CHAPTER 4
Understanding Learning and the Learners

INTRODUCTION

Part 2 of the book explores ways in which L&D practitioners can ensure high quality and ethical learning and development practice, linked to organisational as well as individual performance and responsive to changing needs and challenges. The focus in this chapter is on learning and the learners.

Traditionally learning in organisations has been defined as (Bass and Vaughan 1967: 8):

A relatively permanent change in behaviour that occurs as a result of practice or experience.

Here, though, is a rather different view (Marton and Ramsden, 1988: 271):

A qualitative change in a person's way of seeing, experiencing, understanding, conceptualising something in the real world.

And here is one that takes ‘learning’ into a new terrain altogether, defining it as (Zuboff 1988: 395):

The heart of productive activity. To put it simply, learning is the new form of labor.

How can three definitions be so different? And what do their differences signify for the individual, the work organisation and the L&D profession?

To find answers to these questions the first three sections of this chapter explore traditional and more recent approaches in learning theory. Each section ends by identifying practical challenges for L&D practitioners. The fourth section traces parallel advances in training and learning technology, concluding with implications for a potential ‘age of the universal knowledge worker’. The final section reviews the evidence to assess whether in reality a ‘shift’ to a learning and knowledge age is occurring in work organisations.
As we saw in Chapter 1, throughout most of the twentieth century training was the main approach to employee development in which employers invested. After World War II, the need to rapidly rebuild the UK’s skills base increased its popularity, which was reinforced by the advent of Industrial Training Boards in the 1960s, then of the Training Services Agency and, in the 1980s, of the Training and Enterprise Councils.

Throughout this era the dominance of training was underpinned by the development of psychological learning theories based on the assumption that individuals learn as the result of conditioning and of information processing.

**LEARNING AS CONDITIONING: BEHAVIOURIST THEORIES**

Behaviourist learning theories are known as ‘positivist’ approaches. This is because they rest on the assumptions that the world is an objective external reality, and that the aim of learning is to acquire accurate knowledge from ‘out there’ to transfer to individuals ‘in here’ so that they can engage with that world successfully. Behaviourist theories emerged initially from Pavlov’s (1927) work with dogs, which led to his ‘classical’ theory that all behaviour can be explained by reference to learnt patterns of stimulus and response. Skinner’s (1953) pioneering work with pigeons and rats led to a broader understanding of the learning process: one that took into account the part played in the learning process not only by instinct but by reinforcement from social and environmental factors.

This latter strand of ‘radical behaviourism’ focused on the role of ‘operant conditioning’ in the modification of behaviour. Described in simple terms, operant conditioning proposes that learning is an interaction of four core processes in the individual:

- **drive** – Human beings have a fundamental need to seek new knowledge, skills, or attitudes when confronted with an unfamiliar problem, challenge or scenario. They are instinctively driven to close gaps in their existing learning so that they
can continue to perceive their world as one that is meaningful and over which they have control.

- **stimulation** – An individual must experience a specific trigger that activates and sustains their drive to learn in a particular situation – when, for example, they have to perform a new task, work in a changed way, or acquire changed values and beliefs. That trigger may occur naturally, or it may be engineered by another party.

- **response** – Learning involves the acquisition by the individual of some new or reorganised set of responses – ‘behaviours’.

- **reinforcement** – The key to the acquisition of appropriate behaviours (behaviours that enable a learner to solve a problem and thereby move forward) lies in reinforcing such behaviours and in ensuring that inappropriate behaviours are eliminated before they can become habit-forming.

In the US behaviourist learning theories were introduced into industry during the first half of the twentieth century by Scientific Management theorists and practitioners, for whom the concepts of operant conditioning fitted well within the ‘command–control’ model of management. The approach put trainers firmly in the driving seat of the learning process. Its rationality and efficiency led to its widespread popularity and ultimately to the development of the systematic training model described in Chapter 1. It still exerts a powerful influence on training practice.

**LEARNING AS INFORMATION-PROCESSING: THE TRADITIONAL COGNITIVIST VIEW**

Cognitivism became a dominant force in psychology during the 1950s. The term ‘cognitive’ refers to the interacting psychological processes of perception, memory, thinking and learning. In cognitive psychology, learning is understood as a process to do with the acquisition and application of knowledge, and problem-solving as its major vehicle (Garrick 1999: 222). The individual’s knowledge base expands, alters or is transformed as they apply their representations – whether or not successfully – to similar and not-so-similar situations to those in which they were originally acquired.

Traditional cognitivist theories of learning emerged from behaviourism and reinforce the notion of ‘trainer as driver’. They focus on the cognitive structures that enable the individual to make sense of events and situations, and that inform the ways in which they interpret and respond to their environments. ‘Cognitive structures’ are representations – theoretical concepts and knowledge of procedures – that, once acquired by an individual, become organised in particular patterns in their memory and are subsequently applied to solving new problems (Gioia and Poole 1984; Porac et al 1989; Harris 1994; von Krogh et al 1994).
Cybernetics has made a significant contribution to the cognitive approach to learning. It concerns the information and feedback channels that should be used to stimulate and help people to learn. Which senses to make most use of – sight, touch, taste, sound and kinaesthetics (or the ‘feel’ and positioning of muscles) – all come into the equation. So do the perceptual process and the ways in which attention will shift and sharpen during a learning programme as some tasks are mastered, leaving the conscious mind freer to focus on others that are more demanding. Integral to cybernetics theory is the idea of breaking down a whole task into parts, or elements (part and whole learning), in order to design a stepped learning process.

Here is a personal case that illustrates an information-processing approach to learning:

The Self-instruction Manual

In the 1960s I used a manual called Principles of Management – A program for self-instruction, written by American guru Leonard Kazmier, to guide me at my own pace through essentials of management theory in preparation for the Institute of Personnel Management’s business administration exam. It was designed to be completed in anything from seven to 14 hours, and could be used as an adjunct to various management textbooks and other coursework materials, thus encouraging the individual learner to take the learning at their own pace, seeking out information from other sources as and when they needed to expand their understanding of particular sections of the text.

The book divided management theory into bite-sized units, each of which commenced with a small chunk of theory, then took the reader through a series of self-test statements to ensure their understanding of it, then moved on to the next chunk. That cycle of explain, test, provide feedback and reinforcement was repeated for every element of the unit until all had been mastered and a grasp of the entire body of theory covered in the manual had been acquired.

In the final unit of the book, entitled “Learning and employee development” (which I confess I never reached, having abandoned the manual at an earlier point where mathematics had entered too heavily for me into a unit on management control systems), the author explained the factors on which he relied in designing this learning programme (Kazmier 1964: 225):

These factors, called principles of learning by psychologists, include the need to maximize the individual’s motivation to learn, providing feedback during learning, appropriately sequencing the materials to be learned, providing for active participation during training, and considering the individual differences among trainees.
As this example illustrates, traditional cognitivism reflects, like behaviourism, a positivist view of the world. It therefore assumes that filling learning gaps is a rational process whereby the learner seeks access to and mastery of a theoretically perfect body of knowledge ‘out there’, provided by experts. However, the example hints at ways in which cognitive psychology moves away from behaviourist principles in recognising that learning cannot be acquired solely through conditioning. It owes much also to differences in individuals’ cognitive structures and to the operation of the brain as an information processing system that enables adults to intelligently search for information to solve problems and challenges.

Traditional cognitive theories have been influenced particularly by Piaget’s (1950) research into child development which led him to form the view that knowledge grows as the result of continual individual construction and reorganisation of experience through time. He produced a threefold classification of responses to explain how adults resolve tensions between their instinctive desire to learn and their preference to do so by keeping within their customary frameworks of thought (Wiltshire 2005):

- **assimilation**: where we accept new information because it is consistent with our existing cognitive framework
- **accommodation**: where we experience some tension but manage to adapt the new information so that it fits into our existing framework without radically changing it
- **rejection**: where the new information challenges our existing framework to such a degree that we are not prepared to make the necessary changes to accept it.

Piaget’s theories also influenced later approaches in learning theory that are very different from ‘traditional’ cognitive approaches. As such I will return to them shortly.

**POSIIVIST APPROACHES TO LEARNING: THE ROLE OF THE TRAINER**

Behaviourist and early cognitivist theories led to the ‘empty vessels’ model of training in organisations, rooted in the old command–control paradigm: one party – the expert – is the fount of knowledge that the other party – the learner – receives in order to fill the gaps in their learning. No matter how imaginative, sensitive and participative may be the organisation, design, delivery and evaluation of learning events and assessment of learners, it is the trainer who remains firmly in the driving seat.

Key tasks for the trainer as driver are:

- Identify and analyse the tasks that the learner must master, breaking each down into core elements of knowledge, skill and attitudes (KSA). Then analyse each core element in detail to identify the set of responses that its effective and efficient performance requires.
Design the curriculum so that sets of desired responses are arranged in a sequence, from simplest to more complex. Once the first set has been mastered by the learner it must be combined with the next, and so on, until through this cumulative learning process all sets have been mastered and a whole new pattern of behaviour emerges.

Set concise KSA objectives for each stage of the learning programme and determine appropriate methods of assessment for the trainer to be applied, related to those objectives, both during (formative) and at the end of (summative) the learning event.

When the learner achieves ‘correct’ responses, ensure that these are reinforced in order to embed them, using practice, feedback and other forms of reward.

When the learner produces ‘incorrect’ responses, ensure either that these are ‘punished’ before they have a chance of becoming habitual (for example, by withholding rewards) or that they are ‘negatively reinforced’ through supportive actions that encourage the individual to abandon them and try harder to learn the correct responses.

Is it here, then, in positivist theories, that the first definition at the start of this chapter fits in?

Learning – a relatively permanent change in behaviour that occurs as a result of practice or experience.

In its emphasis on practice, yes. But its equal emphasis on experience provides the link to learning theories that differ profoundly from positivist approaches, as the next section will show.

**REFLECTION**

Consider a training or other formal learning event that you have experienced, based on ‘trainer as driver’ principles. How far did it succeed in achieving its stated objectives, and what do you think were both its strengths and its weaknesses as a learning vehicle?

**THE AGE OF THE LEARNER**

**CHALLENGES TO POSITIVIST THEORIES OF LEARNING**

Throughout the second half of the twentieth century, research into adult education and into the psychology and sociology of learning in the workplace began to place...
big question marks against the view, held both by behavioural and traditional
cognitive theorists, that there is a separation between knowing and doing. This
questioning in the academic and educational domains also made itself felt at
practitioner level in industry, drawing attention to the fact that to train or teach is
not necessarily to achieve learning. Only the learner can learn.

In the view of later cognitive theorists adults are not merely information
processors. Their learning cannot be understood simply by reference to a type of
‘input, conversion, output’ system, largely or wholly governed by the application
of reason. Making new information available to people – no matter how skilfully
– will not necessarily change their base of knowledge, because each individual’s
learning process, mindset and perceptions of the world are unique and are also
shaped by experience. Therefore people will always differ to some extent – and
sometimes radically – in their responses to new information. Some will accept it,
some disregard it; some will distort or misinterpret its intended meaning, some will
not even notice it because their attention is elsewhere.

Most fundamentally of all, according to the body of theory called ‘social
constructivism’, individuals construct their own learning through a social process.

THE LEARNER IN CONTEXT: SOCIAL CONSTRUCTIVISM THEORIES

The constructivist approach is often described as ‘humanist’ because it places
the individual in the driving seat of learning, which it views as intimately shaped by the
social relationships and culture that most directly influence the individual’s values,
beliefs and perceptions of the environment.

Knowles (1973), one of the leading experts in the field of adult learning, was a
major influence on this new approach. He acknowledged the contribution that
Piaget’s theories made to constructivist learning theory, but because their base lay
in research into child development he questioned their relevance for adult learning.
His argument was that andragogy (the art and science of teaching the adult) differs
significantly from pedagogy (the art and science of teaching the child) because
adults have more to contribute to the learning of others and a richer foundation of
experience to which to relate new experiences. They also possess a larger number
of fixed habits and patterns of thought, and therefore tend to be less open‑minded
(Parr 2005).

Constructivist theories also owe much to the work of Kelly (1955), who proposed
that we each create our own model of the world – our personal construct – and of
others in it and our relationship to them; and that the construct is shaped as much
by feelings, beliefs and values as by experience. Other leading researchers include
Lave and Wenger (1991), who popularised the concept of ‘situated learning’ (see
below), Sternberg (1994) and Vygotsky (1978), one of the first to direct attention
in research away from a preoccupation with what is learnt to the ways in which
learning capability can be developed through the learning process (Matthews
and Candy 1999: 51). By proposing that learning is ‘a collective activity in which
the focus is on asking questions and engaging in dialogue’ (Schuck 1996: 200)
researchers like these have extended definitions of learning to include group and
organisational levels. I will discuss those levels further in the next chapter.

A central concept in constructivism is what Vygotsky (1978) has called the ‘zone of
proximal development’. This refers to a context where learners are challenged near
to, but slightly above, their current level of development. The successful completion
of each challenging task gives them the self-confidence and motivation to move on
to the next, more complex challenge. Lave and Wenger (1991) produced a similar
concept of ‘legitimate peripheral participation’.

It is not only learning but also expertise that, when viewed through constructivist
eyes, has a ‘relational, embedded, competent, reciprocal and pertinent nature’
problem solutions are feasible and acceptable in the particular circumstances.

So it is here, then, in constructivist theory, that the second of this chapter’s initial
definitions of learning fits in:

Learning: a qualitative change in a person’s way of seeing, experiencing, understanding,
conceptualising something in the real world.

COMMUNITIES OF PRACTICE

The ‘situational’ approach (another way in which theories of social constructivism
are described) reflects the belief of the educationalist John Dewey (1916) that
individual experience is the core of knowledge. Reflection on past experience in
the light of new experience is the means whereby new understanding develops and
new knowledge is formed. Competency, in this light, is the capacity to perform
in a context, and ‘reflective practice’ (to which I will return in the next chapter) is
crucial to its development. Such practice, derived from Schon’s (1983) work on
professional practice has been defined as (Hunt 2005: 234, 235):

A conscious act … with the intention of finding out more about our own learning
processes and how they affect our professional practice and working relationships.

The situational approach stresses the significance of learning in authentic settings
like workplaces where learning is also social in orientation. In Chapter 1 I
referred to ‘communities of practice’ and their role in building social capital and
organisationally valuable knowledge. That concept too is central to the situational

A community engaged in a common set of tasks, with its associated stories, traditions
and ways of working.

Two influential studies that supported this view of learning were reported by Eraut
in their important review:
• Zemke in a study in the Honeywell company found that 50% of the ways in which managers learnt to manage came from challenging job experiences, 30% from relationships with others in the organisation, and only 20% from training.

• In similar vein, Eraut’s researchers found that the two modes of non-formal learning reported as important by nearly all respondents in their study of technical and professional personnel were learning from the challenge of the work itself, and learning from other people.

An expanding body of literature now points to the crucial importance of the social basis of learning. Whereas psychological investigations of learning that have produced positivist learning theories focus largely on the individual as the unit of analysis (Matthews and Candy 1999: 50), humanist approaches rest on social sciences research focused primarily on the social relationships that influence individual learning. This focus has many educational implications. For example, whereas traditional learning theories point to the need to teach learners abstract concepts before, and distinct from, the context in which they are to be applied, situational theories emphasise the opposite: training, education and practical learning that is fully integrated (Gonczi 1999: 184).

WORK-BASED LEARNING METHODS AT BIRMINGHAM CITY COUNCIL

A senior management development programme run by Birmingham City Council for some years involved a range of established learning methods including visits to other organisations, work shadowing and mentoring. What was unusual, however, was the lack of any classroom-based component. Instead, participants had to set their own goals for learning and then find largely work-based ways to meet them. The MD centre manager explained:

Had we gone for a more traditional approach, the content would already be out of date. By using a self-managed learning approach, each senior manager creates their own programme that responds to needs that are relevant to both them and the Council.

Not all participants welcomed the idea, which was met with a degree of uncertainty and scepticism. However the results of the course showed ‘dramatic improvement in their ability to influence others, manage change, work in teams and think strategically (Cunningham 2004: 38). It also enabled deep learning that helped participants better understand and cope with the current complexity and uncertainty in local government.


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Such an approach calls, of course, for very skilful facilitation and support by L&D practitioners. It is a form of what is called ‘cognitive apprenticeship’ which I will explain in the next chapter.

The close association of constructivist theories with a ‘learning by doing’ approach does not exclude the classroom (actual or virtual) as an effective learning domain. As a Korean case shows (Kim 2005), that approach can be followed there by gearing the learning environment and process closely to the required real-life context. The facilitator’s role involves agreeing a goal-oriented learning contract with the learners, providing sufficient structure, direction and expertise to give them confidence and ensuring challenging learning activities that will help them take increasing control over the learning process. The facilitator must also provide regularly throughout the classroom period and at its end clear routes for effective transfer of learning.

**CHALLENGES TO SITUATIONAL THEORIES OF LEARNING**

Let us stop at this point to critically examine assumptions that lie at the heart of constructivist learning theory.

> **REFLECTION**

Situational theory rests on the belief that (Boud et al 1993: 8–14):

- Experience is the foundation of, and stimulus for, learning.
- Learners actively construct their own experience.
- Learning is a holistic experience.

Learning is socially and culturally constructed.

Learning is influenced by the socio-emotional context in which it occurs.

Before reading on, what tensions can you identify between some of these assumptions?

There are powerful inherent tensions between several of the assumptions shown above – particularly between the second and the fourth (Garrick 1999: 220). Consider the following:

- What if the individual learner’s ‘experience’ referred to in the first assumption is one that has led to their reduced trust in their ‘community of practice’ and to lack of commitment to its goals?

- In many learning situations it is impossible to let learners move entirely at their own pace, or to determine what the content of learning should be, if they have not yet gained the knowledge or experience to do so (Wiltshire 2005).

- There are many different types of knowledge. Some concern specific procedures, formulae, routines and techniques required to solve a problem or act...
appropriately in a situation; others relate to academic theory and conceptual models; others are about values, behaviours and practical competencies of various kinds. Not all are equally easily or effectively developed along the lines suggested by the five assumptions.

- What about failure to learn? It can leave learners blaming themselves, or being blamed by others (Wiltshire 2005).

- How can assessment of learning in the workplace be organised so that it incorporates inputs from the learners but also remains rigorous and valid?

These tensions increase when learning is located in a workplace community of practice, and today in many organisations a variety of workplace training and learning processes are being put in place to resolve them. I will expand on these in the next chapter. Suffice to say here that there are no easy or clear answers to the questions posed above because in its fundamental premise constructivist theory hits the nail on the head: it all comes back to context. After a review of relevant research Harrison and Kessels (2003: 225) concluded:

Study after study points to the impact of organisational context. Where top management’s vision and values … and … management actions, work practices and HR processes at all organisational levels … recognise the new importance of workplace learning, then a culture of learning is likely to develop and be sustained.

**SITUATED LEARNING: THE TRAINER/FACILITATOR**

The need for workplace learning to bring benefits for the business as well as individuals and groups draws attention once again to the skills, behaviours and values that trainers need to acquire if they are to become effective facilitators of learning. Pickard (2006a: 36–7) describes the case of the UK’s Department for Work and Pensions where, as the first step in a ‘revolution’ from training to learning, an experiential learning project was designed to develop the trainers, in order through that process to ensure a change in their function’s culture. The project was successful in building a community of practice in that function, transforming its practitioners into agents of change. Their experience of a learner-centred approach stimulated and enabled them to cascade it to line managers who, in turn, began to adopt it in their workplaces.

In situated learning the facilitator’s role calls for a demanding skill set because:

- The facilitator’s own culture, values and background will become part of the learners’ context and so will have a significant influence on the learning process. That influence must be a positive one, developing trust between facilitator and learners.

- Since learning is a social process, facilitator and learners must tackle challenging activities together and engage in reflective practice that leads to a mutual development of learning capability.
• The facilitator must strike a balance between directing the learning process sufficiently to ensure that it serves the goals of the business, and focusing on learning activities that will help learners to gain the confidence, ability and autonomy to increasingly direct and manage their own learning. Such facilitation should be assessed and rewarded (Schuck 1996: 267).

• When assessing learning, there should be a shift away from formal measurement dominated by the trainer to assessment as a continuous and interactive process, built into the learning process (Gredler 1997). It must be supportive and confidence-building so that it stimulates learners’ further development (Holt and Willard-Holt 2000).

THE AGE OF THE UNIVERSAL KNOWLEDGE WORKER?

LEARNING IN A KNOWLEDGE ECONOMY

So far in this chapter the discussion has focused on the nature of the learning process. This section raises the implications for learning and the learners of the emergence of a knowledge economy: a theme that will be taken further in the next chapter.

The consequences of the ‘dizzying pace’ of technological change in the past few decades have included an information-rich, computation-rich, and communications-rich organisational environment (Bettis and Hitt 1995) and, alongside and interacting with it, a heightened level of knowledge intensity. In the new economy knowledge unlocks wealth, because its application adds more value than the traditional factors of capital, raw materials and labour.

Globalisation is a key factor here. In the context of this discussion it is a process directly linked with the Internet and the pricing and information revolution that the net has made possible. Through the World Wide Web buyers and sellers can come together naturally, speedily and continuously. Companies must quickly learn how to co-create value with customers who have access to information on a global scale and who can rapidly and easily compare experiences. They can experiment with and develop products, and so have an unprecedented influence on value creation (Prahalad and Ramaswamy 2002). Sometimes through their purchasing power they can force fundamental changes in organisations’ choice of suppliers and in their ethical stance. Consider, for example, the growing success of the Fair Trade movement, or the extent to which retailers like Marks & Spencer, Tesco and Sainsbury’s have ‘gone green’ in order to keep and expand their customer base.

To make progress in a knowledge economy, organisations must regularly innovate as old knowledge that is vested in current products, processes, services and brands falls quickly out of date. Organisational boundaries become blurred through the development of new cross-boundary webs of alliances, partnerships, supply chains...
and joint ventures that provide access to far greater resource and knowledge than any single organisation can hope to acquire (Whittington et al 2002: 483).

In 2005, in this book’s 4th edition, I commented that restructuring was no longer an infrequent activity whose outcome was a stable form of organisation design. It was a recurrent process, in which most organisations were involved around once every three years, sometimes more often. Now, for many organisations that process has become almost continuous. In like manner business strategy can no longer be cast in stone. Organisations must be able to produce new strategic responses as soon as old recipes become obsolete. ‘Continuous strategising’ rather than ‘producing the strategy’ is the appropriate way of describing the process whereby they regularly have to find new ways of doing new things, adapt with little warning to the complex and the unfamiliar and sometimes adopt quite new business goals (Whittington and Mayer 2002).

The two-fold flexibility that organising and strategising involves rests on organisations’ ability to guide and facilitate continuous individual and collective learning and knowledge creation (Sanchez 1995; Eisenhardt and Santos 2002). And this is where the third definition of learning given at the start of this chapter comes in:

Learning – the heart of productive activity. To put it simply, learning is the new form of labor.

Zuboff was referring here to learning as the source of knowledge that can enable organisations to continually do new things in new ways, as well as customary things better, to continuously improve and also to radically innovate in goods, processes and services. One term for such organisations is that they are knowledge-productive (Kessels 1996). In other words they have the capability to rapidly generate, disseminate and apply knowledge that ensures continuous improvement and regular innovation throughout their value chains. (For more discussion of the organisation’s value chain, see Chapter 14.)

This focus on knowledge productivity requires all employees to become knowledge-creative. In knowledge-intensive firms such as consultancies, R&D institutions and software businesses, employers give unique status to their specialist knowledge workers, described by Peter Drucker in 1993 as those with high levels of education and specialist skills combined with the ability to apply these skills to identify and solve problems. But in an economy where knowledge creation is a task for all organisations, all organisational members possess uniquely valuable knowledge – especially of the tacit kind. Given the opportunity and incentive, all can become valuable knowledge workers. That is why I call the final age covered in this chapter that of the universal knowledge worker.

CONSTRUCTIVIST THEORY AND NOTIONS OF KNOWLEDGE

I have already explained that in the constructivist view knowledge is not a type of commodity to be captured ‘out there’ and brought ‘in here’ to transfer from experts
to learners in a systematic way. Rather, ‘knowing’ is both a product and a process. It is an ever-changing outcome of learning and is itself a stimulus to ongoing learning as our past and present knowledge interacts with that held by others with whom we associate. It is about relational and emotional as well as rational processes, and is influenced by social as well as psychological factors (Daft and Weick 1984; Gioia and Sims 1986). Both practical and social competencies are crucial in explaining intelligence and ‘contextually appropriate behaviour’ (Ginsberg 1994: 155). The basic principles here are by no means new. They go back at least to Kant (1781), if not further (Kim 2005).

The following definition summarises this interrelationship of learning and knowledge processes (Greeno et al 1993: 100, cited by Tennant: 174):

Knowing is the ability to interact with things and other people in a situation, and learning is an improvement in that ability … that is getting better at participating in a situated activity.

THE EMPLOYEE AS KNOWLEDGE WORKER: TASKS FOR THE L&D PROFESSIONAL

Any transition from an ‘age of the learner’ to an ‘age of the universal knowledge worker’ will involve a transformational change for most organisations in their vision and values, structure, culture and core competencies. In Chapter 6 I will discuss in greater detail the issues that raises for learners, management and leadership in an organisation. At this point, it is relevant simply to note that L&D professionals will need to help their organisations and individual learners to make that shift by:

• raising awareness across their organisations of the need for a learning culture that promotes knowledge productivity

• identifying and advising on barriers to the development of such a culture and how they can be tackled

• helping to develop social capital through expanding learning capacity within small groups in the workplace, and through contributing to policies and practices that build organisational commitment, trust and engagement amongst employees

• developing the competence and motivation of leaders, managers and team leaders to promote learning that leads to knowledge creation in the workplace

• working to ensure that L&D resources are focused not just on ‘key’ personnel but also on all an organisation’s knowledge workers, especially those at the lower-skilled levels who in the past have customarily received little support from managers in their learning and development
harnessing new information and communication technologies (ICT) to the knowledge process.

The next section expands on that last and vital point.

**Reflection**

Reflecting on this section of the chapter, how far do you think it is important for your organisation to invest in learning approaches that could start to transform its employees into ‘universal knowledge workers’? And what aids and barriers might there be to the success of such an investment?

**Advances in Learning Technology**

**The Impact of New Information and Communication Technology**

Learning technology has changed out of all recognition since the pioneering days of the early twentieth century, but before outlining how that has happened it is important to clarify the meaning of that word ‘technology’. I define it as:

Technology – the particular way in which, in a workplace, technical systems, machinery and processes are designed to interact with human skill and knowledge in order to convert inputs into outputs.

From the 1960s on, computers played an increasingly important part in the technology of training. Initially, designers moved from a dependence on paper-bound materials such as the Kazmier manual I mentioned earlier in this chapter to the production of computerised programs that offered the individual control over a greater variety of simulated learning situations, more rapid and involving feedback systems and an altogether more imaginative self-paced learning experience. The basic principle that drove the technology was still that of stimulus-response theory, but expressed in a more subtle and user-friendly mode.

Today, in the so-called post-Fordist workplace, new ICT has brought together electronically-based hardware, human skills and knowledge in unique ways that enable individuals to quickly and easily access information as and when they need it. Since being opened up to the public in 1992, the World Wide Web has developed into an extraordinary powerful vehicle for learning and knowledge. As Lymer (1996) observed, it is not just a tool to provide access to existing data in more
flexible, user-friendly, timely ways. It changes the way new information is generated by offering users a new medium through which to exchange ideas, formulate proposals and generate solutions in ways not previously possible. Joy Matthews et al. (2004: 126–7) identified five examples:

- **synchronous communication** – takes place in real time and relies on the use of bandwidth to carry images and sound – eg chatrooms and webcam conferences
- **asynchronous communication** – takes place with a time delay – eg emails, bulletin boards
- **use of learning objects** – bite-sized chunks of learning material
- **web-based training** – learning packages available on the Web
- **support from a learning management system** – a system that enables the management of the process of learning and development, from skills analysis to learner assessment and feedback.

An ICT-enhanced workplace offers an environment for thinking and problem-solving in which the employee’s role can be (Schuck 1996: 199):

not only to push buttons to control processes, but also to use the information generated by the technology to ‘push the business’ – to redefine process variables, to improve quality, and to reduce costs.

In such an environment, the intelligence of employees can expand until it exceeds that of the software with which they interact. These smart workers can become knowledge workers by applying knowledge gained in the course of their work and through ICT-aided self-directed learning to continuous improvement and to innovation.

**USING ICT AS A LEARNING DRIVER**

Given its dominance, the crucial question now is not whether, but how, we make best use of ICT to drive learning in our own organisation (Harrison and Kessels 2003: Chapter 11). The following are essential guidelines:

- There must be the shared vision and purpose, the leadership and management, the workplace environment and the human resource strategies that recognise and support the change.

- E-learning must be driven by learning needs rather than by any technological imperative. It should be delivered in support of needs recognised across the organisation, with appropriate structures to support it, learners who are motivated to learn and who have good IT skills (CIPD 2004a).

- There must be adequate capital expenditure and the operational infrastructure to support ICT applications.
A one-size fits all approach will not be successful. Research evidence suggests that the best way forward is to have a series of small-scale experiments, frequently reviewed, in a structure in which success is followed up and failure is used to aid future design (CIPD 2004a).

Research also points to the need for blended learning solutions that include varying levels of e-learning adapted to suit a variety of learning contexts. The real challenge here is to give more control to the learners over the whole learning process while ensuring that they are equipped to handle that shift and are motivated to do so (CIPD 2004a).

Online learning involves accessing much wider groups of people than is customary in traditional training situations. E-learning facilitators must therefore be competent in working cross-culturally and in building on diversity.

Facilitators and managers must be skilled in motivating learners and have an informed knowledge of what stimulates or hinders them in an e-learning process. In the late 1990s Lloyds TSB had 450 learning centres in the UK. Researchers found some regions much better than others in achieving enthusiasm among employees for computer-based training. This was mainly because local training administrators and line managers were supportive, proactive and imaginative in their approach to learners and the learning experience (Hills and Francis 1999). It is particularly important that e-learning does not carry the image of a solitary and demotivating experience. More sophisticated technology can avoid the problems that led in early days to such an image.

BP is one company that has invested heavily to meet these requirements as the example overleaf shows. Yet we must be cautious here. BP is a leader in the field of L&D practice but there is a long way to go before any such transformation occurs in most organisations. The CIPD’s 2008 annual L&D Survey (CIPD 2008a) raised even more doubts than its 2007 survey concerning the effective practice of e-learning in organisations. Over half of the 729 respondents reported that their organisations used it but only 7% ranked it in their top three most effective training practices. Coaching by line managers and in-house development programmes were rated much higher. Nearly all the respondents believed that e-learning is more effective when combined with other forms of learning. This raises the question, why is it not being so combined in their organisations?

In his travels to explore L&D practice in a variety of contexts across the world, Sloman (2007b) concluded that the progress of e-learning has been ‘gradual rather than spectacular’ in organisations, with the greatest advances being made in the USA. He sees its current state as one concerned with developing best practice after initial stages of excessive hype followed by the identification of critical issues (Sloman 2007b: 177). His concern following the CIPD’s 2008 L&D Survey is that far too much e-learning is driven by IT departments, far too little specifically tailored by HR staff to meet the needs of learners (Sloman 2008a).
ICT-DRIVEN LEARNING AT BP

In his article, Reynolds (2002) describes one of BP’s goals as being the introduction of services that allow the individual, group or network of employees in a workplace to take charge of their own learning through ‘an appropriate mix of inputs and outputs, individual and collaborative study, formal and informal processes, and a blend of face-to-face and virtual contact’. The idea is to provide a ‘rich set of options’ in terms not only of the ways in which individuals choose to learn, but of what and why they wish to learn.

Reynolds clarifies the spectrum that can be involved here for employees, extending from fully supported learning with clear learning objectives at one extreme to a self-initiated knowledge-creating process at the other. The three applications of e-learning that he identifies as aiding this are:

- web-based training, where content is delivered to the learner without significant interaction or support – a throwback, in other words, to the age of the trainer and to what is basically a stimulus-response conditioning process although still useful for certain purposes
- supported online learning, where the learner ‘interacts intensively, supported by content as appropriate’ – typifying the kind of activity involved in an age where control over the pace, place and timing of the learning process is moving significantly from trainers to learners, but where trainers still play leading albeit more design-focused, facilitative and supportive roles in the learning process
- informal e-learning, where learning occurs through self-directed communication, information retrieval and co-operation between peers during the normal course of work. It is this type of learning that has the potential to transform learners into their organisation’s knowledge workers. In Reynolds’ words, it marks a ‘move beyond the replacement of conventional courses into richer and more fertile learning domains’.

Source: Reynolds, J. (2002) People Management, 4 April

SHIFT OR NO SHIFT?

FINDING THE EVIDENCE

Within the space of a few generations we seem to have moved from an age where, in organisations, ‘learning’ was treated as a planned event, dominated by training, through an age where attention shifted to learning as a social process dominated by
workplace context, to a potentially transformative new age where learning, work and knowledge can become an integrated activity.

But is this really the case? 729 out of 5,000 CIPD members in senior L&D-related positions in organisations across all sectors responded to the CIPD’s 2008 annual survey of current and emerging trends and issues in the L&D field. Some of their comments have a particular relevance to claims of a shift from planned to learner-led approaches to learning in organisations today, amongst them those outlined in Table 6.

The findings outlined in Table 6 could be interpreted as signs of a real shift from a trainer-led to a more learner-led approach to learning. But they are ambiguous, because they could equally be symptomatic of what respondents to the 2008 survey forecast as the most important change likely to affect L&D in organisations in the coming five years – the drive for a closer integration of L&D activity and business strategy (68%). In-house, tailored training and coaching all aid such integration without necessarily bringing with them any real attempt to put learners in the driving seat of an organisation’s L&D process, let alone transforming them into a community of knowledge workers.

Finally, the sustained popularity of coaching does not appear to reflect any genuine recognition of the importance of reflective practice or of learning located in communities of practice. On the contrary, most coaching reported in the 2008

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**TABLE 6** Summary of some key findings from the CIPD 2008 annual Learning and Development Survey

- For the first time in three years on-the-job training was not identified by respondents as the most effective way to learn, but it remained widely popular (43%). Its lower rating was probably caused more by the introduction of new items into the questionnaire than by any reduced shift in preference.
- In-house programmes were rated highest (55%) with 61% of respondents also saying that they used these types of programmes more regularly than two years ago.
- Coaching came second (33%), thereby regaining almost all the ground it had temporarily lost in the 2007 survey. It ‘appears to be the shining star of the portfolio, with seven in ten believing it to be an effective tool’ (CIPD 2008a: 27).
- 62% of respondents identified efforts to develop an L&D culture in their organisations. 60% recorded new approaches to identifying individual training needs, with some evidence of rather more involvement now of employees/learners in determining L&D needs of the organisation as a whole.
- Management development approaches were placing greater emphasis on learning through projects, and with and from peers.
- 72% of respondents reported that over the past two years there had been a growth in new programmes to develop the role of line managers – the most significant new practice to emerge from the survey.

Source: Chartered Institute of Personnel and Development (2008a)
survey was carried out by line managers coaching those reporting to them – thereby setting up potentially powerful tensions at the heart of the coaching relationship that Howe explains in detail (Howe 2008a: 18); and a high proportion used it for remedial purposes (74% overall, rising to 80% in the private sector). Furthermore a quarter of respondents said that coaching had no link with the overall L&D strategy in their organisation, being considered as a stand-alone process, and only 12% found coaching ‘very effective’ (ibid). Such data suggest that if there is any ‘shift to learners’ in UK-based organisations it is slow and conservative.

In this chapter I have examined from a variety of perspectives the claim that in the past decade or so organisations have been experiencing a significant shift from an age of the trainer to one of the learner – possibly, even, of the learner as knowledge worker. At its end there remain many unanswered questions. That also reflects the state of research into the psychology and sociology of learning, and into notions of learning, knowing and knowledge creation in the workplace. No clear consensus on any of the big issues has yet emerged. Perhaps it can never be achieved. With each scientific advance we seem to know more yet understand less about the human condition. What are the roots of human learning and knowledge? How far and in what ways can that learning be managed, directed, made productive for the organisation? What part does it play in determining an individual’s performance at work? Is there such a thing as collective or organisational learning? And how far might that link to organisational performance?

In the next chapter I will explore further issues to do with the workplace as a source of individual and collective learning, with the development of knowledge-creating organisations, and with challenges that these issues raise for the L&D profession.

**REFLECTION**

How far, if at all, in your own organisation, do you see evidence of a shift from ‘the age of the trainer’ either to ‘the age of the learner’ or to ‘the age of the universal knowledge worker’? Reflecting on concepts and issues in this chapter, what reasons do they suggest for this shift, or for the lack of it?
This chapter has sought to identify whether a gradual shift has been occurring in recent years from trainers to learners as prime controllers of learning and knowledge in the workplace. You will find review questions related to the chapter’s content in Appendix 3.

Main themes covered in the chapter’s five sections have related to:

- an increased awareness now in organisations of theories of learning that emphasise the role of experience and of social interactions in the learning process, and that cast doubt on the validity of the traditional trainer-dominated approach to planned learning
- alongside this, a changing business environment featuring rapid technological advance, the emergence of a new and globalising knowledge economy, and a growing emphasis on organising and strategising as key processes for business organisations. It is only through these processes that an organisation can learn faster, more regularly create and apply new knowledge to continuous improvement and innovation, and quickly redeploy its internal resources in order to collaborate and compete effectively in turbulent conditions
- a consequent possible but very gradual shift in most organisations to pass more control over the learning process to the individual learner, and a parallel need for trainers and managers to take on facilitative learning roles
- the powerful potential – not yet realised – for ICT to accelerate a shift from trainers to learners, and beyond that to enable the transformation of learners into knowledge workers, and the tasks here for L&D professionals
- the requirement this raises for e-learning strategy to become an integral part of business strategy and to be fully supported by people management and development and ICT strategies and practices.


http://www.trainingzone.co.uk/ [accessed 13 March 2008]. Online community of practice of 35,000 training and HR professionals