

OXFORD & CARDIFF UNIVERSITIES



ESRC Centre on **S**kills, **K**nowledge
and **O**rganisational **P**erformance

The Significance of Workplace Learning for Individuals, Groups and Organisations

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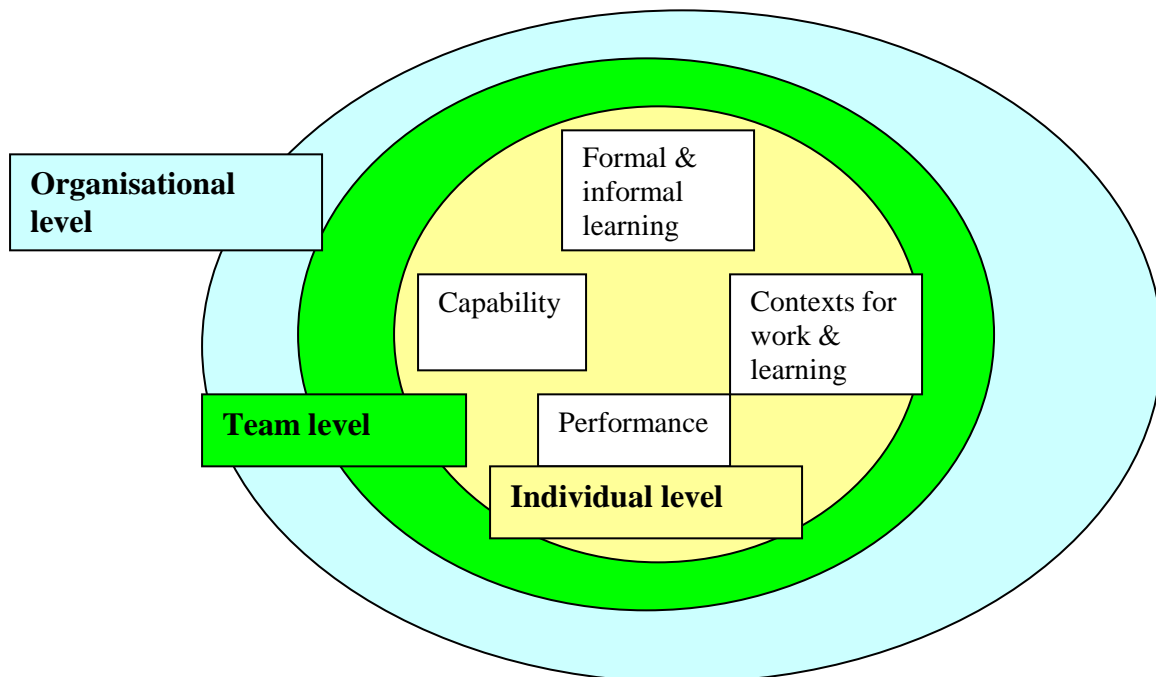
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Introduction

This paper considers workplace learning and its link with performance. The approach we take is to start with the real experience of workplace learning. This means putting the individual employee centre stage and working outwards to the work group, the manager, other colleagues and the organisation. This approach leads naturally to implications of research for how organisations can better facilitate workplace learning. We do not extend very far into implications for public policy, although this paper does provide a different lens through which policy makers might care to review the relevance and effectiveness of policy in relation to the employed adult workforce.

Figure 1 below suggests four main sets of factors which are most relevant to learning in the workplace.

Figure 1: Key aspects of workplace learning



Looking first at the individual level these factors can be described as:

- The *capabilities* an individual has in the broadest terms including personal attributes, skills, knowledge, experience, understanding
- Their *performance at work* and how this is perceived by others and themselves

- The *formal and informal learning* which takes place for that individual and the processes by which this happens. Such learning is not necessarily planned or conscious
- The *context* in which the individual is working and learning. This includes both the job and its wider context, especially the workplace culture and social interactions as well as more formal management processes.

The factors are always affecting each other. Capability is obviously influenced by learning but also current capability influences the ability to learn. Capability is required by job performance but is also developed through job performance. The context in which the individual is working and learning influences how their capabilities are perceived, how they perform and how they learn. An individual can be seen as highly effective in one setting and not another. Individuals are in a dynamic relationship with their work setting, being both influenced by it and being part of it themselves and through their relationship with others.

This paper also considers how this model is replicated at different scales in the organisation, typically at team or work group level, and at the level of the whole organisation. Teams and organisations also have their own contexts and their own learning processes; and can be said to have a collective capability and a collective performance. Although there are intermediate levels between teams and the organisation, they are beyond the scope of this paper.

The entire learning system is dynamic through time and has to respond to the changing needs of organisations, the changing aspirations of individuals, changes in the labour market and in outputs from the education system, and so on.

People are engaged in learning in different ways and in different contexts; but they do not recognise much of this learning without being prompted to reflect on particular types of experience or specific changes in their capabilities. Hence attributions of learning to particular experiences may be unreliable unless they are accompanied by detailed narratives; and the influence of prior learning often remains hidden or even unconscious. For example, most people remember episodes of being taught to read and attribute their reading ability to those episodes, without remembering the drip-drip of their daily contacts with texts in their home or town environment; and the immense progress in reading between the ages of 10 and 30 through engagement with a wide range of texts of increasing difficulty is often disregarded, because their focus at the time was on the meaning and content of the texts rather than on the further development of their reading skills. Researchers in workplace or community-based learning soon came to recognise that questions about learning trigger images of being formally taught in classroom-like environments by teachers, lecturers or trainers. Thus *classes* have become a default explanation for how, why and where their learning did or did not take place.

Both *knowledge* and *learning* can be examined from two perspectives, the individual and the social. An individual perspective on knowledge and learning enables us to explore:

- what people know

- what people can do
- what and how they learn
- variations in how different people interpret and use what they learn.

A social perspective draws attention to:

- the social nature of most contexts for learning
- the social origins of knowledge that is shared, passed on or developed by groups, networks or communities
- the wide range of cultural practices and products that provide knowledge resources for learning.

Chapter 1 clarifies our use of key terms such as knowledge, learning, capability and competence; then focuses on the problem of describing what it is that people learn and what counts as progress. It introduces the concept of learning trajectories, and explains the role of different types of tacit knowledge in the workplace.

Chapter 2 begins with a typology for classifying different modes of work-related learning, including both those described as part of the work and those seen as separate from the work, even when they are situated in or near the workplace. It then discusses factors that influence the level and direction of learning and how these factors interact. This leads to a section on the role of the manager in enhancing workplace learning, followed by a section on the transfer of knowledge from education/training to the workplace or from one workplace to another workplace.

Chapter 3 starts with how we can define and recognise group learning or team learning; and how it differs from learning by individual members, then introduces the key concepts of learning through reflection and transformational learning. This leads to a discussion of the problems and possibilities of sharing knowledge, and the limits posed by tacit knowledge and the learning climate. A section on the development and contribution of teams is then followed by a discussion of the meanings and uses of the notion of organisational learning; and a concluding section on knowledge management.

Chapter 4 describes how organisations investigate the learning needs of individuals and work groups, then moves on to discuss how they facilitate learning. It discusses the range of learning interventions now used by organisations for individual workers, work groups and senior managers. Coaching and mixed method approaches are given special attention, but the main emphasis is on strategic issues such as: the balance between atomistic and holistic approaches; the move towards supporting line managers in their learning enhancement role, rather than imposing their interventions upon them; and the integration of learning policies with HR and management practices.

Finally there is a summary table on factors that help and/or hinder learning, and a short final chapter on strategic issues that addresses the main implications and recommendations of this report.

PART ONE: INDIVIDUAL LEARNING IN THE WORKPLACE

CHAPTER 1: How do we describe what individuals learn or need to learn at work?

1.1 Clarification of terms

To address the issue of *learning* we need to consider what it is that people need to learn about. *Knowledge* is acquired through learning but one major difficulty for both the writers and the readers of this paper is that the term *knowledge* is used in several different ways. The narrowest definition is confined to what we shall call *codified knowledge* stored in books and journals. Some people would even argue that in order to count as knowledge it has to be true, but today that would only be supported by a small minority. It would be safer to use terms like *treated as true* or *postulated as true*. However, the creation and use of codified knowledge also depends on the associated *skills* of reading, listening, writing and transforming material of differing complexity and content. These skills, and other skills like reasoning or arithmetic, are part of the *practical knowledge of formal education*, but also play a key role in most working contexts and in everyday life. However, learning and understanding some areas of codified knowledge can be challenging for many people for much of the time. Hence experience of formal education can lead to learners who lack confidence and/or develop a sceptical view of its importance.

All occupations require both *generic* and *specialised codified knowledge* and *practical knowledge*, and these can often be acquired in many different ways. *Inter-personal skills*, for example, are mainly acquired in family and community contexts and informal settings within organisations, without any formal teaching or coaching and only occasional periods of reflection. We call this *implicit learning*, when the learner is not aware of it; whereas more conscious learning from the events around you, or from the results of your own actions, would normally be described as *learning from experience*.

Cultural knowledge that has not been codified plays a key role in most work-based practices and activities. There is considerable debate about the extent to which such knowledge can be made explicit or represented in any textual form; and the evidence gathered so far suggests that its amenability to codification has been greatly exaggerated (Eraut, 2000a). What does appear to be generally acknowledged is that much *uncodified cultural knowledge* is acquired informally through *participation in working practices*; and much is often so 'taken for granted' that people are unaware of its influence on their behaviour. This phenomenon is much broader in scope than the implicit learning normally associated with the concept of *socialisation*. In addition to the cultural practices and discourses of different occupations, one has to consider the cultural knowledge of colleagues, suppliers and clients that permeates their beliefs and behaviours.

Whereas codified cultural knowledge is frequently discussed in terms of its truth and validity, uncodified knowledge is discussed in terms of its ownership, location and

history: who uses this knowledge, where and when? Both types of knowledge may be investigated for their range of meanings, and this is where the interaction of social and individual perspectives is particularly enlightening. The theory of *situated learning* postulates that the personal meaning of a concept, principle or value is significantly influenced by the situations in which it was encountered and the situations in which it was used. Both codified and uncodified knowledge are acquired and used in social contexts, but different people experience a different range of situations; and this may lead to them giving slightly or widely different meanings. Even codified knowledge is personalised to some extent.

Hence Eraut (1997, 1998) chose the terms *personal knowledge* and *capability* for the individual-centred counterpart to cultural knowledge, and defined it as ‘what individual persons bring to situations that enables them to think, interact and perform’. The rationale for this definition is that its defining feature is the use of the knowledge, not its truth. This allows one to investigate the effects of personal knowledge without necessarily being able to represent that knowledge in codified form. He argues that personal knowledge incorporates all of the following:

- *Codified knowledge* in the form(s) in which the person uses it
- *Know-how* in the form of *skills and practices*
- *Personal understandings of people and situations*
- *Accumulated memories of cases and episodic events* (Eraut, 2000a, 2004e)
- Other aspects of personal *expertise, practical wisdom and tacit knowledge*
- *Self-knowledge, attitudes, values and emotions.*

The evidence of personal knowledge comes mainly from observations of performance, and this implies a *holistic* rather than *fragmented* approach to knowledge; because, unless one stops to deliberate, the knowledge one uses is already available in an *integrated form* and ready for action.

We are now able to address a very practical problem, the muddled terminology used by economists, politicians and many workplaces, where the terms ‘knowledge’ and ‘skills’ are used separately, combined and interchangeably. The *Learning and Skills Council* is concerned both with *basic skills* and with the needs of a *high skills economy*. All three terms use the word ‘skills’ as a blanket term which subsumes ‘knowledge’ and clearly includes a significant portion of codified knowledge. In contrast, we have terms such as the *knowledge industry, knowledge management* and *know-how*, all of which claim to subsume various kinds of ‘skill’ (although it is debatable whether knowledge management in its current form includes much of the relevant know-how). We argue that *knowledge is a state*, and that *learning is a process*; but since learning is invisible, we can only infer that individual learning has occurred by noticing changes in that person’s knowledge. Skills are processes that use varying amounts of both codified and uncodified knowledge; but when we use terms such as *know-how*, we are treating learned skills as a form of knowledge. Hence we will try and avoid confusion in this paper by using the word *capability*, rather than *skills* or *personal knowledge*.

To complete our clarification of terminology, we examine the wide range of meanings given to the terms *competence* and *competency*. Competence is another term which has come to be used within both socio-cultural and personal perspectives. Eraut (1998) has argued that the socio-cultural definition of competence as ‘meeting other people’s expectations’ has the longer provenance. In English the everyday meaning of *competent* encompasses the following:

- Being properly qualified
- Being able to perform on your own
- Being capable
- Being adequate but not expert.

The scope of such competence is rarely specified but is often implicit in the context. Our own definition of competence is ‘being able to perform the tasks and roles required to the expected standard’. This expectation, being socially defined, will either be taken for granted or determined by the micro-politics of the particular context. In either case, unlike terms like ‘knowledge’, ‘learning’, and capability, the word ‘*competent*’ entails a social judgement, which may vary across contexts and over time and also, sometimes, with the experience, responsibility and reputation of the person concerned.

Another advantage of our definition is that it enables us to explore the important links between individuals’ capability and their competence. All their competence will be within their capability; but not all their capability will be needed for any specific job. So they will also have *additional capability*, which provides a useful resource for changes in the job or changes of job. Such additional capability may be helpful both in enhancing one’s competence through further learning (this could use prior knowledge or acquired modes of learning in a new context), and in helping to transform one’s job through *innovation* (which requires confidence, imagination and appropriate interpersonal skills).

Unfortunately, several other meanings of ‘competence’ are also quite prominent in the training literature, though all of them focus on *competences* or *competencies* rather than competence as a whole. The dominant meaning in the US and in management development in the UK (see below) derives from the work of McClelland (1976) and his co-workers, who defined a ‘competence’ as ‘an *underlying characteristic* of an individual that is *causally related to criterion-referenced effective and/or superior performance* in a job or situation’ (Spencer and Spencer, 1993). We regard this as one of several methods for representing a person’s capability, most others being more focused on performance.

The term *competency* can be used either in a direct performance-related sense, ‘an element of vocational competence ... a performance capability needed by workers in a specified occupational area’ (Hermann and Kenyon, 1987) or simply to describe any piece of knowledge or skill that might be construed as relevant. The former has been adopted as the basis of National Vocational Qualifications in the UK; but problems have arisen from the combination of the very detailed descriptions often used by trainers to specify learning outcomes at plant level with a national qualification that is claimed to be transferable across contexts.

The third different usage of this term is based in strategic management, where it refers to the *core competencies* of an organisation as those areas of expertise that it expects to dominate its future (Hamel and Prahalad, 1990). We would describe this as part of its planned future capability. Finally, many employers use lists of competencies in job descriptions or in analyses of training needs. Typically these tend to be more generic than traditional job descriptions, and focus more on roles and processes than on individual tasks (see section 1.2).

1.2 How do employers describe their jobs?

Employers set expectations about what they want employees to be able to do in their jobs, i.e. to achieve expected levels of job performance. There have been many changes in fashion about how these are expressed and it is indeed difficult to express all the complex things which are needed if a person is to perform well.

Job descriptions are a traditional method of defining jobs. They frequently include responsibilities, tasks or activities, and descriptions of the capability required to do the job, often called a 'person specification'. The person spec might often cover skills, knowledge, qualifications and personal attributes. Many organisations still have job descriptions which are used for a variety of purposes, including job evaluation and recruitment. Some organisations have moved towards 'generic' job or role descriptions which apply to a whole group of similar jobs.

Competencies are still widely used for defining performance and for targeting training; but the mode of use varies greatly and has evolved over time. Many larger organisations have one or more competence frameworks, most often one for all staff and a slightly different one for managers. These generic and management competence frameworks usually omit technical or job-specific skills; and often they ignore basic skills such as literacy and numeracy, although we know these are major problems for many employers.

Some organisations define technical competencies for each main function or type of job but such frameworks are very hard to maintain and keep up-to-date. The current Professional Skills for Government initiative in the Civil Service is an example of an attempt to define technical as well as generic and leadership competencies for broad groups of jobs defined by function or discipline. Many professional bodies now have frameworks of technical competence to influence curricula, to specify early career work experiences and to accredit members. These frameworks can easily become very complex indeed and are a frequent source of complaint by employers who either want much simpler frameworks or to use their own lists of the technical skills and knowledge they require.

Competence frameworks can apply to absolutely everyone in the organisation if the statements are general enough. Quite often they are modified by broad hierarchical level and describe how a key aspect of job performance (e.g. decision-making) would grow or change at different levels in the organisation. During the 1980s and early 1990s some competence frameworks got very complicated indeed and hence totally impractical. There are four major issues to consider when deciding if and/or when to use competencies:

Are they atomistic or holistic? The implications become apparent when one considers the performances on which judgements of competence are likely to be made. When performances require a combination of several competencies to be integrated, those competencies may be too atomistic. If one competence requires several performances to give a sufficient range of evidence, it may have become too holistic for giving useful feedback. But one should not expect too much. Both listing important attributes of competence and describing their integration into performance is a part-whole problem, whereas nearly all previous representations (including those in higher education) have focused only on the parts.

Are they practical? What counts as competence in a specific workplace is mainly determined by the expectations of those judging the performances (as explained in section 1.1). If a competency is being judged over several performances, the observer will need to have natural opportunities for observation without having to take a 'time out' from their normal work, or else it would be too costly to justify unless it was a learning priority. If criteria are provided, does anyone have time to use them? It is much more natural for someone to give a more holistic judgement, and to explain some of the strengths and weaknesses by giving examples from their observations.

Are they good for learning? The use of numeric grades has low inter-rater reliability unless the raters are trained as a group. They also have an impact on the person being reviewed, who is likely to feel judged as a person, not as a receiver of useful information prior to discussing areas for future learning and development. An appraisee needs to know both what in particular needs improvement and be offered ideas about how that might be achieved. That shifts the focus from judgement to development from the outset.

Are they sensitive to the workplace context and conditions? Both individual and contextual factors may deter an individual or team from translating their capability into performance in situations where they have previously appeared to be competent:

- Personal or team motivation and/or disposition may be affected by both contextual norms and lack of confidence in that particular situation
- Lack of capacity due to a heavy workload or shortage of time
- The context and conditions in which the performance is situated may be too crowded, lack important facilities or fail to provide appropriate support.

Over time these factors may cause people to settle for lower standards of performance.

Competence frameworks are now used for a wide range of HR processes, but seem to have moved in a more pragmatic direction, both in what they cover and how 'levels' of competence are defined. Which aspects of the competence movement seem to be sticking?

- Generic competence frameworks are used to define some aspects of job performance which are seen as important. Their essence is that they describe what these competencies would look like in action, so they are both behavioural and linked to the job context. Covering all aspects is rare, because many aspects of the job remain tacit or get explained away by terms like 'experience' or 'personality' which tell us very little about how people learn to do them.

- They are increasingly used to send *cultural messages* about the *values* the organisation expects employees to adopt. So, for example, the now frequent competence of ‘treating others with respect’ is as much about whether people are willing to behave this way as about whether they have the capability to show respect in their interpersonal behaviour.
- Some organisations are moving away from trying to score competencies and just using the framework as an aid to discussion of both performance and development. Such discussions offer the opportunity to contextualise competence statements and to recognise that an approach that works well in one situation may not always work so well in another situation.

Standards are sometimes defined by employers, especially in more routine jobs. For example, a checkout person in a retail store would be measured on how many customers they serve per hour, their level of errors, their behaviour towards the customers etc. Both training and performance management would be closely linked to such standards. External standards are important for employers in regulated industries, such as selling a mortgage or flying an aeroplane. Tests of competence are regularly used in such sectors and tend to combine tests of knowledge with observations of job performance to check compliance.

None of this practice is theoretically robust. Three common and entirely valid criticisms of competencies are that they include a jumble of different things (skills, knowledge, personal qualities, values etc.); that they cannot possibly cover all the things you need to perform well in a job; and that they tend to make job performance appear more fragmented and less holistic than it really is (Bolden and Gosling, 2004). These arguments do not take away the value to managers and employees of having some job-related behaviours on which to base their discussions of recruitment, performance and development. They do, however, warn against treating such lists in a mechanistic way.

The merit of competencies is that they make the notion of capability more tangible. They do, however, tend to eclipse some other important aspects of capability:

- When it comes to giving someone a job, experience and evidence of achievement are still extremely important. So both CVs and accounts of how competencies have been shown are key currencies in the labour market. The continuing importance of experience still probably indicates a concern about people who can behave in all the right ways but may be short of critical knowledge (especially knowledge of the business environment) or may lack the drive to deliver results.
- Employers need employees who can adjust well to change and have the skills and confidence to manage their own position in the labour market. A range of deeper or meta-skills appears in the literature on employability which includes self-awareness, self-confidence and the ability to learn (Tamkin and Hillage, 1999). These are closely related to the skills needed for career management, which also include the capability to find out about work and learning options and to use others for advice and support (Waterman et al., 1994). These types of skills are frequently included on lists used for

selecting high potential entrants or those on high potential development programmes, but are less often mentioned in generic competence frameworks.

- Employers are often in the position of considering an individual for a job they have not yet reached, e.g. in a promotion decision or in developing them towards a future role. The term *potential* is widely used but often ill-defined. Although some of the interpersonal aspects of working at higher levels are well described in competence frameworks, the more internal and cognitive aspects of the transition to a new or higher level job are harder to observe. Terms like *thinking strategically* do not explain the general cognitive abilities or habits which might be required, or the extent to which these might be amenable to development activities.
- Competence frameworks are often not derived in any rigorous way. If there is a clear method, it combines a top down view of business needs with analysis of the behaviours shown in the job by people seen as being good performers. Organisations do not always consciously look at future organisational needs and the way work is changing. So a competence-based approach to HRM often lags behind changes in the nature of the work. This is a particular weakness in relation to learning, where the definition of capability should be leading not lagging.

Finally, we should note that much of the competence literature tends to assume that competence and/or its attributes or components have a generic character, when there is little evidence to support that claim. Hence it is important to give prime attention to clarifying the domain within which individuals or teams are deemed to be competent, i.e. where their practice meets the expectations of significant others in their workplace and/or among their clients. Key variables in characterising the domain for any particular type or aspect of performance are likely to be:

- The contexts in which the performer can currently operate, including likely locations and their salient features
- The conditions under which the performer is able to work competently, e.g. degree of supervision, pressure of time, crowdedness, conflicting priorities, availability of resources
- The situations which the performer has handled capably, covering such factors as client types and demands, tasks to be tackled, interpersonal events, emergencies etc.

1.3 Learning trajectories

This theme is concerned with what counts as progress in a person's performance. The variables include the focus of what is being tracked, the type(s) of performance being observed or described, purpose of the exercise and the timescale envisaged. One major problem is that the complexity of practical knowledge makes it virtually impossible to represent it in a single text. The huge length of specifications for competency-based qualifications is one manifestation of this problem; and the limited transferability of some of the skills required to obtain these qualifications indicates that even these lengthy

descriptions fail to capture significant features of local settings. Typically people recognise what they judge to be competent performance in their own working context without being able to express the full nature of that competence in words. They may be able to give good feedback on performance, but that relies on both parties having been present and feedback being given soon after the performance, when most of what happened is still fresh in people's memories. Only then can they refer to jointly observed events without having to give detailed descriptions of them in words.

Let us give some examples. There are many possible types of progress in the early stages of a new job, only some of which would be relevant during any short period of time:

- Doing things faster
- Improving the quality of the process
- Improving communications around the task
- Becoming more independent and needing less supervision
- Helping others learn to do the task
- Combining tasks more effectively
- Quicker recognition of possible problems
- Expanding the range of situations in which one can perform competently
- Increases in task difficulty/ taking on tasks of greater complexity
- Dealing with more difficult or more important cases, clients, customers, suppliers or colleagues.

Some of these types of progress could be described as *doing things better*, some as *doing things differently* and some as *doing different things*. Sometimes all three may be happening at once. One simple method of tracking progress would be to agree on a set of progress items like those above but more specific to the job and the context, then either (1) to report on each heading in turn, or (2) compile a single report, using those headings that were deemed relevant to inform it. These could be witnessed self-reports or reports written by people with ongoing contact with the person concerned.

One approach to defining a trajectory is to link it to job descriptions. However, this becomes problematic when promoted posts are scarce, and the focus shifts from achievement to selection. Capability may be critical for shortlisting, but the final selection may be attributed to micro-politics (who knows or supports who?) or 'talent' (often seen as an arcane prediction of future performance). In these circumstances the apparent low weighting of current performance can lower motivation. The response may be to make promotion decisions more 'objective', but then one encounters the difficulty of describing or judging less technical or more complex types of performance. Another difficulty arises when there are several possible career moves, both vertical and horizontal, each requiring a different portfolio of capability. Can learning trajectories inform both internal career development and leaving one's organisation to gain different experiences and learning opportunities?

In technical areas learning matrices are quite common, in which one axis lists types of expertise and the other axis records progress within each area of expertise. A typical scale

might be: *Not needed, aware of the subject* (some understanding but not yet an independent user), *user proficiency* (independent application under normal circumstances), *specialist* (application at advanced level, can teach and mentor others), *expert* (pushing the limits of the subject, recognised leading practitioner) (Hoag, 2001). This type of matrix suggests that the learning pathway might include significant episodes of both formal learning and on-the-job coaching.

A contrasting trajectory was developed by Dreyfus and Dreyfus (1986) as an ‘antidote’ to expert systems and competencies, which puts much greater emphasis on informal learning from experience and the acquisition of tacit knowledge (see Table 1 below). The early and middle stages of the model show the development of situational recognition and understanding, and of standard routines that enable one to cope with crowded busy contexts.

Table 1: Summary of the Dreyfus Model of Progression

Level 1	<p>Novice Rigid adherence to taught rules or plans Little situational perception No discretionary judgement</p>
Level 2	<p>Advanced Beginner Guidelines for action based on attributes or aspects (aspects are global characteristics of situations recognisable only after some prior experience) Situational perception still limited All attributes and aspects are treated separately and given equal importance</p>
Level 3	<p>Competent Coping with crowdedness Now sees actions at least partially in terms of longer-term goals Conscious deliberate planning Standardised and routinised procedures</p>
Level 4	<p>Proficient See situations holistically rather than in terms of aspects See what is most important in a situation Perceives deviations from the normal pattern Decision-making less laboured Uses maxims for guidance, whose meaning varies according to the situation</p>
Level 5	<p>Expert No longer relies on rules, guidelines or maxims Intuitive grasp of situations based on deep tacit understanding Analytic approaches used only in novel situations, when problems occur or when justifying conclusions Vision of what is possible</p>

The explicit rules and guidelines so essential at the beginning are later abandoned as behaviour becomes more automatic; so the use of the deliberative mode of cognition (not usually very analytic) peaks at the competence stage. Progression beyond competence is then associated with the gradual replacement of deliberation by more tacit forms of

cognition. Tacit knowledge appears in three different forms, confirming that tacitness is not a single type of knowledge but an attribute of several types of knowledge:

- *Situational understanding* is developed through all five stages, based largely on experience and remaining mainly tacit
- Increasingly *intuitive decision-making*, involving pattern recognition and rapid responses to developing situations is based on the tacit application of tacit rules
- *Routine procedures* are developed through to the competence stage for coping with the demands of work without suffering from information overload. Some of them are likely to have begun as explicit procedural knowledge and then become automatic and increasingly tacit through repetition, with concomitant increases in speed and productivity.

Our main criticism of the Dreyfus analysis is that it is both individualistic and conservative. Regulations, accountability, value issues and the growth of teamwork have increased the need to share one's knowledge with others; and the Dreyfus Model acknowledges but gives scant attention to the increasing occurrence of novel and complex situations that require a problem-solving approach involving an explicit search for relevant knowledge, the collection of further evidence and critical reasoning. However, we support the Dreyfus progression to Proficiency for two reasons:

1. The difference between being *competent* and being *proficient* is neatly captured by the old training distinction between a *trained worker* and an *experienced worker*. The experienced worker will normally be more productive, need less supervision, be more aware of contextual variations and be competent in a wider range of situations.
2. It helps to explain the benefits and constraints of tacit knowledge. In particular it enables us to better understand the difficulty of changing long established approaches to situational understanding, rapid decision making and routine practices. Such changes involve unlearning as well as relearning, and a return to being a novice without the excuse of being a novice. Hence the need for time and support is an order of magnitude greater than that normally provided (Eraut, 2004c).

The progression to Expert is more problematic. One acknowledged type of expert is highly specialised and often caricatured as someone who knows more and more about less and less, but many experts are expected to be able to communicate their advice in ways that require them to be as explicit as possible. Another type of expert is expected to handle the most difficult problems, those that are ill-defined and cannot be tackled by the same approaches as those used by proficient workers to tackle well-defined problems. This type of expert requires a wider knowledge base, critical analysis and the ability to develop multiple representations of complex problems, as well as being able to work with clients and other people with different types of expertise. The cultivation of such expertise requires a very different learning context from that needed for the development of proficiency.

Another factor to be taken into account in tracking progression is that experience changes the way people think and act as well as what they can achieve. This often hidden change in a person's capability becomes especially important in complex work, in teamwork and in management roles. In order to think about what they are doing at work people use concepts, ideas, principles and values; and their repertoire changes over time according to the demands of their job. These changes are qualitative as well as quantitative for two reasons. First, because the personal meaning of a concept, idea, principle or value is expanded whenever it is used in a new situation; and its current meaning will reflect the range of situations in which it has been used. Second, because both further experience and the addition of new concepts and ideas may lead to that knowledge being restructured either consciously through reflection, or unconsciously through the aggregation in memory of past episodes of use (Eraut, 2000a).

A rather different approach to learning trajectories developed from a typology constructed for classifying what was being learned from two successive research projects on mid-career and early career professional learning in the business, engineering and healthcare sectors. We found that this typology (see Figure 2 below) could be used in a wide range of contexts with only minor alterations; and that it drew people's attention to aspects of knowledge and performance, which they recognised but had not given much attention. This raised the question of their status. We thought that calling them 'competences' would carry too many connotations that we wanted to avoid; so we simply described them as aspects of a professional, technical or managerial job.

We then realised that these categories were particularly useful for tracking learning over long periods of time; so we decided to adopt a lifelong learning perspective and call them *learning trajectories* (Eraut et al., 2005a). Not only does the concept of learning trajectories fit our project's data much more closely than of a set of competences (Steadman et al., 2005), but it enables us to consider both continuity of learning and changes in learning priorities, so that at any one time:

- Explicit progress is being made on several of the trajectories that constitute lifelong learning
- Implicit progress can be inferred and later acknowledged on some other trajectories
- Progress on other trajectories is stalling or even regressing through lack of use or because new practices have not yet been adopted.

Table 2: A typology of learning trajectories

<p>Task Performance Speed and fluency Complexity of tasks and problems Range of skills required Communication with a wide range of people Collaborative work</p> <p>Awareness and Understanding Other people: colleagues, customers, managers, etc. Contexts and situations One's own organisation Problems and risks Priorities and strategic issues Value issues</p> <p>Personal Development Self evaluation Self management Handling emotions Building and sustaining relationships Disposition to attend to other perspectives Disposition to consult and work with others Disposition to learn and improve one's practice Accessing relevant knowledge and expertise Ability to learn from experience</p> <p>Working with Others Collaborative work Facilitating social relations Joint planning and problem solving Ability to engage in and promote mutual learning</p>	<p>Role Performance Prioritisation Range of responsibility Supporting other people's learning Leadership Accountability Supervisory role Delegation Handling ethical issues Coping with unexpected problems Crisis management Keeping up-to-date</p> <p>Knowledge of the Field Knowing the repertoire of practices Evidence of their effectiveness in particular contexts Using knowledge resources and networks Knowing what you need to know Making practices more explicit Conceptual and theoretical thinking Use of evidence and argument Writing appropriate documents</p> <p>Decision Making and Problem Solving When to seek expert help Dealing with complexity Group decision making Problem analysis Formulating and evaluating options Managing the process within an appropriate timescale Decision making under pressure</p> <p>Judgement Quality of performance, output and outcomes Priorities Value issues Levels of risk</p>
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Another advantage is that it problematises the role of occupational qualifications as signifiers of learning. Occupational qualifications are a very public rite of passage, which symbolises generic competence in that occupation, and this claim is backed by the use of apparently clear and specific criteria for assessment. In practice, however, these qualifications require both a specified amount of practical experience and the demonstration of competence in certain aspects of performance by successful candidates. The assessment process may require either that a particular level of competence is reached in each aspect or that the performance as a whole is satisfactory, or both.

However, variations in candidates' strengths and weaknesses are inevitable, because trainees are allocated to one or more placements, whose learning opportunities will differ in kind if not also in quality. There are bound to be significant differences in the performance profiles of trainees at the point of qualification. The use of learning trajectories can address both variations in competence and continuity of learning by tracking aspects of trainee performance before, during and after qualification; and this should avoid the pretension workers with the same qualification perform at a similar level across the range of occupational activities. Hence, a third advantage of using learning trajectories is that they can reduce the need to base qualification decisions on limited samples of performance under conditions of high anxiety. Mapping progress over time is measuring the ability to learn from experience, probably a better predictor of future performance than a final assessment.

One important problem remains to be solved. In the opening section of this chapter we noted that most occupational activities require that several types of knowledge are integrated into a holistic performance. How then can we reconcile the use of learning trajectories depicting changes in aspects of performance over time with recognising the holistic nature of most kinds of performance? Returning to our earlier discussion about the domain in which performances have been judged as competent or proficient, we decided that points on our learning trajectories should be treated as windows on episodes of practice, in which (1) the aspect of learning portrayed by the trajectory had played a significant part, and (2) the current domain for the trajectory had been sustained or enhanced. This could only be achieved if each window included the following information about the performance:

- The setting in which it took place, and features of that setting that affected or might have affected the performance
- The conditions under which the performance took place, e.g. degree of supervision, pressure of time, crowdedness, conflicting priorities, availability of resources
- The antecedents to the performance and the situation that gave rise to the performance
- The other categories of expertise involved
- Any differences from previously recorded episodes
- Indicators of expertise in the domain of the trajectory having been maintained, widened or enhanced.

This last point draws attention to the complexity of learning and performance in most professional, technical and managerial jobs. It is unusual for a performance to use knowledge from only one trajectory, and the seamless integration of personal knowledge from several trajectories may itself be an important learning challenge that goes beyond progress in several separate trajectories. The holistic nature of any complex performance should never be neglected. Within this overall framework it is still possible, indeed desirable, for different types of representation to be used for different trajectories and at different career stages. There is no one best way for describing complex knowledge in use.

1.4 The nature of performance

We use the term ‘performance’ in a broad sense that includes thoughts and actions that take place within a chosen performance period, and those involved in preparing for, or reflecting on, that period. The length of the period can be chosen to cover whatever time span is appropriate for the purpose. We also decided to focus our analysis of performance around three dimensions. The first dimension covers the context(s) and conditions where the performance took place, which we have already discussed in relation to the domain of competence and the use of learning trajectories. The second dimension analyses performances by either individuals or groups in terms of four distinct but interconnected elements (Eraut, 2000a):

- Assessing clients, and situations (sometimes briefly, sometimes involving a long process of investigation), and continuing to monitor them
- Deciding what, if any, action to take, both immediately and over a longer period (either individually or as a member of a team)
- Pursuing an agreed course of action, modifying, consulting and reassessing as and when necessary
- Meta-cognitive monitoring by individuals or collective monitoring within groups of the people involved, whether agents or clients, and the general progress of the problem, project or situation.

Each of them can take many different forms according to the context, the time available and the types of technical and personal expertise being deployed. Although analytically distinct, they may be combined into an integrated performance that does not follow the simple sequence of assessment, decision and action advocated in many textbooks. Klein et al.’s (1993) research into decision-making in practice showed that real life settings include many of the following characteristics:

- Problems are ill-structured
- Information is incomplete, ambiguous, or changing
- Goals are shifting, ill-defined or competing
- Decisions occur in multiple event–feedback loops
- Time constraints exist
- Stakes are high
- Many participants contribute to the decisions
- The decision-maker must balance personal choice with organisational norms and goals (Orasanu and Connelly, 1993, pp.19–20).

The findings of this research provide a much more complex picture of the decision-making process and the nature of good performance in the field:

- Experts frequently generate and evaluate a single option rather than analyse multiple options concurrently

- Experts are distinguished from novices mainly by their situation assessment abilities, not their general reasoning skills
- Because most naturalistic decision problems are ill-structured, decision makers choose an option that is good enough, though not necessarily the best (ibid. p. 20).
- Reasoning and acting are interleaved, rather than segregated (Weick, 1983).
- Instead of analysing all facets of a situation, making a decision, and then acting, it appears that in complex realistic situations people think a little, act a little, and then evaluate the outcomes and think and act some more (Connelly and Wagner, 1988) (ibid. p. 19).

The research also demonstrates that reasoning is *schema-driven* rather than algorithmic; it uses processes to which the decision maker(s) have become accustomed:

Even for problems with many novel elements, decision makers use their knowledge to organise the problem, to interpret the situation, and to define what information is valuable for solution. Some information may be selected or distorted to fit the existing schema, a potential source of error. But it also enables speedy assessment, search, selection, and interpretation of relevant information, a definite advantage when faced with information overload and time pressure. A critical feature of the schema-driven approach is that people create causal models of the situation. They try to understand the significance of events and information by inferring causal relations. (ibid. p. 18).

The implications for decision-making practice are that (1) the relationship between knowledge and decision-making is rarely simple, (2) good decision-making is critically dependent on how the decision is framed by the decision-makers in the light of their situational understanding and therefore (3) the balance is tilted more towards the personal knowledge of the decision-maker(s) and less towards any codified knowledge management system that might be available. If there is very little time, access to a knowledge management system would only be undertaken when there was a high expectation of getting a valuable pay-off very quickly.

The third dimension is the *time taken*, whether by choice or under constraint. This is linked to our four elements in Table 3 below, which focuses on how the time variable affects the *mode of cognition* and/or *mode of consultation* of those concerned. The model divides the time-continuum into three columns, whose headings seek to describe the *mode of cognition* used by the performers. Hence their timescales may differ according to the way the performers work. For example, in one context *rapid/intuitive* might refer to a minute, while in another context it might include periods of up to ten minutes or even half an hour. The critical feature is that the performers have limited time to deliberate or think in any depth. The *instant/reflex* column describes routinised behaviour that, at most, is semi-conscious. The *rapid/intuitive* column indicates greater awareness of what is going on, and is often characterised by rapid decision-making within a period of continuous, semi-routinised action. Typically it involves recognition of situations by comparison with similar situations previously encountered; then responding to them with

already learned procedures (Klein, 1989; Eraut et al., 1995). The time available affects the degree of mismatch that is tolerated, because rejection of familiar actions based on prior experience leads to deliberative problem-solving and hence to a more time-consuming approach. As workers become more experienced, they acquire a wider range of *precedents* and recognise them more quickly and more accurately.

Table 3: Interactions between time, mode of cognition and type of process

Type of Process	Mode of Cognition		
	Instant/Reflex	Rapid/Intuitive	Deliberative/Analytic
Assessment of the situation	Pattern recognition	Rapid interpretation Communication on the spot	Prolonged diagnosis Review, discussion and analysis
Decision making	Instant response	Recognition primed or intuitive	Deliberative analysis or discussion
Overt actions	Routinised actions	Routines punctuated by rapid decisions	Planned actions with periodic progress reviews
Metacognitive engagement	Situational awareness	Implicit monitoring Short, reactive Reflections	Monitoring of thought and activity, reflective learning Group evaluation

The *deliberative/analytic* column is characterised by explicit thinking by individuals or groups, possibly accompanied by consultation with others. It often involves the conscious use of different types of prior knowledge, and their application to new situations. These areas of knowledge may either be used in accustomed ways, sometimes with adaptation, or combined in novel ways that require a significant period of problem solving.

The relationship between time and cognition is probably interactive: shortage of time forces people to adopt a more intuitive approach, while the intuitive routines developed by experience enable people to do things more quickly. Crowded contexts also force people to be more selective with their attention and to process their incoming information more rapidly. Even when a group has some time for discussion, individual members may feel that their contributions have to be short and rapid. Hence meta-processes are limited to implicit monitoring and short, reactive reflections. But as more time becomes available, the role of meta-processes becomes more complex, expanding beyond self-awareness and monitoring to include the framing of problems, thinking about the deliberative process itself and how it is being handled, searching for relevant knowledge, introducing value considerations etc.

Even when there is no emergency, experienced people typically prefer to do many things quickly and smoothly if they are confident in their own proficiency. However, there are also situations where speed beyond what even proficient workers consider to be appropriate is forced by pressure for productivity. Then quality falls, the level of risk is higher and job satisfaction plummets. Both the development of proficiency and learning to cope with pressures for rapid action involve routinisation and further work; but whereas the routines associated with proficiency lead to improvement in both quality and productivity, coping routines increase productivity at the expense of quality. In either case, routinisation leads to knowledge becoming less explicit and less easily shared with others, i.e. more tacit. Tacit knowledge of this kind is also likely to lose value over time because circumstances change, new practices develop and people start to abbreviate routines without being aware that they are reducing their effectiveness.

The greatest benefit of routinisation is that it reduces workers' *cognitive load*, and thus enables them to give more attention to monitoring the situation or communicating with clients and colleagues, hence becoming both more productive and more effective. We would not survive for long if we could not take for granted many aspects of what we see and do. Not everyone, however, takes the opportunity to take a more evaluative perspective on their practice; and in many cases it is difficult to sufficiently disentangle routines from the practice in which they are embedded to either try to describe them or evaluate them. Indeed both description and evaluation threaten to diminish the utility of routines, which depends on trusting them and not having to think about them. The exception to this is when routines do not derive from increased proficiency but from *coping mechanisms* developed for handling work overload with little regard for quality.

The corresponding disadvantage is *inflexibility*. Routines are very difficult to change, not only because this would imply a negative evaluation of the previous practice but also because such change involves a period of *disorientation* while old routines are gradually unlearned and new routines are gradually developed. During this period practitioners feel like novices without having the excuses or discounts on performance normally accorded to novices. The pain of change lies in the loss of control over one's own practice, when one's tacit knowledge ceases to provide the necessary support and the emotional turmoil is reducing one's motivation. Hence the need for time and support is an order of magnitude greater than that normally provided (Eraut, 2004c).

1.5 The scope of tacit knowledge

Diagrams depicting the transformation of tacit knowledge into explicit, codifiable knowledge have been commonplace from Kolb et al. (1971), through expert systems and evidence-based practice to Nonaka and Takeuchi (1995) and the cult of knowledge management. Sometimes there are useful by-products, but the main outcome for those who look at the evidence and are not seduced by wishful thinking is greater awareness of the pervasive presence of tacit knowledge in the way we do our business and live our daily lives (Eraut, 2000a, 2004a). Since many modes of learning rely on their ability to transfer tacit knowledge without making it explicit, this section has been added to explore

how tacit knowledge contributes to the four elements of performance discussed above: understanding situations, decision-making, skilful action and monitoring.

We start with the role of tacit knowledge in understanding people and situations, because people easily recognise this phenomenon. Getting to know other people typically involves the absorption of a great deal of incidental information, acquired by being a participant observer on occasions when we were both present and partly by the normal conventions of politeness and sociability. While some of the knowledge gained may be explicit biodata, much will be gathered in the form of impressions of their character and behaviour or memories of episodes in which they participated. Secondary as well as primary data may also take the form of stories about a person as well as hard facts. Stories would normally be regarded as an explicit form of communication, but often they also carry implicit cultural and personal knowledge. Typically you learn more about the people you meet than you are able to explain, and some of that knowledge may be so provisional that you are reluctant to make it explicit. Yet you still take that knowledge into account when you interact with that person, because you are unlikely to stop and think unless there is something problematic about the occasion. What influences your behaviour is your aggregated knowledge of that person and that aggregation is usually a largely tacit process to which memories of incidents, encounters and episodes contribute in ways you cannot tell.

Another factor is the way you tend to organise your knowledge of people: this affects how you perceive their behaviour as well as how you structure your memories of them; and neither is a fully conscious process. There is evidence that people use particular personal constructs for categorising others, that early impressions affect later interactions and that you notice people's actions in groups only when they play a significant part. Moreover, if you are a manager your memories of occasions when you interacted with those you manage are bound to be an atypical sample just because you were present.

Many of the same factors contribute to the mixture of tacit and explicit knowledge which constitutes one's knowledge of an organisation, context or situation (Eraut, 2000b). Many situations, for example, are largely characterised by the differing perspectives of the participants and of 'significant others' off-stage; and knowledge of these perspectives depends not only on what people do and say but also on how it is interpreted by others in the context of what they already 'know' about the people concerned. We also use terms like 'acculturation' or 'socialisation' to describe the often unconscious absorption of norms, values and other kinds of culturally embedded knowledge. Also significant is the amount of tacit generalisation which takes place from familiar people, situations and contexts which you think you know to those that are less familiar. All these processes are well documented in the psychological literature. Thus tacit understanding not only contributes to relationships and situational understandings within an organisation but to important transactions with external clients, customers, suppliers and stakeholders.

Skills are defined in terms of knowing how to do things; and nobody will accept evidence of a skill in the form of codified knowledge. For that reason, many skills are regarded as archetypal examples of tacit knowledge. For example, riding a bicycle or swimming are

easily recognised skills which can be explicitly demonstrated; but nobody can explain to you how they do it, at least not in a way that would enable you to do it yourself. Skills of this kind cannot be disseminated by the use of a knowledge management system. Many important work processes involve a combination of propositional knowledge and skills of many kinds. These components are highly integrated and interdependent (Eraut, 2000b). Thus a person's negotiating skill will affect the way in which they use their propositional knowledge and even the choice of that knowledge. The technician troubleshooting a piece of electronic equipment will draw on propositional knowledge in a personal form which suggests something about the likely nature of the problem. Designing a knowledge management system which can cater for such individual needs regarding the type and form of information could be difficult. To learn to troubleshoot a piece of equipment within a short period of time is probably best accomplished by going out with an expert with a varied caseload but enough time to talk, show what they are doing and try to explain it on the spot. Even this, however, may not always be successful because troubleshooting is often an intuitive skill by which people recognise patterns without being fully aware of the cues which prompted that recognition. Another example would be interpreting what is going on beneath the surface of a business meeting. Simple well-defined situations might be analysed explicitly, but complex situations would be immensely difficult to portray or interpret.

In the previous section, we discussed the tacit nature of rapid intuitive decision-making in terms of situational recognition and prior experience. The research into naturalistic decision-making in less time-pressured situations, which allow at least some deliberation, suggests a pattern which relies more on the intuitive use of tacit knowledge when situations become more complex and uncertain. Our first three examples concern deciding what to say and how: (1) when asked for advice, (2) when giving feedback, and (3) when being cross-examined in a meeting. Your awareness of the interests and priorities of those being addressed, of the emotional dimension, and of the appropriate length of your response may guide any preparation; and you hope to reach a point where you feel that you have got it right, and when you need to adjust your plan because it does not seem to be having the desired effect.

A similar problem often occurs in recruitment, especially for one-off jobs, because:

- Some criteria are used for inclusion and some for exclusion, and an overemphasis on exclusion leads to 'safe' but uninspiring choices
- The relative importance of the criteria is disputed
- The application of criteria involves a lot of distinct partial judgments, which never quite add up to a final decision.

Such judgments are essentially holistic. Hence, while the discussions about candidates meeting the criteria prepare the way, the final judgment in the absence of strong micro-politics will be based on tacit judgment and at least some mutual trust.

This is but one example of decisions in situations where there is no 'right answer', even after a considerable period of deliberation and analysis. The problem is rarely confined to

analysing probable consequences, because there will often be conflicting interests and different timescales to be taken into account. The group of decision-makers explore and discuss the options, then eventually decide on one which seems to them to be 'the best fit'. This final decision will often be largely intuitive, drawing on the tacit aggregation of knowledge which could only be analysed piecemeal. When there is less time or motivation to collect evidence and to construct and clarify arguments, such decisions will have an even greater tacit component. When there is less time still, they will be described as 'backing a hunch'.

A great deal of monitoring also involves tacit knowledge. The first issue concerns finding space for monitoring: how do you give any attention to self-monitoring when there are many apparently more urgent things demanding your attention; and how do you set up, or take advantage of, informal meetings to pursue your monitoring agenda with others. The second relates to what you notice during conversations or observations. Whether you rely on spotting problems or more systematically scanning your environment, you still have to notice any relevant evidence; and this is particularly difficult if it is not very salient and rarely appears. Then thirdly, you may also have to decide, often very quickly, whether or not to ignore, make a note for later consideration or make a rapid intervention. More explicit monitoring is only likely when based on previous mistakes, and even then it may have a short half-life.

Apologia

This opening chapter has been quite challenging for us as well as for some of our readers. This reflects the complexity of knowledge work, which we neglect at our peril. We have tried both to clarify the issues involved in a manner that matches our readers' experience and to indicate the directions to which some of the enticing but highly problematic pathways lead. In particular, we think that it is important to use practical examples as well as generic concepts in order to recognise diversity and to keep close to reality. Both the complexity of human performance and the important role of tacit knowledge should warn us against simplistic solutions that deny the unique character of each individual, group and organisation. The remaining chapters should seem more accessible, and also be more convincing because of the foundations laid here.

CHAPTER 2: How do individuals learn in the workplace, and what factors enhance or constrain such learning?

2.1 Modes of learning at work

Our research into mid-career learning (Eraut et al., 2000) found that most learning was informal learning within the workplace itself. This was mostly triggered by consultation and collaboration within the working group, consultation outside the working group and the challenge of the work itself. We anticipated that formal learning or formally supported learning would be more significant for newcomers, and that a binary distinction between informal and formal learning might be a useful start. However, we found that this distinction was difficult to sustain when most new recruits were clearly recognised as ‘learners’, as in formal settings, but were more likely to be given advice and feedback informally by those around them than by those designated as their mentors.

Hence we decided to classify learning processes according to whether their principal object was working or learning (Eraut et al., 2005a; Eraut, 2007b). Processes in the left column of Table 4 below were judged to be *working processes*, from which *learning* was a *by-product*, while those in the right column are clearly recognisable as *learning processes*. Another problem arose when we became dissatisfied with including processes, which were clearly bounded and relatively time consuming, in the same list as very generic and often quite *short activities*, such as asking questions, observing or reflecting. These activities could occur many times in a single process, and were found within almost every type of process, often several at a time. When we moved these ‘activities’ into a different category, the central column in Table 4, we obtained the much tidier typology that we finally used. The rest of this section is devoted to exploring Table 4 column by column.

Table 4: A typology of early career learning

<i>Work Processes with learning as a by-product</i>	<i>Learning Activities located within work or learning processes</i>	<i>Learning Processes at or near the workplace</i>
Participation in group processes Working alongside others Consultation Tackling challenging tasks and roles Problem solving Trying things out Consolidating, extending and refining skills Working with clients	Asking questions Getting information Locating resource people Listening and observing Reflecting Learning from mistakes Giving and receiving feedback Use of mediating artifacts	Being supervised Being coached Being mentored Shadowing Visiting other sites Conferences Short courses Working for a qualification Independent study

Work processes with learning as a by-product account for a very high proportion of the reported learning of people we interviewed during our mid-career and early career projects. Their success depends both on the available opportunities and on the quality of relationships in the workplace. Hence the amount of learning reported varied significantly with person and context.

Participation in group processes covers *team-working* towards a common outcome, reviewed in chapter 5, and groups set up for a special purpose such as discussing a client, problem solving, reviewing some practices, planning ahead, or responding to external changes.

Working alongside others allows people to observe and listen to others at work and to participate in activities; and hence to learn some new practices and new perspectives, to become aware of different kinds of knowledge and expertise and to gain some sense of other people's tacit knowledge. This mode of learning, which includes a lot of observation as well as discussion, is extremely important for learning tacit knowledge or the knowledge that underpins routines and intuitive decisions and is difficult to explain. When people see what is being said and done, explanations can be much shorter and the fine detail of incidents is still in people's minds; and multi-sensory engagement over some time enables the gradual development of tacit as well as explicit situational understanding.

Consultations within or outside the working group, or even outside the organisation, are used to coordinate activities or to get advice. The act of initiating a consultation, however, depends on the relationships between the parties, the extent of a worker's network and the culture of the workplace. For *newcomers* the distinction between a consultation and being mentored or supervised is not always clear, as part of a mentor's or supervisor's role is making oneself available for consultation.

Tackling challenging tasks and roles requires on-the-job learning and, if successful, leads to increased motivation and confidence. However, people are less inclined to take on challenges unless they feel confident both in their ability to succeed as a result of previous experience and in the support of their manager and/or colleagues. Without such previous experience and support, challenges pose too high a risk.

Problem solving, individually or in groups, necessarily entails learning; otherwise there would be no problem. Such problems are not just technical, they may involve acquiring new knowledge before one can start, searching for relevant information and informants, imagination, persistence and interpersonal negotiation.

Trying things out is distinguished from less purposeful behaviour by the intention to learn from the experience. It requires some prior assessment of risk, especially where other people might be affected, and may require special arrangements for getting feedback as well as time for subsequent reflection and evaluation.

Consolidating, extending and refining skills is particularly important when entering new jobs or taking on new roles, when it is sometimes supported by episodes of supervision, coaching or feedback. It is greatly helped by informal personal support and some sense of an onward learning trajectory (see 1.3 above).

Working with clients also entails learning, (1) about the client, (2) from any novel aspects of each client's problem or request, and (3) from any new ideas that arise from the encounter. Some workers have daily experiences of working with clients, which may or may not be recognised as learning opportunities. Some progress from less to more important clients, or from those with simple needs to those with more complex needs. There can also be a strong emotional dimension, when a client arrives in a distressed state or is about to receive bad news. This is a context where sharing experiences can be helpful. Another factor is the extent to which client contact gives the work meaning and value, and thus enhances workers' sense of collective purpose.

Learning processes at or near the workplace

The right column of Table 4 lists nine processes whose *prime object is learning*. These are listed in terms of their *proximity to the workplace*. Thus supervision, coaching and mentoring are at or very near the learner's normal workplace; shadowing and visiting other sites are usually in other people's workplaces; conferences, short courses and working for qualifications are usually not in workplace settings; and independent study can be followed almost anywhere that is quiet.

For most workers the main influences of their *line manager* on their learning were through the allocation of work, appraisal, and support for any formal learning requiring fees or time away from the job. New young employees were usually supervised by the person 'in charge' of the relevant work group. The manager's role in enhancing or constraining learning is discussed in section 2.3 below.

Coaching and *mentoring* are provided mainly for newcomers, and occasionally for newly appointed managers and training in new technology. Coaching is often limited by managers not being prepared to release potential coaches from their normal work, and mentoring by lack of informal opportunities to develop an appropriate relationship. In many situations mentoring is provided by helpful others, who are not designated mentors, and this is usually best for mutual on-the-spot support and feedback.

Shadowing and *visits* to other sites are used for inducting new employees, for workers taking on new responsibilities and for improving cooperation between different sites. They could be very helpful for developing a *wider understanding* of projects, other work groups, suppliers and customers; but this need is often underestimated.

Conferences are probably more important for updating and networking than for direct learning, and *short courses* were the main kind of formal Continuing Professional Development. Attending short training courses was important for some people at particular stages in their career. But even then, work-based learning was important in developing the ability to use what has been learned off-the-job. This was especially true

for short courses, which have very little impact unless they are appropriately timed and properly followed up at work. There is evidence from Basic Skills training, however, that *learning schemes* in or near the workplace are able to pick up on the use of various basic skills at work and hence be much more relevant and convenient, as well as helping to develop relationships among those attending them.

Mid-career management and professional qualifications were also judged highly effective when they were able to build on prior experience at work. In these contexts learners benefited from engagement with peers from other organisations. Thus management courses involving small groups and projects played an important role in helping people shift their thinking from an operational to a strategic level. In the less interactive context of Higher Level N/SVQs in Management our research found that using a more developmental approach to working for a NVQ resulted in significant impact on practice, whereas an accreditation of current competence neither impacted on practice nor shortened the time taken to get the qualification (Eraut, Steadman and James, (2001).

Independent study may be supported by the provision of *knowledge resources* and/or agreed plans, such as lists of competences, learning projects or personal development plans. Formal training and knowledge resources such as manuals, reference books, documentation, protocols and an intranet were generally available to all workers, the engineers in particular using the intranet as their prime source of current information. Apart from essential textbooks, manuals and guides received limited use. Learners generally found it quicker and more effective to get information directly from more knowledgeable colleagues or the minority that did conquer the manuals.

Learning activities located within the processes described above

The nine learning activities in the central column of Table 4 were embedded within most of the work processes and learning processes, but were also found in short opportunistic episodes. The key issues for learning are the frequency and quality of their use.

Asking questions and getting information are important, proactive activities; and good questions and knowledge searches are appreciated in positive learning contexts. However, many novices feel diffident about asking questions of senior colleagues unless they are working together and the question is spontaneous. They feel that asking a ‘silly’ question would reflect badly on their reputation and are afraid of being prematurely labelled as a ‘weak’ practitioner. This constraint, however, does not apply to talking to peers or novices a year or less ahead of them who still remember what it was like at their stage; and this should be considered when allocating and supporting new staff. *Locating resource people* is also a proactive activity that requires confidence and social understanding. Some early career professionals were very proactive in seeking out and developing relationships with a wider network of knowledge resource people, while others gave it little attention, often because they did not appreciate its potential value.

Listening and observing activities are very dependent on what the observer/listener is able to grasp and comprehend; and comprehension depends on awareness of the significance of what has been said and/or done. Such awareness and understanding is developed through discussion and reflection.

Learning from mistakes is possible in most working contexts, both from one's own mistakes and those of others; but opportunities for this activity are frequently missed. Another important issue concerns when it is better to be taught the right way and when it is better to allow people to learn from their mistakes.

Reflection is included here because it occurs both on and off the job and often plays an important role in recognising and learning from mistakes. Authors such as Schon (1983, 1987) have argued that reflection lies at the centre of nearly all significant learning, but have not fully explored the range of reflective learning agents (individual or group), foci (current, past or future), contexts (busy or relaxed) and purposes (monitoring, decision making or learning) and their influence on the reflective process. Hence this topic will be given particular attention in Chapter 3 in the context of organisational learning.

Giving and receiving feedback are both important, often vital, for most learning processes. We found that most learners need short-term, task-specific feedback as well as longer-term, more strategic feedback on general progress. But the two are not necessarily found together. Good short-term feedback on performance was often accompanied by an almost total absence of strategic feedback, giving even the most confident workers an unnecessary sense of uncertainty and lowering their commitment to their current employers (Eraut, 2007a).

Mediating artifacts need more explanation in spite of their considerable value, so we provide some examples from our recent research into the learning of early career accountants, engineers and nurses. They play a very important role in structuring work and sharing information by mediating group learning about clients or projects in progress. Some artifacts in daily use carry information in a standard way that novices soon learn to understand. In both nursing and engineering these include measurements, diagrams and photographs. For example, patient records cover temperature, fluid intake and output, drugs administration, biochemical data and various types of image. These refer both to the immediate past and to plans for the immediate future, and salient features considered important are prioritised for the incoming shift at every handover. Understanding the thinking behind the handover rituals is essential learning for newly qualified nurses.

A mechanical engineer was observed discussing virtual design 'drawings' on the screen over the telephone with colleagues, contractors and clients on an almost daily basis; and she also sent digital photographs and measurements to initiate a discussion about a sagging bar. A water mains planning engineer and her colleagues all used her meterage progress reports to decide whether to clean out a mains pipe, re-line it with plastic piping, or replace it, all with different associated costs and time implications.

Accountants learned how to interpret audit files and the ‘tests’ they were given for sampling their clients’ data. They learned to give some priority to significant changes in accounts over time; and they needed considerable tact to find out how their clients’ business processes were represented in their accounts when their clients’ accountants regarded them as self-evident.

Then at a higher level of complexity, engineers used design specifications and software packages; and nurses used the MEWS protocol for deciding when a patient needed urgent attention and patient pathway protocols for patients with particular conditions. Accountants used software packages for organising their auditing processes. The really expensive ones were used as a guide for the auditors through their tasks, as a framework for assigning sub-tasks, as a repository of accumulated judgements, as an archive of explanatory material and as a record for the following year. The distinctiveness of these higher level artifacts was their incorporation of a considerable amount of professional knowledge, and they could be used, albeit under supervision, before all that knowledge had been acquired.

2.2 Factors affecting learning at work

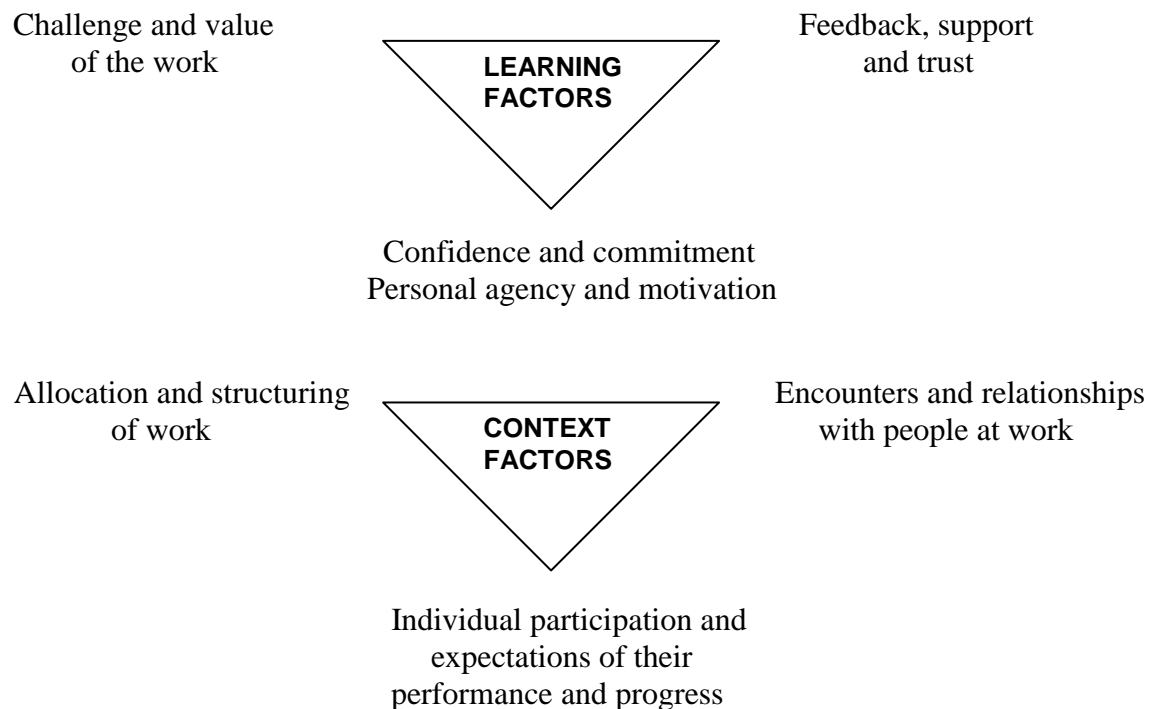
The literature on factors enhancing or constraining learning at work tends to focus either on specific factors or on the overall culture of the chosen unit of analysis. Specific factors include communications and feedback, work design, industrial relations, participation, continuity and training. Cultures are often attributed to leadership or management style rather than the nature of the work and the opportunities it offers for developing relationships or group work. At workplace level Fuller and Unwin (2003) have categorised learning *environments* for modern apprenticeships as being either *expansive or restricted*; and at organisational level there is a significant literature on *learning cultures*. But in our recent research projects on early career and mid-career learning at work we started with evidence of learning, much of which was not recognised as such, then sought to find out more about the factors affecting learning by using a grounded theory approach. How did these factors differ with the type of learning and the context? How did they interact with each other? At what organisational level were the more significant features of the learning landscape determined?

One prominent finding of our earlier research on mid-career learning was the overwhelming importance of *confidence*. Much learning at work occurs through doing things and being proactive in seeking learning opportunities; and this requires confidence. Moreover, we noted that confidence arose from successfully meeting *challenges* in one’s work, while the confidence to take on such challenges depended on the extent to which learners felt *supported* in that endeavour by colleagues, either while doing the job or as backup when working independently. Thus there is a triangular relationship between challenge, support and confidence (Eraut et al., 2000). The contextual significance of the word ‘confidence’, which was used by our respondents without further elaboration, depended on which aspects of this triangular relationship were most significant for particular people at particular points in their careers. The dominant meaning for most mid-career respondents usually came close to Bandura’s (1995) concept of *self-efficacy*, a

context-specific concept relating to ability to execute a particular task or successfully perform a role. For some mid-career respondents, however, confidence related more to *relationships* than to the work itself. Did they feel confident about the *support* and *trust* of their working colleagues in more senior, more junior or parallel jobs? This depended on whether they perceived their more significant working relationships as mutually supportive, generally critical, faction-ridden or even overtly hostile. For early career professionals, this latter aspect of confidence was more prominent.

Figure 2 below shows how our early career project, where observations over a three-year period added greatly to our understanding of contexts, was able to expand this triangular relationship to include new features. We added *feedback* and *trust* to support and the *value of the work* to the challenge, because both had a major influence on *motivation* and *commitment*. Feedback was especially important during the first few months of a new job, when it was often best provided by the person on the spot. This happened within the ‘distributed apprenticeship’ approach we found in accountancy, and in other organisations where local workplaces had developed a positive learning culture of mutual support. In the longer term, more normative feedback on progress and meeting organisational expectations also became important.

Figure 2: Factors affecting learning at work: the Two Triangle Model



Equally important for developing confidence after the first few months was the *right level of challenge*. Newly qualified nurses were over-challenged physically, mentally and emotionally by their sudden *increase in responsibility* and the unceasing *pressure of work*

in most ward environments. While some engineers progressed through a series of challenging assignments with remarkable rapidity, most of them were under-challenged and many of them were seriously under-challenged. The value of their work carried many nurses through their unnecessarily pressured start, and this was strengthened in some contexts by their *social inclusion* in supportive teams. We also noted the importance of *personal agency* in sustaining their motivation after their early period of settling into their new environment, and that this was not necessarily always aligned with their employer's priorities.

The role of *extrinsic motivation* is frequently discussed in the workplace, and we feel there is no need for us to discuss it here. However, Thomas' (2000) framework provides a useful basis for exploring intrinsic motivation, which is less well understood. Under *opportunities* he puts *sense of choice* over work activities and *sense of the meaningfulness* of their purpose; and under *accomplishment* he puts *sense of competence* in their work activities and a *sense of progress* in their purpose. This gives four kinds of intrinsic motivation, which were all prominent in the research reported above.

The inclusion of observation in this study enabled us to give more attention to the allocation and structuring of people's work, their relationships at work and their level of participation in workplace activities; and this led us to the extension of our model to include a second triangle. This mirrors the first triangle, but focuses on the contextual factors that influence its learning factors.

The allocation and structuring of work was central to our participants' progress, because it affected (1) the difficulty or challenge of the work, (2) the extent to which it was individual or collaborative, and (3) the opportunities for meeting, observing and working alongside people who had more or different expertise, and for forming *relationships of mutual trust* that might provide *feedback and support*. Our analysis of modes of learning in the workplace in the last section confirmed the importance of relationships by showing how many prominent modes of learning were dependent on good relationships with other people. These were not necessarily close relationships but required some mutual respect and a disposition to collaborate.

For novice professionals to make good progress, a significant proportion of their work needed to be sufficiently new to challenge them without being so daunting as to reduce their confidence. Their workload needed to be at a level that allowed them to respond to new challenges reflectively, rather than develop coping mechanisms that might later prove ineffective. This usually worked well in our two accountancy organisations; but in engineering the appropriateness of the allocated work differed hugely according to the company and the specialty. Very few graduate engineers in electronics or computer science had sufficiently challenging work and nobody appeared to take any responsibility for addressing this problem. In nursing the quality of learning was mainly influenced by the ward manager and her senior nurses, and some of the best and worst learning environments we observed were in the same departments of the same hospitals. Eraut et al. (2005b) provides a more substantial account of these factors and their interactions.

We found that decisions affecting the structuring and allocation of work could be determined by any combination of the following factors:

- 1) The nature of the work, the way in which the organisation handled it and the discretion given to local managers in decisions of this kind. In all three of our professions local managers had significant opportunities to facilitate learning through their allocation of work and support of novice workers.
- 2) The quantity and urgency of the work in hand at the time. This was a major issue in hospitals where work overload almost overwhelmed novice nurses, while at the same time reducing the amount of support they could get from more experienced colleagues; and was sometimes important in engineering, if a company was undergoing a fallow period that limited the supply of challenging assignments.
- 3) Periodic decisions made by managers in which learning needs might or might not have been considered. This was relevant when allocating novices to audit teams, nursing shifts or medium term engineering tasks.
- 4) Decisions made by more experienced colleagues with delegated authority, who were currently working with the novice, and were probably best able to judge the appropriate level of challenge if they thought it was important.

Whether these decisions benefited the learning of the novice professional depended on the disposition, imagination, competence (in making these kinds of decisions) and available thinking time of those who made them.

The factors affecting individual learning in the workplace are important in considering the practical enablers of and barriers to learning, which we summarise in a wider context in section 4.8 with a table listing factors that help or hinder learning.

2.3 The role of the manager in supporting learning

This section follows up the implications of the previous two sections, then moves on to consider the role of line managers in the longer term development of those they manage. These roles are complementary and the optimal balance between them will vary with the context. As organisations focus increasingly on learning which takes place on or very near to the job, so their attention has concentrated on the role of the line manager as a facilitator of learning. In many ways the responsibility placed on line managers as agents of the organisation in matters of skills and learning is the single strongest plank of their learning strategies. It is part of a much wider move to extract the HR or training function from delivering quite so much in terms of people management and placing this responsibility back onto the line. So managers are left much more to use their own initiative to identify learning needs at team or unit level.

Our typology of learning modes in section 2.1 indicates how learning opportunities in the workplace depend on both the organisation of work and good relationships. This is an

area where managers and supervisors can play an important role in promoting and enhancing the learning of those whom they manage, both individually and collectively. One major obstacle is that knowledge of workplace learning is conspicuously absent from most workplaces, yet most of the required behaviours are within most workers' capability and simple common sense. Moreover, much of what is needed can be done by people other than managers. The manager's role is not to do most of the learning support themselves, but to set the climate, encourage their staff to take on this role as an integral part of their working responsibility and include the facilitation of learning in their management of performance.

To fulfil this role managers need to know that:

- Being over-challenged or under-challenged is bad for learning and morale. So providing an appropriate level of challenge is important for developing confidence and making good progress. Hence this needs to be given attention when allocating and structuring the work of individuals and groups. When this is not under the control of the managers concerned, they should discuss it with their immediate peers and draw it to the attention of their own managers.
- The quantity and quality of *informal learning* can be enhanced by increasing opportunities for workers to *consult* with and *work alongside* others in teams or temporary groups. Hence good opportunities are needed for meeting and working with others to develop mutual trust and cooperative relationships.
- They may need skills in conflict resolution and addressing bad relationships that threaten the group climate and/or achievement, and to consult others for a second opinion or mediation if they themselves are directly involved.
- Support and feedback are critically important for learning, retention and commitment. Feedback is most effective within the context of good working relationships, and the rapid feedback essential for short-term learning is best provided by people on the spot. Hence it is important for managers to develop a positive learning culture of mutual support both among individuals and within and across work groups.
- More traditional feedback on progress, strengths and weaknesses, and meeting organisational expectations, is also needed; and this is discussed at some length below.
- Upsetting feedback, anxiety about one's status or performance, client behaviour, relationships or events outside the workplace can all influence the emotional dimension of a person's working life; and this may require ongoing attention for a period. The manager needs to signal their awareness and to check that they are receiving appropriate support.

The role of line managers in supporting learning is quite complex. It includes identifying skill and learning needs at both individual and group level against their understanding of what performance should look like. It also embraces discussions with individuals about their own work and career aspirations and the extent to which the organisation can

support these through learning opportunities inside or outside the organisation. Where the individual or team needs learning support it is up to the manager to think about whether this should be in the form of a course or through on-the-job support. For the former, the setting of training objectives and decisions about how to procure training would also often rest with the manager, ideally in discussion with a training professional. For the latter, the manager will either have to do the on-the-job coaching themselves, or find someone else to do it. Managers are also expected to make an input into learning evaluation and to assess the impact which learning has on job performance. The deceptively simple phrase ‘manager as coach’ does not really unpack either the complexity or the scale of learning which is often needed in a team.

Workplaces are complex interpersonal environments, where managers need to be well-informed about relationships and personal or collective concerns without being unduly intrusive. They also need to delegate and to work through other people as well as by direct action. Otherwise they will never have enough time to realise their good intentions and those they manage will have less opportunity for self development. It is increasingly recognised that frequent informal conversations with individuals and small groups create good settings for preparing people for coming issues, listening to their problems and concerns, seeking their advice, asking them to consult others about a problem and come back with suggestions etc. In this context their personal interests need as much attention as the collective interest, if they are not to feel exploited. This means being supportive both when they have personal problems and in developing their future careers.

The IES Report, *Managers as Developers of Others* (Hirsh et al., 2004), was based on managers’ roles in developing their workers in four organisations, two in the private sector and two in the public sector. Its data was collected from interviews with *givers* and *receivers* of *good* or *bad development* support; so it was designed to investigate relationships between pairs of people rather than groups and to focus on ‘development’ which may be taken rather more widely than job-related ‘learning’. They found that *good development* was delivered through a supportive relationship, sometimes short-lived but often over a period of months or years and was typically characterised by the following features:

- Managers set a *climate* in which they are easy to approach, and where development is an important part of working life.
- They build *developmental relationships* with individuals in their teams and more widely. These relationships are often fostered by frequent, informal conversations about work, listening to concerns and the offer of positive support.
- Good development support is quite *focused* through a clear, shared analysis of development needs, frequent review and honest but constructive *feedback*.
- The delivery of development is through a wide range of learning methods tailored to individual needs. They often engage in *informal coaching*, make good use of formal training offered by the organisation, and focus heavily on finding the *right kinds of experience* both within the job (often through delegating developmental tasks) and outside the job (through projects etc.).

- They offer *active career development* and work to help individuals have a realistic sense of their own potential and readiness for possible job moves. They see the individual in the context of their previous work experiences and their interests and obligations outside work.

Many of the individuals in this study reported feeling more confident and more motivated at work as soon as someone started talking to them seriously about their development. They cited specific instances of how this increase in motivation had led them to improve their work performance even before any coaching or skill development had taken place. So it seems that attention to development in the workplace impacts on performance both through improving the capability of individuals and also through improving their motivation and engagement.

Another study examined the views of employees in large UK organisations about career development discussions (Kidd et al., 2004). Only seven per cent of the discussions which employees found useful in their career development took place in the formal setting of appraisal. At least half were informal, i.e. not part of any HR or management process. The key to an effective career discussion was combining a high level of mutual trust with challenge and information-giving. This gave employees a better sense of direction, increased self-awareness and more confidence; and led to concrete actions by both parties.

A survey by the Career Innovation Group (Winter and Jackson, 2004) asked over 700 high performers in a small sample of large, mostly global, organisations to comment on the conversations they had at work which had high impact on them. Not surprisingly, these high performing employees are the kinds of people who get a lot of attention, and they had a quite a lot of conversations about their work, especially with their managers. However they were not always getting the types of conversations they most needed:

- They had far more high impact conversations about their performance than about their development.
- The lack of development conversations was a major source of dissatisfaction which also correlated with intention to leave. The big conversation gap in relation to development was about career development (especially future career opportunities and development planning for the future) rather than skills and training for the current job.
- 40 per cent of respondents had an issue about work which they had no opportunity to discuss. These were nearly three times more likely than other respondents to be planning to leave the organisation in the next twelve months.

The study concluded that conversations about performance which do not also address development for the future do not engage high performing employees. In other words ‘the best leaders are those who address performance and development together’.

All three of the studies above suggest that semi-formal discussions may be helpful, i.e. the conversation itself is planned, but its structure and agenda are not over-prescribed.

They also support the need to talk about development in a holistic way and not just through a list of skills or competencies related to the current job.

We conclude that managers have a major influence on workplace learning and culture that extends far beyond most job descriptions. Doing nothing about learning and development will have a strong negative effect. Thus managers need (1) to have greater awareness of the modes through which people may learn in the workplace, (2) to recognise and attend to the factors which enhance or hinder individual or group learning, and (3) to take the initiative in the longer-term development of their staff. Preparation for this role should be given much greater priority in management development programmes, incorporated into qualifications for managers and supervisors, and included in the appraisal of all managers. The justification for giving this such high priority is that what is good for learning is also good for retention, quality improvement and developing the skills and people that will be needed in the future.

2.4 Transfer of knowledge between contexts

Our definition of knowledge transfer is ‘the learning process involved when a person learns to use previously acquired knowledge / skills / competence / expertise in a new situation’. This process may be quite simple if the new situation is very similar to some of those previously encountered; but it is likely to be long and very challenging if the new situation is complex and unfamiliar. In more complex situations the transfer process typically involves five interrelated stages:

- 1) The extraction of potentially relevant knowledge from the context(s) of its acquisition and previous use;
- 2) Understanding the new situation, a process that often depends on informal social learning;
- 3) Recognising what knowledge and skills are relevant;
- 4) Transforming them to fit the new situation;
- 5) Integrating them with other knowledge and skills in order to think/act/communicate in the new situation (Eraut, 2004d).

None of these stages are simple and, although they are in a logical order, there is usually a lot of interaction between them.

Salomon and Perkins (1998) made a distinction between forward-reaching and backward-reaching kinds of transfer. The forward-reaching approach anticipates that certain kinds of knowledge will be useful in the future, and is most likely to occur in education and training contexts. Nearly all the taught components of professional and vocational education are intended for future use at work; but the evidence that this happens as intended is often disappointing. Backward-reaching transfer is required when one faces a new situation and deliberately searches for relevant knowledge already acquired. This is very likely to occur with knowledge previously used in fairly similar contexts, when its relevance is quickly recognised; but committing time to searching for previously taught knowledge is rare unless someone has a memory trace that they can follow up quickly. The discourse and culture of the workplace are so different from most education and

training environments that persistent searching for what is perceived as ‘past knowledge’ is very unusual. A major reason for this lack of commitment to exploring knowledge from one’s past is a general failure to understand that transfer is a learning process, which often requires a lot more time than most people expect.

When transfer is from initial qualification programmes in Higher or Further Education, the learning problem is exacerbated by the difference between the forward transfer discourse of higher education and the backward transfer approach expected in the workplace. Formal education tends to assume that simple recognition of what it teaches is all that is needed; so it attends mainly to stage 1, even though perhaps half of its students fail to transfer knowledge from one HE course to another. It may give some attention to stage 3 if students are asking for it, but not in any systematic way. Employers may give some attention to stage 3, but take stage 2 for granted, when they argue that knowledge from higher education should be ‘ready to use’. Thus both cultures not only ignore the very considerable challenges of stages 4 and 5 but deny their very existence! This failure to recognise the nature of the further learning required to make education more useful can only be described as disastrous. The previous sections of this chapter were designed to address this major problem, and were based on a mixture of the good and bad examples encountered in our research.

The problem that remains is that of how best to help those who have learned knowledge appropriate for their field of work to use that knowledge in a range of potentially relevant situations. Before they start they need first to establish which areas of knowledge are relevant to a particular case or situation, second to focus more precisely on what knowledge is needed for a particular investigation, decision or action, then finally to ascertain how that knowledge is interpreted in a manner appropriate to each particular situation and context.

Establishing which areas of knowledge are relevant is not as simple as it seems. When teachers in education settings spend time discussing how the knowledge they teach relates to practice, a large collection of potentially relevant knowledge can be quickly assembled. But who uses which parts of it, why and when? There is a marked contrast between the very large number of knowledge areas deemed relevant by those who teach them and the very limited number of knowledge areas that can be taken into account at any one time. The workers concerned have to assess the priority to be accorded to each particular area of knowledge in each particular situation; but in practice patterns of attention will soon be developed and only some knowledge areas will even be considered. The greatest difficulty at this stage is for experienced workers to recognise knowledge which is embedded in their practice but no longer explicitly discussed. Recognising what knowledge one needs in any particular situation is mainly learned through participation in practice and getting feedback on your actions; and many aspects of one’s knowledge repertoire remain dormant until triggered by a very specific aspect of the situation.

Occupational qualifications are no longer considered as qualifications for a lifetime, nor are they regarded as preparation for only one or two years of work. The knowledge resources that qualifiers take with them into the workplace have to last longer than that;

so they must relate to a reasonable range of jobs, roles and workplaces. However, most of these knowledge resources will not become useful until they have been further transferred and re-situated in one or more working contexts. Hence knowledge perceived as irrelevant in the workplace may not necessarily be irrelevant; those who still possess it may not yet have learned how to use it in a new context. With these considerations in mind, the selection of content and modes of learning for programmes intended to provide knowledge resources for a particular occupation should be conducted with great care, and the reasons for the selection should be public and subject to review.

Learning in education or training settings cannot be substituted for learning in workplace settings. Practice components of programmes have to be authentic. However, learning to practise and learning to use knowledge acquired in education settings do not happen automatically. The conclusions we can draw from the above discussion are that:

- Learning to use field knowledge in practical situations is a major learning challenge in its own right – it is not a natural consequence of learning knowledge on its own and practice independently of any critical questioning of its appropriateness and effectiveness.
- Such learning requires both time and support. Learning programmes rarely allocate any time to this form of learning, but just assume (wrongly) that it will occur spontaneously.
- Not only has little thought been given to the kind of support needed for this kind of learning, but there is rarely any clarity about who is responsible for providing it.

Even the best-delivered company training encounters similar problems if its learners get few opportunities back in the workplace to learn how best to use what they have learned, before they have forgotten it or become disillusioned. We noted in section 1.5 that most job performances involve the integration of knowledge of several kinds from several trajectories, all of which need to be fine-tuned to fit the new context; and that requires time and support in the workplace itself. There are two different scenarios: those where the relevant expertise is already present in the workplace and therefore, in theory, available to be shared with those returning from the course; and those where the workplace is importing new expertise. In the first case, the key lies in the allocation and structuring of the work. Course completers need access to appropriate work and support. Both learners and those supporting them need to be aware of the problem of sharing tacit knowledge and encouraged to think of ways of tackling it. Supporters need to be treated as part of the training team, valued by the formal trainers, updated on any new developments and encouraged to contact other post-course mentors to discuss some of the mentoring/coaching problems involved.

If the expertise acquired on the course is new to the workplace, managers have to recognise that they need to treat it as a change process, which could affect the work of many other people beyond those sent on the course; and that not all those changes can be predicted. Managers need to know both how their work group needs to change in order to learn more intelligently, and what they need to learn in order to change more

intelligently. We return to these issues in chapter 3, where we discuss the learning entailed in innovation at group, department or organisational levels.

PART TWO: GROUP AND ORGANISATIONAL LEARNING

CHAPTER 3. The meaning and nature of work group (or team) learning and organisational learning

3.1 How can work group learning be defined and conceptualised?

Medium-sized organisations have at least three levels of organisation: individual members, work groups and the whole organisation. Larger organisations will have further levels between the work groups and the executive. Every level affects the contexts within which lower levels work and learn; but this contribution varies in both significance and explicitness. Some influences are hard to detect, others may be illusions fostered by managers seeking to avoid discussion or responsibility. At work group level, there are four possible sources of *agency*: individuals; small, possibly temporary sub-groups; the leader or manager; and the group as a whole. It is not unusual for all four to be involved at the same time, so how is it possible to understand who is learning what?

In section 1 we introduced the term *capability* to indicate what an individual can do in a range of contexts and conditions. Then we noted that the learning of individuals could be operationally defined in terms of a change in their capability, based on evidence of their performances over an appropriate period of time. We can also define the learning of a group as a change in its capability, but how do we find out what that is? The central problem is that of *attributing learning* among the four possible types of agent. The best method we can think of is to focus in turn on the four elements of practice discussed in section 1.4 – situational assessment, decision-making, actions and meta-cognitive monitoring and reflection – choose some critical and typical incidents, and then attribute the *responsibility* for each element of each incident among the four types of agent. This would necessarily mean involving the people concerned. Although they might not be unanimous, finding areas of persistent disagreement would indicate problems in the work group that needed attention, especially if they detected *interpersonal animosity* or a *blame culture*. To undertake an exercise of this type might take some time, but the issues involved are central to both individual and group performance. Moreover, a collective exploration of this kind is often one of the most productive learning experiences that a work group could undertake.

The delineation of a work group may be little more than an organisational convenience, dictated by the need for people to share a common space and/or a common manager. But in many contexts group members will be doing at least some similar or complementary work, for which closer contact could be beneficial. This suggests treating the group as a significant agent for some areas of work, and this draws our attention to the question of when a *group* becomes a *team*. The dictionary definitions of ‘*team*’ and ‘*teamwork*’ are quite loose: a team is ‘*two or more people working together*’ or ‘*a number of persons associated with a joint action*’; ‘*teamwork*’ is defined as ‘*cooperation*’ or ‘*working as a team*’. In practice, some people restrict the choice of the word ‘*team*’ to groups where

there is strong cooperation, some use it as an aspiration or a euphemism for groups that show very little sign of cooperation.

Salas et al. (1992) argue that:

Teams can be conceived to fall on a continuum. At one extreme fall highly structured, independent teams, at the other extreme fall teams, whose members interact minimally and perform individual tasks in a group context. The placement of a team is probably moderated by the task demands imposed on the team. (p. 4)

They then focus on the more highly structured independent teams:

For our purpose, a team is defined as a distinguishable set of two or more people who interact, dynamically, independently and adaptively toward a common and valued goal/objective/mission, who have each been assigned specific roles or functions to perform, and who have a limited lifespan of membership ... The central point of the definition is that task completion requires: (a) a dynamic exchange of information and resources among team members, (b) coordination of task activities (e.g., active communication, back-up behaviours), (c) constant adjustments to task demands, and (d) some organisational structuring of members. (p. 4)

To this I would add that the combined capability of a team should be greater than that of all its members acting only individually. In practice, there will usually be some areas where the group can enhance their group capability by networking or by restricting meetings to those aspects of work for which cooperation is welcome, some areas where the group fails to use relevant knowledge held by some of its members, and other areas where more cooperation could be a waste of time. Both the balance between these areas and the group's feelings about cooperation will determine whether or not to regard their group as a team.

Most of the literature on teams gives high priority to the interdependence of their members; and this is true both of teams created for a special purpose, normally from people already within the organisation, and of people who find themselves members of a work group, whose success depends on them learning to become more interdependent. In the former case members are selected; in the latter case, they are expected to change the nature of their relationship with their colleagues. In either case, the central problem is that of how groups, newly created or already in existence, can construct the collective knowledge, skills, attitudes and relationships that will enable them to develop into teams which are fit for their new or redefined purpose.

This brings us to two key concepts, which have dominated the discourse of learning at work over the last two decades, *reflection* and *transformation*. Both concepts carry a range of meanings which need to be carefully differentiated; and both can be used at the levels of individual, group and organisation, although reflection is more commonly used at the individual level and transformation at the group and organisation levels. The

development of the concept of reflection can be neatly summarised by the work of Kolb et al. (1971) and Schon (1983, 1987) and the critical literature that followed it.

Kolb's learning cycle of concrete experience, reflection, conceptualisation and active experimentation is derived from Dewey, a notable educator and philosopher. The messages it carries are the need for learners to be engaged in all four processes and to use them flexibly, darting anticlockwise and across as well as moving clockwise. While schools focus mainly on second-hand conceptualisation and a bit of reflection, workplaces tend to emphasise direct experience, a bit of reflection and very little conceptualisation in the lower echelons. Neither is well balanced nor geared to quality or innovation.

An important variation on these priorities was introduced by Revans' (1980) development of the idea of action learning, which challenged the tendency to treat experience passively rather than actively. He advocated paying more attention to actions that provided new information, i.e. intelligent trial and error, and less time on trying to understand everything before taking action, especially in rapidly changing situations. He argued that one has to interact with situations in order to understand them, and that provisional understandings can be sharpened or even transformed by interactive discussions with external peers from different contexts, who both challenge and learn from each other's experiences. Thus Revans was one of the first people to advocate group reflection, and to use external peers to challenge taken-for-granted interpretations and assumptions.

Until then reflection had been regarded mainly as a deliberative process, which demanded both time and freedom from interruption. Then Schon's (1983) book, *The Reflective Practitioner*, gave it another dimension by discussing the role of reflection in busy, rapidly changing situations, when the short time available for responses prevented more than token deliberation. Nor was it clear whether reflection in action was a form of rapid decision-making or a form of meta-cognition. Eraut (1995, 2004b) clarified the situation by suggesting that types of reflection could be usefully distinguished by using three critical variables: *purpose*, *focus* and *context*. Dewey's (1933) purpose was *learning for future projects*, while Schon introduced the purpose of *formative reflection* (Eraut's term) to improve current projects already in motion (this was also Revans' purpose). The *focus* of a reflection includes both the content, which may be emergent rather than pre-planned, and the timing, which could be retrospective, prospective or concurrent. For example a planning meeting might be a deliberative process which switched its focus between past and future thinking quite frequently, or a headlong rush to get something out for another meeting the following day. *Context* covers several variables including the people involved (individuals, pairs or groups), the time available and its implications for the mode of cognition (see section 1.4), the availability of mediating artefacts (section 2.1) and the physical environment. More attention to this wider range of options could make reflection both more critical and more practical.

Until recently the discourse of reflection has been largely confined to professional workers and managers, and has usually referred only to individuals. Perhaps the term reflection has been subsumed under the term discussion when used in group settings? If so, the use of discussion needs to be given the same cross-examination as that recently accorded to reflection, especially in the light of the much greater acknowledgement of the

social dimension of learning. Section 2.1 gave this considerable attention, noting both the importance of relationships in creating learning opportunities and enhancing learning outcomes and the particular value of learning more tacit aspects of knowledge from participation in knowledgeable groups and working alongside knowledgeable individuals.

Argyris and Schon's (1974, 1978) concept of *single-loop and double-loop learning* is fundamental for professionals, managers and organisational learning. It argues that people and groups often believe their own justifications for their actions without seriously looking at the evidence. Such actions are often coping strategies which resolve temporary situations but damage the longer-term context. Hence single-loop learning is most common when favoured routines have ceased to be effective or when feedback is restricted by a power differential. When single-loop behaviour is self-confirming but blind to the consequences, people have to use double-loop learning to escape from their single-loop fixations. This involves greater attention to evidence, looking at long-term rather than only short-term outcomes, critical reflection and discussion; and it leads to changes in previous assumptions and an in-depth reassessment of one's problematic practices. Argyris and Schon called this process 'reframing', Mezirow (1990) calls it *transformational learning*, and there is also a parallel literature on *transformational management*.

Section 3.2 discusses issues related to workers *sharing practices*, and section 3.3 discusses how and what people learn within a *team context*, and how a team can develop its own capability as an agent distinct from its members and its leader. Section 3.4 discusses *organisational learning* and section 3.5 focuses on *knowledge management* at all three levels.

3.2 Sharing practice: problems and possibilities

Workplaces are rarely homogenous. Even within a single occupation, there is likely to be a considerable diversity of background, experience and opinion. Workers' past experiences of family, community, education and other work contexts will influence their current practice, discourse and identity; but their current expression of these attributes will also depend on their current participation and positioning in workplace relationships and working practices. Moreover, individual capabilities within more complex or varied areas of work will have different profiles as workers with different aptitudes, personalities and opportunities become more proficient in some areas than others and relate better with some colleagues and clients than others. Some are more gregarious than others, some are more confident, some are more ambitious.

Discourse about work covers not only individual or cooperative practices and the allocation of tasks and duties but also discussions with colleagues and possibly also with customers, clients or suppliers. Such discourse serves several different functions: seeking or communicating information, seeking or providing practical or emotional support, developing relationships with colleagues and clients, preserving one's autonomy, restraining or expressing one's feelings etc. It also varies greatly with the setting: one-to-

one, small group or semi-public; whether or not one is doing other things at the same time; the time available; and the level of mutual trust between the participants.

Useful exchanges of knowledge and information are sometimes the main purpose of the discourse, but sometimes only a by-product. They are never free from the wider context of interpersonal relationships, close or distant, positive or negative; and are unlikely to be interpreted only at face value. Two very practical problems are the time it takes to establish the relationships of trust that are so important for mutual learning, and the setbacks caused by changes in the membership of working groups. In the absence of any existing workplace relationships, newcomers seeking help or information are most likely to approach people of similar status or people with limited power.

It is important to recognise that when one takes into account practitioners' possibly negative perceptions of their workplace climate, its micro-politics and its readiness to engage in mutual criticism, there may be good reasons why they do not want to communicate more information about their practice than is essential. The art of discourse about practice then becomes one of establishing affinity with colleagues through work-related discourse and giving the appearance of being generally cooperative, without giving anything away that might increase one's vulnerability.

'Learning to talk to clients or colleagues or managers may be at best a semi-conscious process, during which the latent functions of the discourse are not revealed and may even remain hidden from the participants. For example, the manifest function of discourse could be to consult and inform clients, to keep colleagues aware of your actions and to render account of your actions to managers. The latent function may be to keep clients happy while asserting the professional role, to maintain good relations with colleagues while preserving freedom from their influence, and to tell managers what they want to hear while keeping them off your back. To serve the manifest function will often require congruence between what is said and what is done; but this may constrain the latent function.' (Eraut, 2000a).

Although presented in individual terms, such discourse is primarily a social characteristic of many workplaces, into which newcomers are rapidly socialised. In many settings discourse helps workers:

- To provide a defensible account rather than a description of their actions
- To create an impression of control over situations which inspires confidence in themselves and other people
- To preserve personal autonomy of action.

Two undesirable consequences of this discourse are that:

- Uncertainty and risk-taking are disguised rather than shared
- Overt sharing of information serves to sustain a power-sharing equilibrium rather than communicate useful knowledge.

This discourse is often taken for granted rather than consciously developed and sustained; and unlike explicit training discourse, it is strong on collective protection but vague on substantive content.

For all the above reasons, one should expect to find variations in the practices of individual practitioners in the same workplace, which are not always reflected in their discourse about those practices. Moreover, because that discourse serves many purposes other than the exchange of information about practice, we should not assume that practices and the discourse about those practices are well aligned. What is said and not said about practice may tell us more about relationships at work than about practice.

Another important factor affecting such discourse is the role of tacit knowledge in many areas of professional practice. This limits what people are able to say, as well as what they choose to say, though the two are not unconnected. While pattern recognition and routinised actions are features of tacit knowledge often associated with individual experiences, the possibilities for deeper conceptualisation of practice that might lead to the ability to discuss them more explicitly are constrained by the absence of any discourse that might trigger reflection or enable any productive discussion. Thus tacit knowledge and deceptive discourse are two, mutually reinforcing, aspects of workplace culture.

Given the many challenges described above, let us now explore the possibilities for sharing practice, whilst recognising that these will depend on relationships, local discourse and culture, and the aspects of practice accorded prime attention. One immediate problem is that positive relationships and useful discourse take time to develop. Possible starting points include coaching each other on areas of skill where their experience is unequal, and sharing opinions on difficult cases. In the latter option there is the possibility of consulting further people if they disagree, or if both practitioners feel uncertain about the best course of action. Indeed, developing the habit of discussing issues with a 'buddy' before consulting a manager or supervisor is an excellent way of fostering good relations, learning to frame problems for consultation and constructing a more communicative common discourse. This should gradually develop the ability to consult more widely, enhance the disposition to consult and expand the circle of workers with strong mutual relationships.

Another strength of working as a pair is that mutual observations of each other's interactions with colleagues, customers or clients will communicate much more about their practices than could be revealed in any discussion. As mutual communication becomes more effective, exchanges about clients may become more informative; and it becomes possible to pass on less clearly substantiated concerns and hunches without being misunderstood.

A different approach is to convene group discussions about cases, aspects of practice or even processes and systems. These are more difficult to arrange than meetings between pairs, but they are important for developing teamwork and ownership of the policies and

collective practices of working groups. Many group leaders and managers lack the skills for organising such events, and genuine participation by all those present is difficult to achieve. The initial disposition towards constructive participation can be enhanced by earlier events of a purely social nature and also, we would argue, prior experience of discussing the issues with one or two close colleagues.

While it is possible for pairs of experienced colleagues to understand and learn from each other's practice by a combination of discussions and working together, without even attempting to make their tacit knowledge more explicit, the same assumption cannot plausibly be extended to a group of practitioners with few opportunities for mutual observation. So we have to consider ways of communicating at least some tacit knowledge if important aspects of practice are to be shared. Approaches to sharing tacit knowledge that we have used or encountered in the literature include:

- Demonstrating skills with a voice-over commentary – this may not be an authentic account of normal thinking in action but can still communicate much useful tacit knowledge
- Discussing common episodes at which the participants were co-present
- Recordings of episodes, with the possible addition of a voice-over commentary (Holmstrom and Rosenqvist, 2004)
- Describing incidents or telling stories, followed by discussion (Fairbairn, 2002)
- Discussing cases and/or problems, real or fictional
- Use of mediating artifacts as suggested in section 2.1.

Over time, it also becomes possible to develop new vocabulary and practices for discussing expertise, and gradually to introduce concepts and theories that may help people to make more sense of their experience.

Our own interview-based research on mid-career learning in the workplace (Eraut et al., 2000) found that the capability to tell was linked to people's prior experiences of talking about what they knew; and that talking more explicitly about their knowledge at work was more likely to occur when there was:

- A climate of regular mutual consultation encouraging those consulted to describe what they know; or
- A training or mentoring relationship in which explanations were expected, sometimes of cultural or behavioural norms as well as more technical matters; or
- An informal relationship leading to work-related discussions of information out of hours, when more 'provisional' and 'riskier' comments might be made which conveyed some meaning but were not understood as pretending to be comprehensive or accurate; or
- A crisis, review or radical change in practice, which caused people to exchange opinions and experiences, sometimes also to making values more explicit.

Those experienced in facilitating the sharing of tacit knowledge are constantly surprised by the diversity of practice at the level of detail: communities of practice are rarely as

homogenous as is often suggested, and the level of mutual learning is often very low. Expanding the boundaries of explicitness is possible in most situations, though not necessarily popular. However, there remain many questions about how far it can go. It appears to require considerable expertise in knowledge elicitation to capture significant aspects of tacit knowledge; and whether those aspects add value to a practice team or organisation without further knowledge that still remains tacit is a matter for empirical enquiry. Often close inspection of examples cited in the literature reveals that processes other than the conversion of tacit knowledge to explicit knowledge were involved. For example, most of the examples in Nonaka and Takeuchi (1995) appear to describe a process of making personal knowledge more public. The knowledge involved was already explicit but neither its existence nor its relevance had been recognised.

Clearly a degree of explicitness is needed not only for improving performance but also for clarifying the linkage between actions and outcomes, which underpins practice and enables one to take responsibility for one's actions. But the constraints on making tacit knowledge explicit are formidable, and much of the discussion about it in the literature is ill-informed if not naive. The probability is that 'thick' tacit versions will coexist alongside 'thin' explicit versions: the thick version will be what happens in practice, the thin version will be used for justification and when discussing practice or training.

The implications of this analysis for any kind of teamwork are that:

1. A climate of mutual trust, both lateral and vertical is essential for the sharing of practice
2. Even when there is trust, sharing requires time and opportunities
3. Working interdependently with others is a learning challenge, for which some external support may be needed, because close cooperation in complex situations requires that those involved have:
 - mutually developed understandings that permeate their discourse
 - mutual adaptation and collaboration in rapid response situations
 - mutual awareness of differences of perspective and expertise that broaden and deepen their problem solving capability
 - agreed processes for making decisions for which the group will be deemed responsible.

3.3 Learning within groups and learning by groups

The majority of employees *work within a group* of some kind and, even when their work is mainly individual, the group provides an important context for their *sense of purpose*, their *identity*, their *self-confidence* and their *learning*; and these factors interact in a

variety of ways (see chapter 2). Moreover, even when their group has a very limited role in the organisation of their work, its impact on their working and learning can still be significantly positive or negative. All groups need *good relationships* between their individuals and sub-groups for their performance and learning to be maximised, and opportunities for *sharing information* are an important part of this, especially for those who visit their home base only weekly or monthly, if at all. Group work becomes more important still when there is some *sharing of knowledge* between individuals and sub-groups (see section 3.2); and this could be the optimal position for many groups. Some groups, however, *work together* for some or all of their time. The significance of this working with others will depend on the level of engagement. This could involve working on the same shift, holding regular group or sub-group meetings, working alongside others, working in a range of different teams, or working in the same team for a significant period of time. Whether this results in synergy or discord is crucial for both group performance and learning.

Most of the research on learning by groups relates to groups which are intact social systems with clear boundaries and one or more common tasks to perform. In order to improve the effectiveness of such groups one needs (1) to understand group behaviour, and (2) to identify the factors that most powerfully enhance or depress its task effectiveness. The issues are clearly presented by Hackman's (1987) Normative Model of Group Effectiveness, which is briefly summarised below. Hackman starts with a broad definition of team effectiveness based on three criteria, all of which are socially defined:

- 'The productive output of the work group should meet or exceed the performance standards of the people who receive and/or review the output'.
- 'The social processes used in carrying out the work should maintain or enhance the capability of members to work together on subsequent team tasks.'
- 'The group experience should, on balance, satisfy rather than frustrate the personal needs of group members.'

He then points out that 'The challenge for researchers and practitioners is to develop ways of understanding, designing and managing groups that help them to meet or exceed these modest standards.' (ibid. p. 323)

Hackman's *basic proposition* is that the overall effectiveness of work groups in organisations is a joint function of three *process criteria of effectiveness*:

- 'The level of effort group members collectively expend carrying out task work
- The amount of knowledge and skill members bring to bear on the group task, and

- The appropriateness to the task of the performance strategies used by the group in its work.’¹(ibid. p. 323)

He then argues that, rather than trying to *manipulate* a group’s position on the process criteria, interventions should try to *design and manage* a group so that task-effectiveness group processes emerge naturally. Hence his model includes three classes of variables on each of the process criteria:

- ‘The design of the group as a performing unit: the structure of the group task, the composition of the group, and group norms that regulate member behaviour
- The organisational context of the group: the reward, education and information systems that influence the group, and the material resources that are put at the group’s disposal
- Group synergy resulting from members’ interactions as they carry out the task.’ (ibid. p. 324)

We will just focus on his conditions for supporting the group’s knowledge and skill:

Design of the group

- Individual members have high task-relevant expertise
- The group is just large enough to do the task
- Members have interpersonal as well as task skills
- Membership is moderately diverse

Organisational context

- Relevant educational resources
- A delivery system to make those resources accessible to the group

Group synergy

- Minimise inappropriate weighting of member contributions (this advice would seriously challenge medical power in healthcare).
- Fostering collective learning (ibid. p. 326–8). Two key aspects of this that rarely surface are members’ beliefs about teamwork itself (Miller et al., 2001) and the need for shared mental models, especially in fast response teams where members have to anticipate their colleagues’ actions (Cannon-Bowers et al., 1993).

¹ This refers to how the group planned their work, i.e. who did what, with whom, and when?

One clear implication of this analysis is that potential members of newly created groups need to be persuaded rather than allocated, and should not be treated as needing formal training for the purpose unless they request it. The problem for the organisation is to design a context that both attracts and challenges them and to give them sufficient support for them to feel confident about the prospects of the new group. The education aspect has to be flexible and negotiable; and in our view the most important learning issues are likely to concern how new members learn from each other and the organisation's capability to set up and support such groups.

An IES report on Learning from Cross-Functional Teamwork (Kettleby and Hirsh, 2000) described such teams as 'typically composed of individuals who have a functional home base (*eg* engineering, personnel, marketing, *etc.*) but who work collaboratively on issues or processes requiring diverse resources'. The teams in their study were created for one of the following reasons:

- Innovation and new product/service development
- Problem-solving across traditional organisational/functional boundaries
- Integration of systems typically via process re-design/re-engineering
- Coordination into a 'one-stop shop' or a single point of contact or delivery.

Two important distinctions were:

1. Between those teams expected to 'in some way shape the future of the organisational strategy and development of the business', i.e. to generate new knowledge or synergistic learning; and those responsible for largely operational business processes, with an emphasis on the application and delivery of shared knowledge.
2. Between teams integrated into the organisation as a semi-permanent structure and those organised as a largely separate project.

There was no prior expectation about *how* or *what* group members might learn, nor did group members find it easy to answer questions about learning without some prompting. The questionnaire asked which of four alternatives enabled them to learn the most. Forty-three per cent answered 'direct transfer from experts' and about 20 per cent chose each of the alternatives: 'picking things up from observing diverse others in action, collective problem-solving and experimentation', and 'consolidating prior experience and re-framing new insights'.

When asked about the knowledge and skills acquired, about 40 per cent chose 'personal effectiveness and learning about self' and 'learning about organisational interdependence'; and about 20 per cent chose 'learning about other specialisms'. This

finding is interesting because organisations often put people in such teams to learn about other functions, whereas individuals felt their most important learning was broader understanding about themselves or the organisation. Attempts to inquire about team learning were unsuccessful, and it appears that neither the team members nor the researchers had an operational definition to guide them.

Other problems detected by the researchers included selection of members without considering interpersonal skills, difficulties between members and their home functions, limited preparation for this kind of special teamwork and little awareness of change strategies among those who were expected to precipitate change. Some individuals were very disappointed that their organisations neither recognised nor utilised their new capabilities when the work of the team came to an end. They saw 'going back' to their old jobs as wasting their new knowledge and skills.

The health service is full of cross-functional groups, but most of the research reveals that few function well. West and Slater (1996) found that less than a quarter of primary health care groups were successful in building effective teamwork, and cite organisational context as a major hindrance. In particular, there are diverse lines of management, anomalous reward systems, poor training for teamwork and a lack of ongoing support for teams. Although it is generally acknowledged that teams are very important for delivering continuity of 'joined up' patient care, there seems to be an assumption that the service can be developed without developing effective teams. There are examples of successful teams in the literature, but they are not common and do not often last for long. Miller et al. (2001) studied six cross-professional teams in detail, only one of which could be described as fully integrated. Some had a central core of members and an unconsulted periphery, the others could only be described as fragmented. They also identified four organisational factors hindering team development:

Recent government policies in the late 1990s reduced the levels of stability and predictability in the healthcare environment, and during their study both communication and understanding of others' roles were compromised, allegiance to professional rather than team groups was reinforced, and the outcomes for patients were detrimental. A new key-worker role was introduced within Community Mental Health Teams (CMHT), which was contested between various professions within the CMHT, both in terms of its meaning and its allocation. This raised difficulties of communication and role understanding, and exacerbated professional defensive behaviours. As a result, team allegiance was diminished.

The diversity of the patient population with which teams had to work related to two issues. The first was the extent to which professionals were expected to work with patients outside of the designated population defined by the team. This caused professionals to prioritise their work in ways that were sometimes detrimental to work with patients within the team. This competition for professionals' time created frustration for themselves and other team members and strained team allegiances. The second issue was where teams of professionals were brought together who had very different patient

foci. Not being able to work to a shared focus raised problems in terms of communication, and knowing who was contributing in what way to a particular patient's care. Allegiances were formed around diagnoses, therapeutic interventions, or professional groups.

Team oriented structures and processes related to two aspects: the degree of collaboration across professional management, and the extent of collaborative communication structures. In the former, this applied both within an organisation and across organisational boundaries. Lack of collaboration across management structures was seen to inhibit the development of team practices and, through arbitrary decision making, to create unpredictable situations for team members, often at odds with team function. Frustration and professional defensiveness resulted. Where communication structures remained within a professional group, there were possibilities for reducing the effectiveness of inter-professional communication through professionals neglecting or misjudging others' contributions, thus reinforcing professional rather than team allegiance.

Opportunities for working closely were important in two ways. Where people were located together in order to practise, then there were opportunities for learning about each other's contribution. Working separately made this more difficult, but was compromised further if professionals had no central location where they could meet to discuss team practice and patient issues. In addition, professionals who did not work closely were denied the opportunity to engage in on-going *ad hoc* communication around particular issues, and to form social bonds that strengthened their teams. These structural issues and their associated processes had implications for the way in which teams were able to function, and as a consequence, affected patient care. Where professionals were shielded from the fallout from current policies, where the team shared a patient focus without competing priorities, where management and communication structures were shared, and where opportunities to work closely were taken, then patients were seen to benefit. Where these did not apply, then the continuity and consistency of care was compromised, referrals were seen to be inappropriate, ambiguous messages were given, and there was a lack of comprehensiveness to the decisions and actions taken in relation to patient care.

A particularly informative study of the learning of cross-professional teams was Pissarro et al.'s (2001) study of 16 US cardiac surgery departments implementing the same innovation, a new technology for minimally invasive cardiac surgery. In comparison with conventional surgery, the new procedure was 'a far more integral process in which task boundaries are more blurred and tasks are more interdependent. Thus, the technology disrupted the smooth flow of the [conventional] operating routine and required the development of new communication behaviours to enable the execution of a more interdependent set of processes.' The main outcome criterion was the *net adjusted procedure-time*, for which the period of *aortic occlusion* was subtracted; because the only significant variation was the doctor's speed, rather than that of the team as a whole. All teams attended a three day training programme before starting their first case. By the 40th case, the fastest team's adjusted procedure time was 143 minutes and the slowest team

took 305 minutes, the average was 220 minutes. The faster times both improve patient safety and save money.

What factors accounted for this variation? The fastest team was hand-picked by the adopting surgeon on the basis of their demonstrated ability to work well together, seniority was not considered. There had been previous cross-department cooperation and this was increased. The entire cardiology department was invited to a presentation at which the new system was explained and indications for referral were discussed, both in general and for the early cases in particular. Weekly meetings to discuss upcoming cases still take place. The perfusionists and operating-room nurses met to agree on the standard terminology they would use during the operation. The surgical procedure strictly followed the training model for the first 30 cases, and there were team debriefings after each of the first 20 cases. They started much more slowly than the average and reached the average speed on their eighth case. There were no changes of team members for the first 15 cases, and after that new members had to observe four cases and be mentored through two cases before being fully admitted to the group. The surgeon encouraged input and feedback from other team members in the operating room, and was described as 'willing to empower the team'. Both the ongoing attention to the learning of the team and the coordination with the other relevant departments that enabled organisational learning were rarely found in the cross-professional teams that participated in the IES and Miller studies.

We now move on to consider how teams should be created or reconstituted. Hackman (1987) divides this into four stages. The first stage involves some key decisions about the purpose of the team and whether it is needed, for which he suggests four questions that need to be answered before starting to create or recreate a team:

1. *What is the task?*
2. *What are the critical task demands? What does the group have to do to accomplish its task well?*
3. *Will the group be manager-led, self-managing or self-designing? Given the likely group members and the cultural and political realities of the situation, what would be acceptable to most parties?*
4. *How advantageous is it to assign the work to a team? How feasible is it? What are the benefits? What are the risks and liabilities? Are the advantages worth the costs?*

The second stage, *setting the performance conditions*, is 'to make sure that the group has an appropriate *design* and a supportive organizational *context*' (ibid. p. 335). His two questions for this stage are:

5. *How should the group be organised and the task structured? How can the task be designed to be as clear and as motivationally engaging as possible? What can be done to make the work more challenging and significant? How diverse should the membership be? West and Pillinger (1996) ask whether suggested members have the interpersonal skills needed for cooperative work? If not, this should*

either disqualify them or they should be offered appropriate training both before and after the group starts work. They go on to list the relevant KSAs (knowledge, skills and attitudes) under the headings of *conflict resolution, collaborative problem-solving, communication, goal setting and performance management, and planning and task coordination*. Salas et al. (1992) advocate *learning fidelity* as a key training principle. This means using a training environment as similar as possible to the operational environment including, where appropriate, the introduction of stress and pressure, which is not only critical for developing communications under stress, but also exposes those aspects of the work that are most vulnerable under stress and might require a different approach to cope with it.

6. *What contextual supports and resources must be provided?* Space, material resources, education, outside expertise, contact with other parts of the organisation?

The third stage, forming and building the team, has just one question:

7. *How can a team be helped to get off to a good start?* ‘Building a competent work team involves helping members (1) develop an appropriate *boundary* for their group, (2) come to terms with the *task* they will perform, and (3) begin to develop the *norms* that will guide behaviour in the group’ (Hackman, 1987, p. 336). Team leaders in particular may need some coaching in how to continue to develop group learning without disempowering other members of the group. Hackman also argues that task redefinition is a natural part of the group performance process, and that any possible conflicting objectives within or across tasks should be discussed and resolved before any conflicts or misconceptions can arise. Norms and roles also need to be made explicit to prevent the influence of forces of which members are unaware. An important omission from this list concerns the need for the organisation to listen to teams when they find organisational practices preventing them from improving their performance. Otherwise the consequent disillusion may reduce their performance still further.

The final stage, providing ongoing assistance, has three further questions:

8. *How can opportunities be provided for the group to renegotiate its design and context?* This concerns the interface between the group and organisational levels.
9. *What process assistance can be provided to promote positive group synergy?* Cannon-Bowers et al. (1993) discuss the role of shared mental models in predicting the needs of the task and anticipating the actions of other team members in order to adjust their own behaviour appropriately in fast-moving situations. The greater the dynamic of the task and the flexibility required from team members, the more important shared team models become. Improving coordination is best provided on the job, possibly by coaching.

10. *How can the group be helped to learn from its experiences?* (Hackman, 1987, p. 337). Salas et al. (1992) argue that the most important factor to consider is the quality and timing of feedback on both individual and team performance.

3.4 How do we think about organisational learning and learning organisations?

The next question we need to address is that of what people mean when they use the terms ‘organisational learning’ and ‘learning organisation’. The term ‘organisational learning’ was introduced in the 1970s to describe the development of, and continuing changes in, organisational behaviour. Argyris and Schon (1978) described it as both an agency with a task system and a cognitive enterprise with a complex system of norms, strategies and assumptions which constitutes its *theory of action*, the way we do things here. In theory, appropriate changes are made if the intended outcomes are not achieved, but their effect will depend on the accuracy and timing of the information received, and how that information is interpreted. Hence Duncan and Weiss (1979) defined *organisational learning* as the process by which knowledge is developed about action–outcome relationships between the organisation and its environment. Argyris and Schon (1978) would also add *double-loop learning*, the second order development of knowledge about previous organisational learning and the factors that helped or hindered it.

Daft and Weick (1984) took this problem still further in their explanation of the diverse ways in which organisations obtained knowledge about their environment in terms of (1) management’s beliefs about the analysability of the external environment, and (2) the extent to which the organisation intrudes into the environment to understand it. When the environment is deemed to be analysable, the organisation seeks for formal data, either passively from available sources or actively by surveys and data gathering in the field. When the environment is deemed to be unanalysable, the passive organisation resorts to hunches and seeks for informal data while the active organisation uses experiments or pilot testing.

If we turn our attention to the internal environment, there is a balance to be found between the technical knowledge acquired through training, the practical knowledge acquired through experience, and the interpersonal skills in acquiring relevant knowledge from customers, suppliers or other relevant organisations, when considering the knowledge needed to inform decision making at different levels and in different parts of an organisation. While at the strategic level judgements about marketing, technical innovations, organisational capability and financial implications have to be considered in relation to each other by people who can respect each other and work together. Organisational learning depends on the organisation’s ability to handle its existing knowledge, its acquisition and use of external knowledge and its priorities for developing new knowledge through learning and recruitment.

In the UK the idea of the *learning organisation* has been developing since the mid-1970s, especially through the work of Pedler, Burgoyne and Boydell. In *The Learning Company*

(Pedler et al., 1991) they define the learning company as ‘an organization that facilitates the learning of all its members and continuously transforms itself’. So the first central idea is that increasing the amount and frequency of individual learning in organisations can somehow lead to positive change in the organisation as a whole. Pedler et al. provided no particular model of how this might happen, but preferred to give what they called ‘glimpses’ which illustrate what it may look like to reflect learning throughout the activity of an organisation. Many of these glimpses are taken from real organisations.

So the second idea is that learning organisations do not actually exist in a fixed form, but that the learning organisation is more of an *ideal type* than a specific model or ‘recipe’. Garratt (1999) also sees the learning organisation as ‘more of an aspiration for a continuous process rather than a single product’ – more of a way of travelling than a point of arrival.

Meanwhile Senge (1990), who had become the best-known US proponent of the ‘learning organisation’, explored a third important idea – how you move beyond an organisation in which people learn a lot all the time to an organisation in which individual learning is shared and taken up in the way things are done generally. Only in this sense can we see organisational learning as something additional to individual learning. Senge is admirably clear that the team forms the most critical link between individual and organisational learning. Team learning is ‘where the rubber meets the road; unless teams can learn, the organization cannot learn’.

As ideas about the learning organisation have been developing there has been a strong and parallel debate about organisational capability and human capital (Mayo, 2001). One of the strands linking the learning organisation literature with the human capital literature is the need for organisations to use relationships between employees to do things which individuals could not do alone. So we see learning as affecting both the human capital of the organisation (what individuals can do) and its social capital (what they do through working together). Organisations can increase their human capital through recruitment. Social capital is much harder to replicate and therefore is a source of competitive advantage. So a fourth important idea about organisational learning is that the way organisations take up learning and build it into their mainstream activities is through *relationships* between people at work.

Ortenblad (2002) derived a typology of the idea of a learning organisation from a detailed textual analysis of a wide range of literature published by 12 authors during the 1990s, which he interpreted in terms of four distinct types of understanding. His first construct is *Organisational Learning*, where he follows DiBella (1995) in defining organisational learning as concerned with the processes of learning in organisations. This omits many of the aspects of organisational learning discussed above. However, most of the authors he cites seem to regard organisational learning and the learning organisation as parallel concepts with some overlap. For example:

Easterby-Smith & Araujo (1999) describe the organisational learning literature as dealing with observation and analysis of processes involving learning in organisations. They describe the learning organisation literature as action oriented, focussing on finding tools that can help to increase the quality of the learning processes. Argyris (1999) describes the organisational learning literature as sceptical, scholarly and academic and the learning organisation literature as practice-oriented, prescriptive and promulgated by consultants and practitioners. (p. 214)

His second construct is *Learning at Work*, the main subject of this paper. In addition to the modes of learning discussed in section 2.1, he includes Total Quality Management and Action Learning.

The third construct is *Learning Climate*, which is associated with better conditions for learning and space for learning that is not controlled, only facilitated. None of the citations give any further detail or examples, so this construct is distinctly under-defined. There is no mention of social partners, such as Trade Unions who normally press for more learning and sometimes represent workers' long-term interests in learning both intelligently and accurately. Even more serious is the absence of any discussion of the emotional dimension in this paper, which has an important influence, positive or negative, on the learning climate at both workplace and organisational level (see the excellent paper by Tran (1998) entitled 'The role of the emotional climate in learning organisations').

Learning Structure is the fourth construct, which in this context signals a flatter organisation, flexibility, and decentralisation. However the examples he cites seem to be more about empowerment, which could be included under Learning Climate; and there are also hints of work intensification.

In spite of these concerns, his comparison between the meanings prioritised by his chosen 12 authors and those chosen by ten respondents he consulted, who were members of a networked Forum for Learning Organisations, most of whom worked in personnel, is of particular interest. His analysis of the meanings prioritised in the texts showed that ten of the 12 authors included Learning Climate, eight included Organisational Learning, six referred to Learning Structures and only five referred to Learning at Work. His ten respondents' choices were more selective and entirely different: Learning at Work was highest with six, followed by Learning Structures with five, and the lowest was one for Organisational Learning. Our interpretation of this evidence would be that the authors tended to attach the label to innovative organisations they admired (espoused theories), and that the respondents from personnel focused almost entirely on individual learning (theories in action).

Two recent studies in the Netherlands explored the concept of a '*corporate curriculum*' as a basis for understanding and prioritising organisational learning. This comprised five

learning functions, which previous research had indicated to be influential in developing knowledge productivity: *subject matter expertise, problem solving, reflective skills, interaction and communication, and self-regulation*. First, Van Lakerfield et al. (2000) surveyed 271 professional workers and 110 managers/quality managers/training managers from 48 institutions in the Health and Welfare sector. They agreed that these functions related positively to the improvement and innovation of work processes and services, and sufficiently positively with one another to be linked together. *Reflection, interaction and self-regulation* seemed to be the most powerful; and *reflection*, in spite of being the most adversely affected by lack of time, emerged as the single most crucial function for developing capability to improve and innovate in the day-to-day work environment.

Keursten et al. (2004) conducted 16 case studies in Western Europe and Asia to investigate the characteristics of work environments that were successful in producing incremental improvement and radical innovations. Their conclusions were as follows:

- Innovation occurs when teams develop sufficient learning skills, good working relationships and positive values and beliefs, and are supported by an encouraging leadership, a flexible organisational structure and abundant autonomy.
- Creative turmoil seems to drive the innovation process. Motivation comes from the urge to create something new. Experimenting with new ways of working brings both energy and new perspectives.
- The substance of the innovation process was provided by subject matter expertise.
- The autonomy and responsibility given to teams was crucial, but team members needed support in developing communication skills.
- Participants needed time to reflect both on what to do next and on the learning process required to support it.
- The social context is provided by the cross-functional personal contacts, care and respect and tolerance for mistakes.
- The organisation and its management have an important role in supporting these innovation teams; but it would be impossible for them to manage the process by command and control.

3.5 Knowledge management

Increasing recognition of the role of knowledge in most workplaces led to discussions about whether organisations might benefit from managing that knowledge more effectively. The process started with the conservation of documents for future use and this led to the possible creation of new documents to describe aspects of the experience of the organisation which could be useful in the future, what is often referred to as the

organisational memory. This ranged from notes and memoirs written by senior managers for their successors, and often not publicly available, to advice from workers, especially those with specialist knowledge, to help others act sensibly when they were away or not available for consultation. With the introduction of ICT and more flexible and distributed working, electronic access to this and other knowledge became increasingly important. Distance courses and an increasing number of library resources also became available electronically.

The next stage was to try and codify workers' practices in order to make it possible for others to learn them independently; and this raised many problems. Printed accounts and audiotapes posed considerable difficulty to both practitioners and potential users, because of their significant tacit dimension (see below). Even when the instructions did provide the required advice, receivers were often unable to use them. For example, in our research into the mid-career learning of professionals and technicians we found that only 20 per cent had succeeded in learning from a manual. Thus early attempts to get to grips with knowledge management led to very large, expensive and often ineffective IT systems for holding lots of documents about how to do things, which were only rarely used.

There were also some micro-political issues. Many users were reluctant to participate because they were worried that they might be replaced by younger and cheaper people. This felt very different from having an apprentice, and the majority who had not had that experience were even more worried because they were less aware of the competence gap between themselves and 'better qualified' newcomers. Another micro-political issue was the 'deceptive discourse' discussed in section 2.4 on Shared Learning.

Given these difficulties, many people have recognised that it is more appropriate to treat knowledge management as a process for sharing knowledge rather than codifying it. This process is more promising, although some of the micro-political concerns and communication difficulties are still there. Reducing the concern about revealing one's personal knowledge needs both initial trust in the other members of the group and anticipation of benefiting from other people's knowledge. These will be easier to develop if the groups are small, the manager is absent and someone with training in knowledge elicitation is present. Improving communication also depends on good relationships, and may be improved by using mediating artifacts as foci for conversations. The knowledge to be shared is not in the text and/or pictures but in the conversations around them; and that is where a facilitator, familiar with the artifacts, can be most helpful. The artifacts themselves can be narrative accounts of cases, customers and critical incidents or prototype diagrams or knowledge maps that invite detailed additions from practical experience and adaptation to fit them.

Two examples will help to explain why the outputs of a process often fail to convey the knowledge constructed by a group. When a group of people engage in a collaborative planning exercise they will typically share some of their relevant knowledge and learn a lot from each other. They may also be very enthusiastic about the plan or document that resulted. An outsider looking at the same document may find it unremarkable and wonder

why they were so enthusiastic about it. There are two possible reasons for this. One is that by discarding rejected ideas and restricting their reasoning to a few short sentences at most – a common restriction on documents of this kind – the plan looked very ordinary. The other is that the participants in the planning process regarded the final plan as a summary of a great exercise in collaborative thinking, whereas in reality it was only an aide mémoire. For them the final document contained their memories of the whole process of producing it, while for the outsider such memories were absent: the document did not capture the knowledge which went into its production.

Another example comes from research into making tacit knowledge explicit (Sternberg et al., 2000, chapter 9). One of the ‘gems’ of tacit knowledge extracted from a study of junior leaders in the US army was that there comes a stage when your men are too exhausted to be pushed any further. This could be described as a maxim which appears like a truism, but is all too easily forgotten. The authors rightly noted that this could not be taught but had to be learned from experience. I would add, however, that although the maxim may have seemed attractive because its propositional form gave it the status of codified knowledge, the most important knowledge in the situations described was how the leaders recognised the situation as being one to which the maxim was applicable. This would involve both prior experience of previous situations and tacit knowledge of the troops involved, developed through working with them for some time. Once again we find that the formal explicit knowledge product is only usable when accompanied by a cloud of tacit knowledge.

Social capital developed through relationships and networks makes such work much easier, and it may have to start with pairs or groups who trust each and share an interest in the territory being explored in greater depth, then gradually expand to include others. Learning facilitators would then look for two or three members of a group with good rapport and an inclusive rather than exclusive approach to their colleagues. At an appropriate stage members of flourishing groups might be asked to think of colleagues in other work groups who might be interested in either the same content or at least the same process. This could draw on existing social relationships, such as former colleagues who have kept in touch and still provide each other with information and emotional support or people with shared interests whom they have met on short courses. Facilitated growth in such learning groups would help to develop a more practical vision of ‘knowledge management’ in organisations.

For example, in the research reported in sections 2.1 and 2.2 we observed huge differences in the learning climate between wards in the same hospital, which could be attributed to their ward managers. The most positive managers had often developed senior nurses with the same vision for learning, who were ideal candidates for promotion to management jobs where they could begin to share their vision and gradually transform their ward. The social nature of workplace learning suggests that problem wards might be more effectively improved by importing a manager and two or three senior people with the same vision, than by any change in policy. This change would take a year or two, and the idea of ‘growing’ a new climate might be more acceptable than that of ‘transforming’ an old climate. Building new groups by introducing an effective core group of people

with experience of developing learning is probably more effective than making grand interventions.

New knowledge is likely to arise from these knowledge sharing groups and networks, so they can also be viewed as being engaged in *knowledge construction*. The recognition and wider distribution of their work will enhance the morale of the groups and their willingness to continue to learn from and work with others. The term '*community of practice*' (Wenger, 1998) is now being used to describe such groups, and it is posited that communities of practice may cut across the power structure of organisations by being relatively self-defined (i.e. you choose which communities you belong to) and self-governing (i.e. the community runs itself). Moreover, the use of ICT should help people to communicate without holding meetings so that communities of practice can be free to stretch geographically. However, if tacit knowledge plays a prominent role this will be more difficult; and it is important to recognise that the term '*community of practice*' was defined to describe communities where people learned more by working alongside each other and not by sharing codified knowledge at a distance. The possibilities and limitations of learning in distributed networks rather than groups have yet to be fully explored.

Griffiths (2004) describes BT's use of Communities of Practice, especially for the large number of employees who work outside conventional offices. BT has about 500 communities of practice with 28,000 members. These are supported in all cases by both a community owner and a community coach, with administrative support for larger communities. There is a '*community charter*' which sets the framework and guides behaviour. The coach is in many respects the heart of the community, shaping and driving the sharing and learning processes. This is a junior/middle management role that requires (and develops) skills in culture change, coaching and mentoring, plus an interest in technology. The coaches have their own network site on the intranet, with live events to boost interchange and peer learning, and a supporting library of materials. This role has evolved rapidly from being a part-time volunteer to being a mandatory title and then a recognised job title with an important part to play in influencing the business.

Another source of new practice is the *transfer of new knowledge* from one context to another (see section 2.4). This may either come with a newcomer or be imported as an innovation. In either case, being accepted and re-situated in a new context will be greatly helped by the support of a team or network, which can bring several minds to bear on the transition problem as well as providing those involved with emotional support during the more difficult problem-solving activities. There are many groups where it is almost forbidden to talk about one's previous job and potential new knowledge is wasted. The problem once more is the failure to recognise transfer as a learning process, in which the attitude of the receiving group is crucial. The same fate awaits many innovations of potential value. To adopt an innovation is not just a decision but a significant learning process for all concerned, in which the mutual interaction of the new knowledge accompanying and embedded in the innovation and the explicit and tacit knowledge embedded in the context of adoption creates new knowledge (Eraut, 2004c). The failure to recognise the need for innovations to be re-situated by creating new local knowledge,

and the learning and time this requires, is responsible for the failure of the majority of potential beneficial innovations and the early detection of inappropriate innovations.

So we see the idea of organisational learning as having moved from one of an organisation which encourages continuous learning to one which uses this learning consciously to improve and change itself; to see relationships as the way in which knowledge and understanding are shared; and to encourage those relationships to form across conventional organisational boundaries. Although organisational learning sounds like something the organisation controls, it has become increasingly clear that organisations only truly learn when they give much of that power back to individuals and self-selected groups. If managers will not allow employees to challenge and question accepted practices, or if they block employees from talking to people in other functions or departments, then the organisation will not learn. These notions of employee involvement – now so central to thinking about increasing organisational performance – also turn out to lie at the heart of organisational learning (IRS, 1993).

CHAPTER 4: How do organisations facilitate learning?

4.1 Introduction

So far we have looked at what we mean by learning, what people need to learn at work, and the processes of individual, group and organisational learning. We now turn to the challenge for organisations of creating conditions in which learning can take place and processes which facilitate it.

Employing organisations have always needed to facilitate learning. For thousands of years large organisations such as armies, civil services, banks and religious organisations have understood the importance of systematic teaching and practising of skills. Small scale craft enterprises came together through collective bodies, like the Guilds, to establish apprenticeship as a systematic preparation for skilled work. This preparation often passed on complex bodies of knowledge, as well as giving the opportunity to practise specific tasks under supervision. So there is nothing new about either formal or informal learning on or off the job.

Throughout most of the twentieth century the UK saw its economic performance as compromised by uneven educational standards and a deficit of workplace training. So for much of this period the thrust was to increase formal attention for training, often through off-the-job methods such as courses. Indeed government policy is still mostly directed at increasing participation in formal courses, especially those linked with educational qualifications.

More recently, ideas about learning in the workplace have been changing again, partly as a consequence of theories about learning which tend to cast doubt on the effectiveness of much off-the-job training. However, when discussing evolving employer practices, we have to remember that new and innovative practices are atypical. The UK is extremely patchy in its learning provision in the workplace. At one extreme we have large employers in both public and private sector working at the leading edge of learning practice, especially in management and leadership development which tends to command high interest and centralised resources. At the other extreme the UK has a weak record in industrial training and in basic workplace training which affects the international competitiveness of the UK (Leitch, 2006).

More recently the CIPD – the professional body for both trainers and HR managers – has clearly articulated the need for a shift ‘from training to learning’ (CIPD, 2005; Reynolds, 2004). Central to this shift is putting the learner at the heart of workplace learning by thinking less about the delivery of content through formal training and more about what is happening for the individual when they experience a learning intervention. Learning is seen as supporting individuals in adjusting to change, and this is facilitated by a wider range of methods, including more on-the-job training and an increase in the coaching capacity of line managers.

We start the main body of this chapter with organisational approaches to identifying skill gaps and learning needs, then we explore some of the trends in employer approaches to workplace learning. First we look at trends in formal learning, including the use of e-learning, and the use by employers of courses leading to educational qualifications. Second we look at more personalised and tailored forms of learning, most of which have evolved from innovation in the field of management development. Then finally we examine the growth of 'OD' (organisational development) and team-based learning interventions.

4.2 How do organisations identify skill gaps and learning needs?

In chapters 1 and 2 we considered various ideas about what people need to learn at work. Organisations, especially large ones, face a formidable challenge in articulating which aspects of learning are most important to business performance. They need to consider where there are gaps in capability between what the business needs and what people have already. They also need mechanisms to assign resources, both time and money, to those aspects of learning which will take priority.

Formal planning mechanisms

The identification of skill gaps and learning needs can occur at a variety of locations in organisations. In particular the organisation can consider the issues of skills and learning in a 'top-down' way, by considering the overall performance of the organisation, its current and future challenges and its plans for change. It can also work 'bottom up' from a more intimate consideration of how individuals and teams are performing. In large organisations there are a range of structures between the 'top' and the 'bottom': divisions, departments and so on. Some structures, like professional functions (IT, finance etc.), are often organised to run across business unit structures.

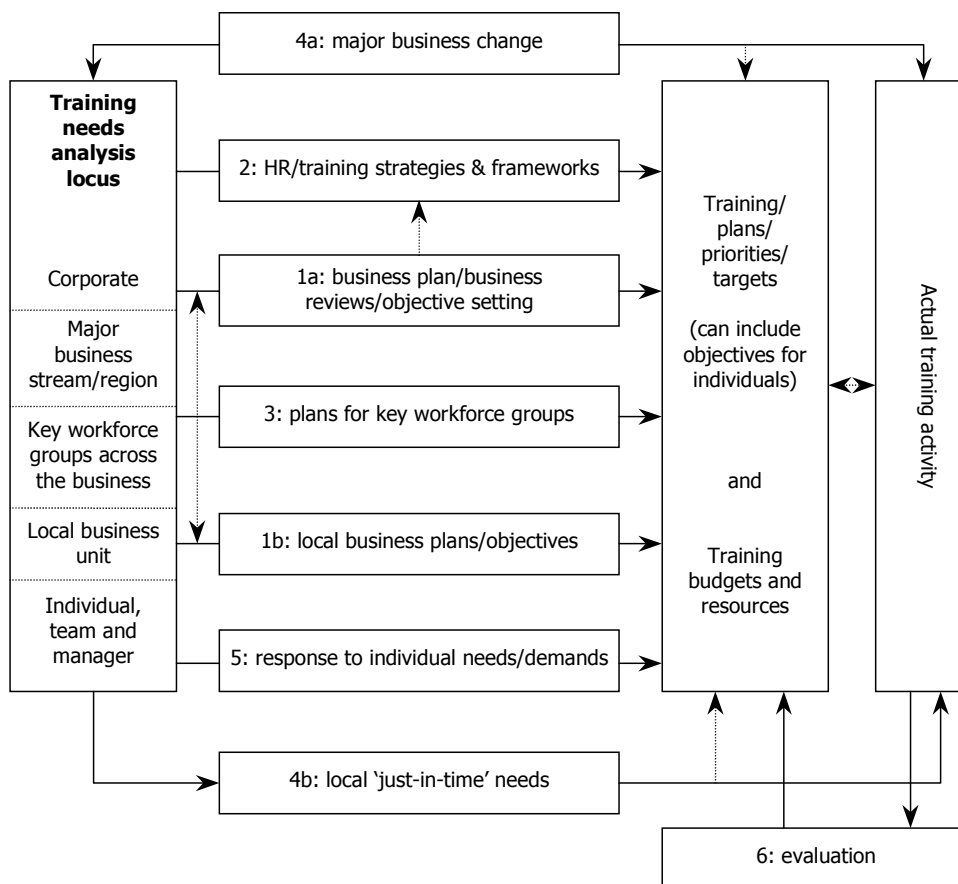
Case study based research conducted by the Institute for Employment Studies (Hirsh and Tamkin, 2005) found that large organisations often do not have a single formal training plan, but a range of plans and budgets at varied locations. The study identified six main mechanisms which influence training plans and priorities (see Figure 3 below).

1. Formal business planning both at top level and more locally leading to training priorities. Either a training plan or set of priorities can be produced on the basis of business plans or targets, or the two processes of business planning and workforce development planning are wrapped together.
2. Links from HR strategy to training implications. The IES study did not find many cases in which HR strategies gave clear indications of training needs. Competence frameworks were often used in training and development, but there was little evidence that they mapped onto real skill gaps. In some cases, the iip (Investors in

People) process was useful in leading to a more rigorous assessment of training needs.

3. Plans for key workforce groups. Organisations often have a specific plan and budget for management and leadership development, partly because this aspect of learning tends to be coordinated by a centralised, corporate team. The same can happen with specific early career entry and training schemes both at graduate and apprenticeship level. Some business functions, especially those with a strong professional identity, such as finance, often have their own training and development plans led by the director concerned.
4. Major business issues or changes often lead directly to major training interventions, usually with extra funds from the corporate centre. Typical of these would be reorganisations, mergers or acquisitions, or major changes in technology or products. In a similar way, specific changes in work at local level can lead to the identification of learning needs which may not have been foreseen on the normal annual planning cycle. It is easier to respond to such needs if the local unit can set aside specific funding.

Figure 3: An emergent model of links between business needs and training and development plans (Hirsh and Tamkin, 2005)



5. Team reviews or personal training plans (PDPs), usually linked with and resulting from performance management processes, are supposed to lead to training plans

at the individual or team level. The IES study found a worrying gap between personal development plans and plans to facilitate learning. There was often no mechanism for the organisation to plan additional training if there was no suitable course available or if managers could provide some coaching themselves. One might expect PDPs to reveal patterns of need but the HR or learning and development function did not often examine them to see if this was the case. The PDP process tends to reflect a performance discussion about the current job and is often weak in relation to learning needs for possible future roles. Such career-related needs may be considered more carefully for individuals covered by some structured succession planning or talent management process. Otherwise it is very much down to the line manager to be helping the individual to look ahead in their performance or development review discussion and not just identify needs in their current job.

6. Take-up of training provision is a strong influence on future plans. Training courses or other interventions which are well used and receive positive feedback through evaluation are often repeated. Learning provision which is not well used tends to be dropped. This effect is particularly strong where local managers have to pay for training whether provided in-house or by external suppliers.

In addition to these internal start points for identifying learning needs, there are a number of industries, especially finance, in which external regulation drives a very large proportion of training activity.

Aligning learning priorities with business needs, focus and timing

The Holy Grail of HRM has become the strategic alignment of people management processes with business needs. Although in theory the kinds of planning processes outlined above should achieve this alignment, the quality of the debate about the role and use of learning in organisations is still very variable.

A more challenging debate about learning priorities is most likely when someone from the training or HR function can have one-to-one discussions with line managers at a variety of levels about their business concerns, skill issues and training plans. This can include questions about which work activities are difficult to staff or are problematic from a quality perspective. Even then, is the problem really one of workforce capability or of work organisation, equipment etc.? If those responsible do not reach down into the organisation and ask these kinds of questions, their 'top-down' analyses of learning needs may seem very platitudinous.

As the workforce becomes more highly skilled, managers do not always come from the same disciplines as those who work for them. Hence it can be helpful to have someone, often called a Head of Profession, who acts as a spokesperson for the specific skill needs of functional or professional groups. Their intimate understanding of the work and of internal and external trends can make them better placed than business unit heads to identify the learning needs of their community, especially with regard to technical knowledge and skills.

It is easy to advocate the involvement of training and development professionals in the early stages of major business changes, but this is often neglected in practice. The CIPD 2006 survey of learning and development found that 93 per cent of respondents believed that the learning and development implications of change are critical, but only 29 per cent felt that L&D implications are considered important when organisations plan major change. It remains an uphill struggle to get organisations to think about learning issues ahead of time rather than seeing training as something which comes along later to patch things up.

An interesting exception to this trend comes from Hoag's (2001) account of skills development in an engineering firm. Having developed five broad skill levels for each type of engineer (see section 1.5), he developed skill tracking matrices for each department that presented the skill levels by person and skill area (perhaps 15 for a typical department) and indicated those recently hired and those about to retire. These could then be compared with a second matrix indicating the skills needed in each area by each of the company's projects, including those about to start or under consideration.

Is a skill gap always a learning need?

Employers often skim over the gear shift from talking about individual or collective skill gaps against work requirements to a list of learning needs. In the case of an individual's performance review, for example, the second list is often assumed to be the same as the first, without even pausing for thought, and then the conversation moves briskly on to how that learning can be facilitated. Something similar happens at departmental or corporate level. Three aspects of this shift should be more often considered:

- Are we really looking at a capability issue, or might the apparent skill gap be an issue of job design, motivation or work context? For example if customers do not feel well treated by employees this might be a lack of knowledge or a lack of training in 'customer care', but it could also be because the customers have been waiting too long in a queue or the products are not in stock. People who work in the sphere of quality management find it curious that management and the HR function so often assign 'an inordinate amount of responsibility for poor performance to individual employees while undervaluing the overall work process' (Roberts, 2002).
- Are all skill gaps fixable by learning? A simple little question but one which has almost entirely slipped from view in the HR literature. It obviously includes difficult issues about the inherent abilities of individuals and who will be able to learn what. It also touches on whether people at work always want to learn how to change their work habits.
- Is the path to better performance more likely to rest on fixing skill deficits or building on strengths? Could better allocation of work tasks to those who are good at them, and improved collaboration at team level, be a better solution than trying to train people to be good at things they are not?

- If one acknowledges strengths and the importance of motivation and retention, then attention to individual needs may also be very important. This raises the possibility of discussing trade-offs at performance reviews, where commitment to organisationally prompted learning is traded for support for individual priorities for development.

These questions are difficult to address through organisational planning processes, but are increasingly a part of the discussions which learning and development or OD professionals should be having with managers and teams. There is increasing interest in so-called ‘strength-based’ approaches to performance and development linked to techniques for coaching, counselling and OD.

Daily and real-time learning needs

Even with strong, formal methods for identifying learning needs, many will fly past under the radar of the organisation. There are two reasons for this. First, unit plans are usually linked to budgets, but a large proportion of the learning that takes place in the workplace is not reported, even when it makes a major contribution to capability. Both learning embedded in the work environment and many learning goals listed in individual PDPs are omitted from plans because they require no money. Thus preparing managers and experienced workers for facilitating informal learning in their workplace will probably provide more value for money than any other item on the list.

The second reason is that sometimes they are just too small to be seen – a critical piece of knowledge or understanding which a particular work task requires. Sometimes they are just too personal – everyone else seems to make sense of something but you do not. Sometimes they come and go too quickly for the cumbersome processes of appraisal and planning. To address such needs individual employees need to be able to voice their concerns and their managers and colleagues need to be able to say when something does not look right. Much of the informal and natural learning which takes place on the job is addressing these more micro-level learning needs. In this sense the formal and informal mechanisms for identifying learning needs need to run side by side.

4.3 Trends in the provision of formal training by employers

We now turn from the identification of learning needs to the mechanisms used by employers to facilitate workplace learning.

Training courses and events

Training courses, workshops and so on are still used by most employers. They are especially important in technical training, in training to meet statutory or regulatory requirements and in generic skill areas. In technical training, the match between course

equipment and job equipment is often critical. Where the equipment or techniques are new to the organisation, then a follow-up facility may be important; if they are already in use, new users will need quick access to further practice and in-house expertise or their training will be wasted. Similarly, training on simulators needs rapid follow-up and further coaching on the job.

Formal training is a way of ensuring that employees receive critical information; but unless it is reinforced or followed up in the work context, it will not be perceived as critical. It can also be the quickest way of introducing large numbers of employees to a new product or process which has not yet been implemented in their own job. Induction sessions and courses have a social and cultural function in larger organisations, which provides one of the few opportunities for people to network outside their own unit or function. The value of such networks is not always appreciated, and could be enhanced by managers briefing trainees about where contacts might be useful and supporting their use on networks when they return.

Some organisations are definitely decreasing the number of training courses they run, whereas others are still building up the number of modules on offer (Hirsh, 2006). Courses have also been getting shorter and more modular in nature, especially in management training. This is driven by both economic and learning considerations. People rightly claim that many course participants do not use what they were taught; but they rarely investigate the reasons for this. The problem is that a well-conceived course can be an excellent learning event, but it cannot be a complete learning package that delivers the desired outcomes because that normally requires a considerable further amount of on-the-job learning. This will only happen if the learning is treated as a high priority by the participants' work group. That is why research has consistently reported that courses are only effective when delivered 'just in time' (Eraut et al., 2000). Shorter courses with more time spent on follow-up might well be more effective for some purposes and less effective for other purposes. For example, 'bite-sized' modules may not provide sufficient nutrition or last long enough for participants to think beyond the daily pressures of their work. People who are not work colleagues will take time to learn how to relate to each other; groups take time to function effectively; and complex problems need considerable discussion time if they are to be treated holistically.

Some changes in training provision do stem from such considerations of the learning process. But we also need to recognise that training budgets are still under strong pressure in the UK (CIPD, 2006, *Learning and Development*) and that organisations are quite often trying both to improve the effectiveness of training activity and to spend less.

A CIPD survey of its members on 'The role of the Trainer' (CIPD, 2006) showed some ambivalence to moving away from formal, off-the-job training. That is understandable, but however good their courses, they will not be in a position to have much influence on the workplace follow-up. The most important evaluation question at the end of a course is 'What happens next?', but that is normally outside the jurisdiction of the trainers. It depends on the decisions of the participants and their managers.

e-learning and access to self-study materials

e-learning caused great excitement in the 1990s and was seen by some as heralding a new dawn of workplace learning via computers. Few people seemed to be aware of the previous waves of computer-based learning innovations from the mid-1960s onwards. Sloman (2001) provided a useful commentary on the development of e-learning in the UK. A great deal of e-learning activity in the 1990s was IT skills training and had little impact on other skill areas. Some very innovative and extremely interactive packages have been produced, but they are expensive to develop and only provide good value when a large number of employees are able to use them.

Now the excitement has died down, e-learning is taking its place alongside other methods rather than replacing them. Twenty-five per cent of respondents to the CIPD 2005 survey of training and development believed that e-learning had significantly affected their training and development offerings. The American Society of Training and Development (2004) showed that nearly 50 per cent of employees and two-thirds of managers were positive about using e-learning to improve performance, but both groups showed concerns. Employees were most concerned about finding the time for e-learning. Managers were concerned about having the right technology and the cost of implementation and maintenance; thus e-learning is most visible in organisations where digital communication pervades work. It is also widely used for communicating and testing specific knowledge, in the financial sector for example.

The use of electronic gateways is also providing access to libraries of self-study materials of a more conventional kind (books, videos etc.). The terms 'corporate university' or 'academy' are being used to describe a collection of learning information and e-learning options available through a computer interface. They are, in effect, a presentational device, and only as good as the materials they are used to present. ICT also opens the way for more direct person-to-person contact via electronic networks and so facilitates the development of learning communities, both formal and informal.

Employer support for educational qualifications

Government has strongly advocated employer support for study towards educational qualifications. In some areas, especially the established professions, employers demand formal qualifications and are accustomed to providing extensive support in the workplace for the 'practice' elements required. Work experiences are often specified by a professional body; but they need to be supervised by a workplace tutor or mentor, who is also often involved in the assessment. Taking student professionals can be time consuming, but also contributes work to the organisation. They help maintain contacts with higher education and stimulate professional workers through their questions and ideas. Perhaps most important is the advantage it gives the employer in recruitment of professionals, especially those who have shown their merits as practitioners.

The evidence on mid-career qualifications for managers and professional workers (many fall into both categories) is that a few programmes have more impact on the workplace than others. Those providing specialist professional qualifications work best, when participants have ‘champions’ within their profession, who support them in gaining access to other people in the organisation and to other areas of practice, and help them to choose, negotiate and carry through suitable projects for both themselves and their organisation.

Those taking management qualifications need to avoid programmes stuffed with content, to take the opportunity to discuss problems and ideas in depth with colleagues from other organisations, and to engage in practical projects in their own organisation which attend to, rather than ignore, the issue of being perceived as wanting to impose changes on colleagues. Learning the skills necessary for developing a project in a manner that is perceived as sharing its ownership and control with others is a challenge; and the amount of negotiation and engagement needed for projects to progress in this way is consistently underestimated by most managers and most business schools. The main role of the programme tutors is to support the transformational learning required to move to a double-loop approach to one’s management role. Having a champion within one’s organisation can make a difference, and having a champion who appreciates the experience of transformational learning can make a big difference.

Some employers sponsor employees to take MBAs, because they think they are talented and will make good senior managers; but do not provide an internal mentor or champion, nor suggest appropriate projects, nor search for programmes that will improve process knowledge and the ability to make things happen. To get the best from MAs or MBAs, organisations have to invest some of their own time, because they cannot expect the programme tutors to operate successfully within their own organisation, nor would they want them to take an interventionist role. Nevertheless, MBAs have been evaluated by many researchers and the clear conclusion is that there is evidence for individuals having benefited, but not for organisations having benefited. One explanation for this could be that in large organisations knowledge needs to be widely distributed before there is any discernable effect.

Outside management development and specific professional fields, employers in the UK often lack interest in formal qualifications (Perry, 1999). Not many people in the education sector have the skills to work with employers in providing training for employees, and employers still find it difficult to work within the curriculum delivery and assessment constraints of universities and colleges. Lower level qualifications are most likely to be supported if the employee is highly motivated to take them seriously and can be trusted not to neglect their ‘day job’. There is also some evidence that basic skills classes held on employer premises can be more successful than those in education settings, because those students want to learn those skills that are most relevant to their work (Newton et al., 2006).

4.4 Innovations in learning from management development

The route through which many of the newer ideas about workplace learning have been translated into practice is through innovation in management and leadership development. Hirsh and Carter (2002) and Bolden (2005) track this journey. Some of the newer approaches to learning have passed fairly swiftly from management development into wider training practice, while others are proving more difficult to spread. The methods we examine here can be seen as attempts to build in two aspects of learning which are hard to deliver through formal training courses:

- Support offered in a very personal, usually individualised, way to help the individual examine and improve some of their work-related skills. Mentoring and coaching are the two most popular innovations, and 360 degree feedback is a common supporting mechanism.
- Fresh work experiences to help individuals enrich their knowledge and understanding (for example of strategic business problems) and to improve some of their skills (for example in team-working). These might be most easily provided through appropriate projects, assignments or action learning, for example.

Personal support through coaching, mentoring and enriched feedback

The biggest growth area in recent years has been in the provision of what we might call 'personal support' as a form of learning. Carter's (2001) report on executive coaching sees this as responding to three problems: the isolation of many managers; the increasing demand for 'soft skills' which are not amenable to formal teaching; and the failure of organisations to give managers enough feedback. Both coaching and mentoring have proved exceptionally popular with employees, as well as being perceived as effective by HR professionals. Eighty-eight per cent of respondents to the CIPD 2005 survey of training and development reported using internal coaching, 72 per cent mentoring, and 64 per cent external coaching, a pattern extending well into the smaller firms in the sample.

The terms coaching and mentoring are used very widely and there is a considerable overlap in their meanings. In the management context, mentoring is taken to derive from the naturally occurring relationship often observed between an older or more experienced leader and a younger or less experienced employee. In such relationships the mentor has a personal interest in helping their protégé (sometimes now called the mentee) develop their potential (Bolden, 2005; Clutterbuck, 1998). This form of mentoring tends to focus on longer-term personal and career issues and often helps the individual navigate the organisation, including its power and political dimensions. It is quite difficult to translate naturally occurring mentoring into an organisational initiative, for example a mentoring 'scheme'. Mentoring can, however, be an effective part of high potential programmes, where very senior managers give time to and show interest in much younger managers. The use of mentoring as an organisational intervention requires careful 'matching' of

mentors with mentees and clear guidelines and training on how the relationship should be managed.

In professional contexts, however, ‘mentors’ are formally appointed to support students on practical placements and to take part in their assessment. These are relatively short-term relationships lasting from one to six months, and such mentors will also be expected to provide some coaching. Newly qualified professionals are also given mentors (see section 2.1), but their provision of support varies considerably. For example, we encountered graduate development schemes in engineering for intending chartered engineers, where a longer-term relationship was expected from senior engineers, which on paper seemed similar to those described above for managers. But in all the companies we visited, there was little sign of any significant engagement. The supposed mentees found support in their immediate environment and rarely met their mentors. Few mentors were proactive and there was very little engagement between mentors and mentees.

There has been a recent and very strong interest in the use of coaching in the workplace, again especially for managers. Coaching has its origins in a number of fields, especially the use of coaches in sport. Executive coaching – the application of coaching techniques to senior managers – is seen by Carter (2001) as having a number of particular features including being: short-term and time limited, goal specific, action and performance oriented, personally tailored, and using feedback. Carter also described executive coaching as a process with a number of specific phases and requirements: entering and contracting, identifying the issues to be addressed; reaching a shared diagnosis, planning action, reviewing action, and closure.

Whitmore is one of the most influential writers on the application of coaching to the world of business. Whitmore has consciously taken the principles of coaching from sport and translated them into the workplace. He sees coaching as being of potentially very wide application in the workplace, and as an approach to management more than a specific development activity (Whitmore, 2002). In this sense coaching implies ‘a fundamental transformation of management style and culture’ and requires that ‘coaching principles govern or underlie all management behaviour and interactions’. He defines coaching as ‘unlocking a person’s potential to maximize their own performance. It is helping them to learn rather than teaching them’. It is therefore in opposition to command and control managerial styles and formal training.

Whitmore advocates some very clear ideas and practices, which is probably why his work is so widely used in organisations. Two ideas he puts at the centre of coaching are Awareness (helping the individual to become aware of what they are doing and thinking and the impact this has on outputs) and Responsibility (of the individual for themselves, their actions and their choices). His approach to coaching is centred on using four types of question to help the individual improve their own performance:

‘GOAL setting for the session as well as short and long term.
REALITY checking to explore the current situation.
OPTIONS and alternative strategies or courses of action.
WHAT is to be done, WHEN, by WHOM and the WILL to do it.’

These are summarised by the mnemonic GROW. However, this questioning strategy is by no means the only model. For example, there has recently been a strong interest in the application of NLP (neuro-linguistic programming) to coaching practice, see for example O’Connor and Lages (2004).

Large organisations now commonly employ executive coaches and may also have coaching experts within their own Learning and Development functions. Coaching has also been applied to dealing with employees who have performance difficulties (sometimes called performance coaching) and to giving career support, where the term career coaching has become popular. The use of the term coaching in relation to career support is partly because the normal US term ‘career counselling’ is problematic in the UK, where it tends to carry the negative impression of an individual in some kind of deep difficulty.

Coaching is quite closely related to the use of feedback on performance. In addition to the normal feedback given in appraisals, some employee groups are given much richer feedback either through 360 degree feedback or through development centres. This feedback is normally given by trained practitioners. Although feedback often leads to personal development plans and varied forms of development, the in-depth discussion of feedback or assessment can be seen as learning experience in its own right.

These personal forms of support – mentoring, coaching and feedback – are very flexible and can be tuned to each individual. They also take place as near to the job as you can get. Used in the formal way described above they can be very expensive in both time and money and, consequently, are most often used for management populations or people on special development schemes.

It is interesting to note that many studies of ‘natural’ workplace coaching, such as those described in section 2.3 (Hirsh et al., 2004), show managers or colleagues intuitively using precisely the same coaching process and behaviours as those described above. These behaviours are also the ones which support the process of learning described in section 2.1. In particular, as well as giving feedback on how current tasks are performed, good ‘natural’ coaches in the workplace often seek to give access to new challenging tasks and to elicit the help of others in supporting the individual in tackling such tasks. This often helps to integrate aspects of team learning with individual learning. Such coaching often covers both the transfer of specific knowledge, often including tacit knowledge, and the supported practice of skills. However, practising strategic skills, interpersonal skills and conflict resolution among senior managers or departments requires more intensive and longer-lasting coaching than most ‘front line’ activities.

The development of coaching as a structured process using clearly identified, often specialist, coaches may be an especially appropriate way of addressing management and leadership issues, which are often very personal. It may also be harder for leaders and managers to find people in their immediate work team who can coach them, and their bosses may be very busy or remote. Some managers also resist training and need quite an intensive process to make them see where they may need to improve.

However, when we look at the wider workforce it does seem appropriate to advocate the more informal use of the line manager as coach as the way of giving personal support to more employees. However, this strategy does not lead automatically to improved learning:

- In placing emphasis on the manager as coach we can underplay the importance of coaching given by peers and managers who are not the individual's line manager. Communities of practice may also give individuals access to wider networks of people who can 'coach' them to improve aspects of their performance and extend their capabilities.
- Managers will not spend time coaching unless the organisation sees such time as a legitimate part of the manager's work activity. If they are too busy they are most unlikely to do it at all.
- Coaching involves giving away your own knowledge and so it does not happen readily in organisations where hanging on to knowledge is a safer bet for the individuals seeking to retain their power, status and security.
- Some people are 'natural' coaches and also find it a satisfying aspect of their work. Many managers are not like this and need more formal support themselves to help them become more confident coaches for others.

These caveats imply that, whilst the notion of 'coaching' in the workplace is helpful, creating a workplace in which coaching is prevalent is far from easy. Some of these issues are discussed further in chapter 5.

Experiential learning including projects, assignments and action learning

The second strand of innovation in learning coming from management development is the use of novel experiences to provide opportunities to learn. Harvard Business School used the 'case study' approach to help students understand how their formal learning related to real business problems. However, this kind of learning is far more vivid when the individual is working on the problem themselves. So workplace projects have become part of the staple diet of management programmes, whether run by universities or by employers.

Other ways of giving novel experiences include periods of internal or external secondment. A smaller scale version has been work shadowing – not exactly a chance to do new things but at least to observe new activities or how someone else does their job. Some of these experiences are not too difficult to arrange (for example shadowing), but significant projects and secondments require quite a lot of management from the organisation. As with specialist coaching, giving people planned experiences is often reserved for management or those deemed to have high potential. Andrew Mayo (2005) in his reflections on the CIPD 2005 survey of training and development is disappointed in the relatively modest use of challenging work assignments for development. ‘I suspect that many firms struggle to find the opportunities, bending under the stranglehold of headcount management – and, perhaps also, a lack of imagination. I really believe that more effort in these areas would yield better-quality learning than many of the more popular activities.’

Action learning sets combine experiential learning with peer support. Sets can have each person doing a work-related project, or they can just be discussing normal work issues, or they can work on a shared project or issue. Learning sets are often facilitated by professional trainers. Again this is a small volume method in many organisations as it may be quite resource-intensive and it is hard to accommodate in busy workplaces. Some organisations, such as the BBC, have experimented with much wider use of action learning sets (Hirsh, 2006). Action learning sets were used by 27 per cent of respondents to the CIPD 2005 training and development survey, although about a quarter felt they were not very effective.

The ‘WorkOut’ process developed at GE (Ulrich et al., 2002) is a business problem-solving process which has many of the potential learning benefits of action learning. Real business problems are solved in a very short time frame by a cross-section of the workforce working together with information and process support. It has the capacity to involve any employee and has been widely used in companies like Zurich Insurance in the UK. WorkOut pulls together varied knowledge and experience, rather similar to the cross-functional teams discussed in section 3.3, with a process designed to bring out and apply their shared capability. It can be a vehicle for business benefit, individual, group and organisational learning.

The most vivid form of experiential learning is the career itself. When large organisations really want to accelerate and broaden the learning of employees – especially those seen as having ‘high potential’ – they give them a sequence of challenging jobs to do. These frequently cross functional or divisional boundaries and increasingly involve experience of working with other cultures or in other countries (Hirsh, 2003).

4.5 Mixing the old and the new

In this chapter we have examined a number of trends in learning interventions used by employers. We see an increasing repertoire of methods for facilitating workplace learning and therefore a challenge for employers in how to use and combine these ideas in

effective ways. Training and HR professionals tend to say that on-the-job training is still the most effective way of facilitating learning. But we also need to attend to the findings reported in chapter 2 on natural learning on the job that is not triggered by HR interventions. The CIPD fact sheet on on-the-job training (2006) helpfully reminds us that on-the-job training can be systematic and purposeful. It is not just letting people do their daily work and hope that learning will occur. Some organisations are also trying to design learning into normal work processes like project objectives and reviews, team meetings etc. The next round of innovation in learning practice seems most likely to come from new or better ways of supporting people on or very close to their jobs, in reflecting on their practice and using relationships with others to appreciate how they might do things differently.

John Burgoyne (in Hirsh, 2006) makes the connection between on-the-job training and 'natural' learning. He sees managed ways of encouraging learning on-the-job as 'spotting something that happens naturally and trying to make it happen more systematically'. However, while methods like coaching, mentoring and action learning can be seen as attempts to facilitate natural learning processes, they are still confined to a small minority of workers and they require organisational cultures and leadership styles which emphasise 'problem-solving and learning, rather than blaming and punishing'. The alternative advocated in section 2.3 is to focus on changes in the workplace climate and the allocation and structuring of work, and to develop and reward managers for removing barriers to natural learning and gradually strengthening practices that facilitate learning. This in turn will stimulate demand for external support where it is most needed and most likely to lead to positive outcomes.

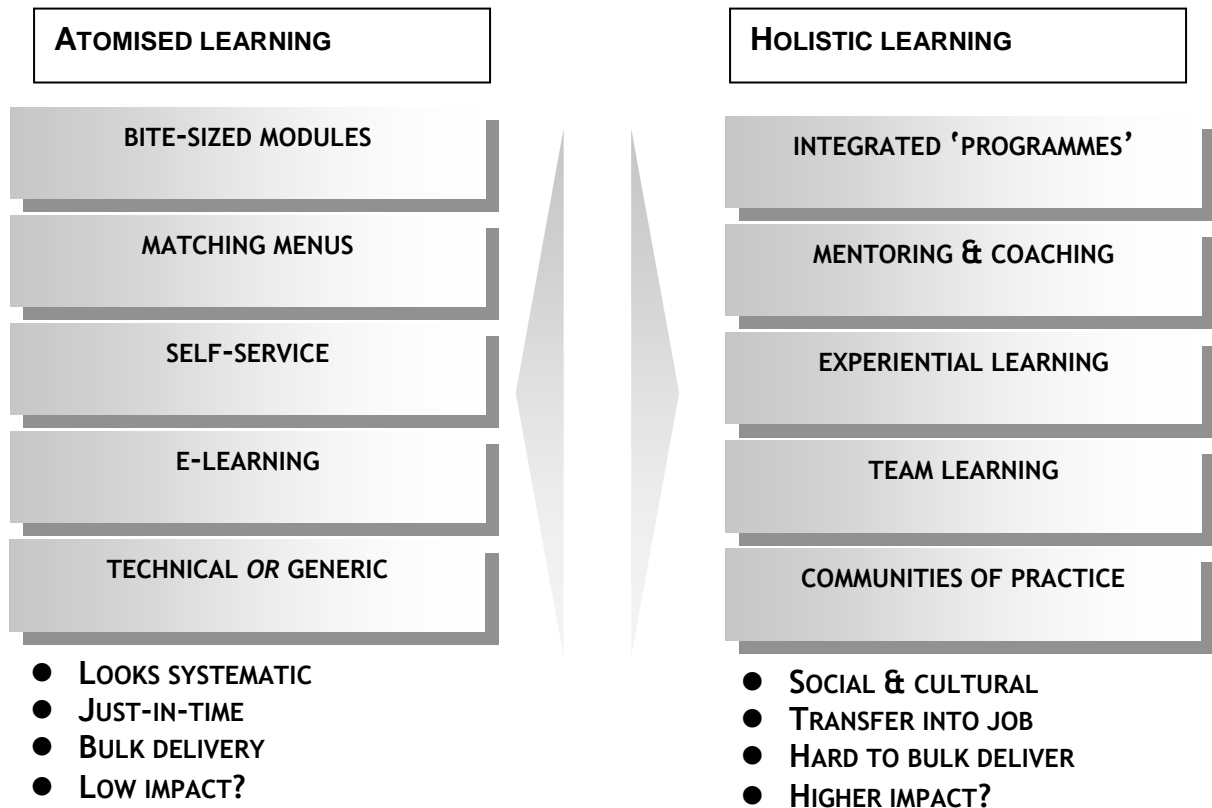
Atomised versus holistic approaches

Looking at the trends in facilitating learning, at least in larger organisations, it feels as though delivery methods are heading in two rather different directions. On the one hand we see the need to use resources to best effect, to focus on equipping people for their current roles, to base learning on predetermined competence frameworks and to move to 'just-in-time' and 'bite-sized' modules of formal training or e-learning. The downside of this 'atomised' approach is its tendency to separate generic from technical or job-specific training. So, for example, a general module on communication might be separate from a job-specific one on customer care, although the latter is almost all about communication. Moreover, while the left-hand side of Figure 4 shows that this approach to learning looks systematic and can 'deliver' to large numbers of employees, the methods used are probably relatively ineffective in helping employees to gain sufficient understanding and to apply their learning on the job in a flexible manner that leads to finer-tuned responses and ongoing improvement.

On the other hand we see learning theory and the aspirations of those involved in learning organisations favouring a much more holistic approach. The right-hand side of Figure 4 shows that when organisations attend to their most valuable employees, especially their senior managers and 'high potential' staff, they are seeking a more integrated learning

design, more experiential opportunities supported by coaching and/or mentoring and more opportunities to learn through social relationships. Current thinking is that these methods may lead to better learning and especially to its application in the job. However, it is harder to evaluate, harder to control and with current methods more expensive to deliver.

Figure 4 : The tension between atomised and holistic approaches (Hirsh, 2006)



‘Blended learning’.... or just a rather confusing patchwork?

Many organisations are attempting to square this circle by combining the varied ways of facilitating learning. The term ‘blended methods’ has been used for such combinations. Methods can be blended within a specific programme, so for example an induction programme can consist of some self-study material, meetings with employees in the work group, a short formal training session (often covering health and safety) and a ‘buddy’ scheme lasting a few weeks. Blended learning can also use different methods for different learning needs. So a tele-salesperson may well have computer-based materials to teach them about products but a series of role play events to improve their skills in talking to customers.

The most obvious attempts at blended learning occur when a unified programme is designed to deliver learning in different ways as part of its design. We discussed this approach to mid-career qualifications in section 4.3, noting how Business and Professional Schools have been offering various forms of active learning alongside more conventional theory-based taught modules and self-study. In-house management development programmes and sector initiatives (e.g. in Health and the Civil Service) often combine pre-programme assessment (e.g. through 360 degree feedback or a development centre) with formal learning modules, project working in between modules, meeting in learning sets and the provision of a personal coach or mentor.

Some organisations try and blend methods in a broader way. For example National Grid Transco seeks to practice the 70–20–10 ‘rule’: seven hours of on-the-job learning for every two hours of coaching and one hour of formal training (Hirsh, 2006). The on-the-job element here can vary in style from job to job but makes the point that support while practising skills *in the job itself* requires much more time than either formal training or time taken out of the job for coaching. Read the other way round, this rule says that every hour of formal training may need a couple of hours of intensive coaching to transfer into work and another seven hours to embed the learning in work performance. This matches our analysis of knowledge transfer in section 2.4.

Recognising diverse needs and circumstances

This account of learning in organisations is biased towards larger employers because their practices are better documented. The CIPD surveys show similar thinking among members in the public and private sectors and also in large and small organisations. Interestingly, CIPD surveys show rather higher spend on training in small organisations, although bigger national surveys show lower spend in small organisations (Learning and Skills Council, 2006). Presumably CIPD members tend to work in more sophisticated small organisations. However, we need to be careful *not* to assume that all small organisations are less sophisticated when it comes to supporting learning. This is especially the case in sectors such as IT and biotechnology where small companies work at the leading edge and are often managed by people who have experienced large company practices and have learned to adapt them. However there are also many small firms which do need more support from external bodies in raising their skill base and helping their employees to keep up with change.

The other main dimension of diversity lies in the nature of the workforce, especially its skill level and occupational mix. Employees in high skill occupations will often enter work as graduates and may also have the support of professional bodies. Those in low skill occupations may be less equipped to manage their own learning and may be more dependent on what the employer offers them. Organisations in both public and private sector still have many employees who do not work at a desk with a PC and for whom work-based e-learning is still hard to achieve. Many employees also have very little

discretion in the way they spend their time at work and will only recognise themselves as learning when work stops for a formal training session.

Another problem is the learning of people who work alone and don't have any regular contact with others. They often have to work without adequate support from bosses or colleagues. Large spans of control and geographical spread mean that some people see their managers fairly rarely or have big gaps between their meetings. These people could be either experienced travellers or home workers or quasi home workers.

When combining methods of facilitating learning, organisations need to consider their different work settings and the kinds of people they employ. There will be no 'one size fits all' approach to learning which will meet these very different needs.

4. 6 Integrating learning with wider HR and management practices

Learning in organisations is not just facilitated by specific learning interventions. It is also supported or hindered by a whole set of other formal and informal processes concerned with people management. Here are just a few:

- The performance management process can be strongly developmental or can be focused on assessing and paying for performance rather than improving performance and planning development. A developmental approach to performance management is very important to keeping learning on the agenda at work. Organisations with more frequent, often monthly, 'one-to-one' general review meetings between individuals and their managers seem more successful in giving learning more airtime during the year (Hirsh, 2006).
- The way work is designed has an enormous impact on what people are allowed to do or to see others doing and therefore the experiences from which they can learn. Narrowly defined jobs tend to restrict learning.
- Workload also affects whether people have time at work to discuss issues and to support others. Lack of time always comes high on the list of factors which hinder learning at work, as shown consistently in the CIPD surveys of learning/ training and development.
- Succession planning and talent management are integrated with learning activities as tools for proactively developing the potential of employees. These processes often give high attention to small groups of employees – often as few as half of one per cent (Hirsh and Jackson, 1994) – but are seldom cascaded to cover the majority of even the professional and managerial workforce. One distinctive feature of succession planning and talent management is that populations of employees are normally discussed between groups of managers. This more collective approach to planning learning for individuals opens out far more opportunities for workplace experiences than the line manager alone can give.

- The way people and their skills are deployed in the organisation also impacts on learning. If, for example, an individual is only allowed to be appointed to a job for which they have all the capabilities required, then their scope for learning is limited. In this sense competence-based selection processes can, if taken to extremes, block development. It also rules out the possibility of transferring or promoting people into jobs where they are not expected to be fully competent on arrival. Indeed, sometimes that particular workplace is the only environment where it is possible to learn what they need.

There are a number of processes which can be used to encourage managers and employees to attend to learning. For example, managers can and should be partly assessed on whether they develop their subordinates. Other individuals can have personal development objectives built into their job objectives, and teams can also be given performance targets that include a learning dimension.

4.7 Summary of factors affecting learning

WHAT HELPS WORKPLACE LEARNING?	WHAT HINDERS WORKPLACE LEARNING?
<p style="text-align: center;">INDIVIDUAL LEVEL FACTORS</p> <p>Appropriate degree of challenge in work</p> <p>Frequent and constructive feedback on job performance</p> <p>Time to learn at work, especially through talking to others</p>	<p style="text-align: center;">INDIVIDUAL LEVEL FACTORS</p> <p>Unnecessarily restrictive job design</p> <p>Excessive work pressure and stress</p>
<p style="text-align: center;">TEAM LEVEL FACTORS</p> <p>Supportive relationships with others, based on mutual respect</p> <p>Frequent informal discussions of work with colleagues</p> <p>Formal team processes (eg team meetings, project reviews) which include discussion of skills and learning</p> <p>Attention to learning opportunities when allocating and designing work processes</p>	<p style="text-align: center;">TEAM LEVEL FACTORS</p> <p>Work issues not discussed with others</p> <p>Unsupportive or threatening relationships, or social isolation at work</p>

<p style="text-align: center;">LINE MANAGEMENT</p> <p>Clear role for managers and experienced workers in supporting learning of others, and time built into their jobs to do this</p> <p>Attention by managers to emotional aspects of work</p> <p>Tolerance of diversity and willingness to consider alternative suggestions</p> <p>Supporting managers by giving them tools and opportunities to practise the skills of coaching, giving feedback, delegation, negotiation, etc.</p> <p>Selecting line managers with an interest in, and aptitude for, developing others</p>	<p style="text-align: center;">LINE MANAGEMENT</p> <p>Line managers who are defensive or unwilling to resolve work issues in a constructive way</p> <p>Lack of time & attention on giving employees meta-skills and confidence in learning</p> <p>Line managers unwilling to delegate</p> <p>Leaving managers to develop their staff even if they lack the skills or motivation to do it</p>
<p style="text-align: center;">APPROACH TO LEARNING & DEVELOPMENT</p> <p>Employees motivated and supported to take responsibility for their own learning</p> <p>Accessible learning advisers for both managers and employees and a flexible capacity to design bespoke learning interventions and work with teams</p> <p>Learning interventions linked closely to the work context, with careful consideration of learning transfer to the job</p>	<p style="text-align: center;">APPROACH TO LEARNING & DEVELOPMENT</p> <p>Seeing on-the-job learning as not needing any resource or time</p> <p>‘Courses’ seen as the main or only means of learning</p> <p>Learning interventions unrelated to current or future work needs</p> <p>The learning and development function seen as about ‘delivery’ of courses and not able to advise/work with line managers or understand business needs</p> <p>Overly-mechanistic or bureaucratic approaches to competence, assessment and documentation of learning</p>
<p style="text-align: center;">ORGANISATIONAL CONTEXT, PROCESSES & LEADERSHIP BEHAVIOUR</p> <p>Performance & reward systems which pay attention to knowledge-sharing</p> <p>Clear organisational values underpinning work and personal behaviour</p> <p>Behaviour at the top which discusses problems and issues and develops other people</p> <p>Encouragement of networking and development of social capital outside the immediate workplace</p> <p>Cooperative employee relations climate</p>	<p style="text-align: center;">ORGANISATIONAL CONTEXT, PROCESSES & LEADERSHIP BEHAVIOUR</p> <p>Promotion and reward mechanisms which emphasise the short-term and individual performance at the expense of investing in medium-term or collective performance</p> <p>Political and senior management context in which people avoid change to protect their job security and/or power</p>

CHAPTER 5: Strategic issues

In this final section we pull together some of the underlying challenges presented by our current understanding of the nature of workplace learning and its link to performance.

5.1 Balancing ‘top down’ and ‘bottom up’ learning priorities

The desire to align learning with business needs is a useful one. However, some business needs are not always visible from the corporate centre of a large organisation. The huge ‘change management’ training initiatives of the 1990s were fairly aligned with perceived business needs at that time, but have dropped from favour and are now seen as largely ineffective in skilling people for change.

We know that in crude terms, skills and training do lead to improved business performance (Tamkin, 2005). However once we look at specific investments in training, tracking their impact through to the bottom line is very difficult indeed. Even looking at the vast literature on management development, the link between investment in learning, individual performance and organisational performance is quite hard to prove (Burgoyne et al., 2003). We simply don’t know whether responding to a few ‘large’ learning needs does more for business performance than attending to the host of ‘small’ and quite job-specific learning needs.

So balancing resources between centralised initiatives and much more local attention to learning is a practical issue for employers. The journey to a ‘learning organisation’ is not just about strong, central agendas for learning. Indeed, one could argue that a devolved approach comes closer to the heart of workplace learning.

5.2 Using coordinated mixed methods

We have highlighted some of the tensions between sustaining formal training programmes and moving to more holistic and flexible approaches to learning in the workplace. The holistic vision is indeed attractive but, if left on its own, could lead to many employees being more poorly equipped for their work than in the ‘bad old days’ of courses. The specialist coaching support used currently for some executives is attractive but also very expensive if purchased from professional coaches. It is therefore unlikely to be extended to the majority of employees. However, we can still learn from more tailored and holistic approaches and adopt less expensive models of ‘blended learning’ methods for wider populations. These would include courses and e-learning alongside stronger on-the-job and team-based learning and coaching by line managers and colleagues. This model does, however, depend crucially on those managers and colleagues having the time, skills and motivation to deliver coaching support (see 5.5 below).

ICT may not yet have delivered a dramatic improvement in workplace learning but it is still in its infancy. The use of ICT for person-to-person networking may yet prove to be its biggest impact. Organisations will continue to juggle with these choices about

methods of facilitating learning, while still having to ensure that they use courses to meet increasing regulatory requirements.

5.3 Designing work to enhance learning

There is a wide range of interpersonal learning episodes in workplaces, only some of which require a significant amount of time. Section 2.1 described the wide range of modes of learning that occurred naturally and noted that much of this learning was not reported as learning by those involved unless they were prompted, and sometimes not even then. Some ongoing learning was inseparable from the work and not seen as taking up time that might otherwise be spent doing ‘real’ work. Other learning arose during conversations around the work, which might not have happened if there was heavy pressure to meet a deadline. Few managers would be concerned about these shorter episodes and conversations, even if they were unaware of any learning taking place. They would be seen as natural and normal, unless they became very lengthy. Many would see them as good for relationships and motivation, as well as making possible contributions to workplace learning.

However, the frequency and value of these episodes would significantly depend on the factors discussed in section 2.2, and many of those factors are, or could be, influenced by the local manager. Thus considerably more learning might occur if the manager was aware of how much he could enhance learning without taking up much more of his time, simply by attending to these factors. More proactive managers might want to introduce discussions about workplace issues involving several people. These might involve listening to suggestions and problems, or reviewing a project or period of work to evaluate how well it had gone, whether they could have done better, and what they might do differently if something similar came up or if they had some additional expertise. Some work groups and teams make a regular habit of holding reflective discussions about new practices, learning experiences and learning needs.

This approach to enhancing workplace learning does not involve external interventions, coaching or mentoring, except insofar as it occurs naturally as part of normal collegial relationships. Nor does it involve creating more demanding special teams like those discussed in section 3.3. All it requires is that each new employee has others around them who can be asked questions and who can show them how to approach a particular problem or new task. Under such circumstances the division between working and learning blurs and the two become seamless. The HR contribution should be (1) to encourage and develop the managers’ capability to promote learning within his or her group, and (2) to help managers of larger groups to develop experienced workers within their group who can share some of the responsibility for promoting learning in particular sub-groups. Spreading the manager’s load can make a big difference to the practicality of the learning enhancement project.

5.4 Are UK employees equipped to be self-managed learners?

When organisations have clear strategies for learning, they tend to say that they want the employee to take ‘ownership’ of their own learning with the line manager in a supporting role. The desire to focus more on ‘learning’ and less on ‘training’ raises several big issues for employers. Firstly, most workplace learning happens through participation in the work group and its practices. This requires that newcomers are willing to ask questions and are encouraged to do so. Although relationships play a critical part in supporting learning, workers still need to have a reasonable level of confidence and assertiveness if they are to progress without being spoon fed. This confidence is raised or lowered by their achievements, their acceptance by their work group and their trust in their colleagues. Even if traditional training courses are provided, further learning is still needed, so the issue of confidence cannot be by-passed.

The second issue concerns the expected self-management of learning, which ignores the fact that most people prefer to learn with others and/or from others. At best it would be sensible to induct newcomers to self-managed learning in group learning contexts before going it alone, in order to build up their confidence and encourage them to develop the relevant learning skills. They may then be ready to progress to learning in pairs, or individually in an area where they have a strong interest, before attempting to learn in an area where their motivation may be less reliable. This leads us to the third issue, which organisations seem to ignore, which is why an individual employee should choose to learn the things their employer needs them to learn rather than the things they might find interesting, or which might be of greater personal benefit to their opportunities for more satisfying or better-paid work. This problem is not helped by trends in education towards overly controlled syllabuses with heavy-handed bite-sized assessments, neither of which seem likely to convert the UK workforce into a nation of passionate and adept learners.

The issue of both the *ability* and the *motivation* of UK employees to learn in the workplace is recognised as critical and employers cannot afford to ignore it; and the *political and power* issues in workplace learning may discourage the learning of young newcomers, older sceptics and ill-prepared line managers.

5.5 Are line managers ready to support them?

Far more attention is now being paid to the role of the line manager in ensuring that employees learn at work. Some organisations are starting to emphasise the role of the manager in supporting learning, although fewer are yet training their managers seriously for this role. Managers have not been selected in the past for their interest in either learning or supporting the learning of others. Nor is the support of learning their only new challenge. The UK has underinvested in first line management training, and the ‘new learning culture’ presents managers with more challenge from below than they find comfortable. This is another reason for having experienced workers who might later be promoted to be line managers. Organisations need to pay attention not just to the

individual line manager but to management as a community and the collective responsibility it discharges for learning in the workplace. Structures and processes are needed which help managers to come together to look at both groups of employees and individuals within those groups.

5.6 Implications for training and development professionals

In many large organisations, training departments were renamed 'training and development' in the 1990s and have now been renamed again as 'learning' or 'learning and development' functions. Looking at the trends in workplace learning it is fairly clear that the role of the training specialist is changing. They will spend less time delivering set piece formal training courses which are designed once and then run many times. They will spend more time:

- talking to managers and employees about their learning needs in a business context
- advising managers and individuals on how their needs can best be met
- designing learning interventions using novel approaches
- procuring specialist services
- coming into a team or department to facilitate a learning intervention rather than to pass on knowledge
- evaluating the impact of learning interventions

This will be a big change in their work pattern for many trainers. Evidence from the CIPD survey of trainers (2006) and its survey of learning and development (2006) is that the move is potentially exciting to existing trainers but also quite threatening.

In addition to these changes in the skill set of the trainer, learning and development functions will find it harder to plan their workload as a set of courses. Many are already creating small OD teams as a kind of training SAS, who can parachute in quickly to work with managers and their teams as and when they are needed. There is little point in creating the demand for genuine workplace learning if the learning function then makes you wait six months before they will come and see you.

5.7 Implications for qualifications

While organisations are trying to work out the most effective ways of helping employees to learn, government policy often appears to be on a journey of its own, determined that formal qualifications are the answer to improving work-related learning. Areas where qualifications are useful include basic skills, early career professional training, and some mid-career programmes in business, management and the professions. Otherwise the

government's agenda seems pretty irrelevant to both employers and employees. There are several reasons for this:

- The size of qualifications doesn't often match training needs
- Different types of learning require different timescales
- Standards based on learning different things in different contexts cannot be judged against the same standards without unacceptably time-consuming assessment regimes
- Programme approvals cannot be both just in time and meet standard criteria
- Transferability between contexts cannot be assured, because learning in the workplace is situation dependent
- The emphasis on individual learning does not align with the evidence that most learning occurs in group contexts
- Learning trajectories showing progress over time may be more flexible and meaningful. They may not be easily validated, but they give more opportunities for cross-questioning than qualifications
- The emphasis on assessment in vocational qualifications puts the emphasis on written accounts rather than performance

5.8 Practical recommendations

This review leads to a number of recommendations for action to improve workplace training likely to lead to improved performance at both individual and organisational level. These recommendations are not primarily aimed at public policy makers or the educational system, but do have implications for the assumptions policy makers often make about how learning in the workplace happens.

1. Design work to enhance learning through allowing time for interaction and work discussion on the job. Teams and work groups can make a closer connection between performance, capability and learning. For example normal team or project meetings can include discussion of concerns about skills or knowledge to tackle work, and what kind of learning will help them.
2. Set some corporate level priorities for learning but also allows for budgets and plans at more local level (down to team or department) to highlight more specific and urgent needs.
3. Use personal development plans (including CPD processes for professionals) written by individuals rather than their managers and review them more frequently. Set aside some training resources to respond to individual as well as

- organisational needs, and encourage managers to negotiate trade-offs between them.
4. Balance formal training with other forms of facilitating learning of a more personalised nature and on or very close to the job, and often involving the work team.
 5. In procuring learning, whether from an internal function, external supplier or the education system, consider learning method, learning transfer and evaluation as well as the content of the intervention. Try to involve the learners and their managers in the design as well as asking for their feedback afterwards.
 6. Design transfer of learning back to the job into formal training. For example require a discussion between the individual and their manager before and after training and review of skill use at periods after training.
 7. Train managers to act as coaches to employees by clarifying the behaviours which are helpful and allow for practising the skills through role play and observation.
 8. Encourage a work climate in which sharing knowledge and helping others is seen as positive. Hold senior managers and leaders to account as role models both through their own learning and for the support they give others. Involve senior managers directly in learning both as training deliverers and as mentors/coaches/sponsors. Include the development of others in promotion criteria. Include workforce development objectives in personal and business objectives both for managers and for individual employees.
 9. Resource the learning and development function to have a more flexible response to needs in the organisation and to have the skills of facilitating learning as well as of delivering formal training.
 10. Extend the concept of learning beyond the current job to include learning for flexibility, career skills and learning for potential future roles.

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