

HRD and the challenges of assessing learning in the workplace

Nicholas Clarke

Increasingly the different ways in which learning can be conceptualised alongside debates within the field of human resource development (HRD) regarding its nature and purpose, potentially lead to confusion regarding how learning is to be assessed in the workplace. This article identifies some of the complexities associated with assessing learning in today's workplace and presents empirical findings suggesting that different aspects of an organisation's training and development system are likely to differentially determine the extent to which either formal or informal learning is assessed. Explanations as to why this may be the case are put forward.

Introduction

The ascendancy of 'learning' to the position it now occupies as one of the most dominant themes within the management literature is predicated on the assumption that it may well be the most significant factor contributing to organisational success (Miner and Mezas, 1996; Barrie and Pace, 1998; Easterby-Smith *et al.*, 1998). Especially in light of predictions that knowledge will rapidly supercede capital, labour and raw materials as the dominant means of production (Stewart, 1997). To this extent those now familiar sentiments expressed in this vein seem to have reached the status of orthodoxy:

the rate at which individuals and organisations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries (Stata, 1989: 64),

a consensus is emerging that the hallmark of tomorrow's organisations will be their capacity to learn (Adler and Cole, 1983: 85).

Recent empirical findings are also beginning to confirm the importance of providing opportunities for developing individuals as being related to better organisational

□ Nicholas Clarke, Business School, University of Greenwich, n.clarke@gre.ac.uk

© Blackwell Publishing Ltd. 2004, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main St., Malden, MA 02148, USA.

performance; measured as either an individual HR practice or as part of a bundle of HR practices within 'high performance work systems' (Huselid, 1995; Macduffie, 1995; Ichniowski *et al.*, 1997; Storey, 2002). Given such developments, the question of whether we can actually measure or assess whether learning has occurred in organisations takes on added significance. However, historically within organisations the evaluation or assessment of learning has not often been afforded significant priority. Much research over the past decades, for example, has continued to bemoan the significant gap between training research and training practice in relation to undertaking appropriate evaluation (Bassi *et al.*, 1996; Philips, 1997; Training, 1999). Recent findings in relation to workplace learning more widely suggest that problems with the assessment of informal learning may pose similar problems. Woodall (2000) for example, carried out an investigation of workplace management development and concluded that despite the recognition of on-the-job learning as a powerful source of learning in these workplaces, very little attention had been focused on how such learning could be either facilitated or effectively assessed:

Most organisations made use of personal development plans, but this was usually as a follow-up mechanism to a formal off-the-job development programme or as part of a competence-based approach. Yet there appeared to be little facilitation of PDPs, and few resources devoted to supporting guided reflection: scant use was made of learning logs and diaries, personal development planning workshops or developmental counselling (Woodall, 2000: 27).

Potentially contributing to the difficulties in assessing learning within organisations is the variety of ways in which learning is conceptualised, which can give rise to considerable confusion on a practical level. Indeed although 'learning' is increasingly seen as occupying a central component within HRD (Mclagan, 1989; Marsick and Watkins, 1994; Garavan *et al.*, 2000; McGoldrick *et al.*, 2001; Swanson, 1995), it is a multi-faceted construct, the different components of which have yet to be satisfactorily integrated within a comprehensive, functional model to underpin HRD at either a theoretical or practical level. Instead, different approaches to understanding the nature of learning has led to increasing controversy about both the nature and purpose of HRD itself (Garavan *et al.*, 2000; Mankin, 2001; McGoldrick *et al.*, 2001; Holton, 2002). Central to these debates are differing perceptions of learning either as a process unique and confined to the individual, contrasting with those that conceptualise learning as embedded within socio-cultural practices. Here learning is said to arise as a result of social interaction influenced significantly by the context in which it takes place (Mezirow, 1996; Gherardi *et al.*, 1998; Hargreaves and Jarvis, 2000). Concepts of learning are also differentiated as either formal or informal, as well as occurring at either the individual or organisational level. Not only do these approaches suggest that the actual target of assessment in relation to learning may be very different in each case (e.g. the individual versus the social context), but they also bring to the fore very different epistemological assumptions and practices to underpin any assessment of learning. As Easterby-Smith *et al.* (1998: 267) state, 'how you categorize and measure something depends on how you look at it'.

Complicating further these differing perspectives of learning is a critical debate within the HRD field regarding its nature and purpose which have significant implications for considering how learning is to be measured or assessed. In this respect there are two contrasting schools of thought. The first, the 'learning perspective', suggests that the focus of HRD should be to enhance both the organisation's and the individuals within it, capacity to learn. The 'performance perspective' on the other hand, is concerned with ensuring that learning should be translated into behaviour or performance that is associated with meeting organisational goals (Swanson, 1995; McGoldrick *et al.*, 2001). Stata (1996) for example defines learning from a performance perspective as, 'a process by which individuals gain new knowledge and insights and thereby modify their behaviour and actions'. Holton (2002: 203) too, has stated that 'the primary outcome of HRD is not just learning, but learning and performance'. The performance perspective therefore addresses issues concerning the measurement of learning at the level of behavioural or performance outcomes. The learning perspective

however is far less concerned with examining performance outcomes since from a philosophical point of view it rejects the idea that learning should necessarily lead to changes in performance. However, it should not be assumed that the performance paradigm is essentially behaviouristic. It only advocates that learning outcomes further the mission or performance of the organisation. Given that the need to assess or evaluate learning programmes and activities has traditionally been recognised as a key component of the HRD practitioner's role (Wexley and Latham, 2002), these differing perspectives are of no small significance. Ruona *et al.* (2002) for example argue that HRD practitioners must 'better demonstrate strategic and bottom line impact. Without such evidence HRD is guaranteed a lacklustre future with diminishing impact' (Ruona *et al.*, 2000: 217). Much of the literature relating to training evaluation however suggests that this tends to be given very little priority within organisations (The Industrial Society, 1994; Philips, 1997; *Training*, 1999). Furthermore the literature suffers in two major respects. First, although we have some understanding of those factors that seem to impede training evaluation, we actually know very little about those factors which seem to drive the assessment of learning in organisations. Second and of most significance, despite an increasing reliance by organisations on different forms of workplace learning, the extent to which the drivers of the assessment or evaluation of training are similar to the assessment of informal learning in organisations is a relatively unexplored area. Given this context this article considers: (1) how different conceptualisations of learning as either formal or informal, may impact on our understanding of how to undertake effective assessment; and (2) presents empirical findings suggesting that particular organisational factors are differentially associated with the assessment of both forms of learning within the workplace. Given the current interest within the field of HRD as to how organisations might develop appropriate learning climates to support different forms of learning in Europe (Tjepkema *et al.*, 2002), United States (Tannenbaum, 1997) and Australasia (Boud and Garrick, 1999), the findings presented here provide important insights into how workplaces might become more effective learning systems.

Assessing formal and informal learning

Traditionally much of the activity directed towards learning in organisations relied to a considerable extent on off-the-job methods, typically those such as training courses, seminars and educational programmes. Over recent years however, one of the most significant developments within the field of human resource development has been the increasing focus on work-based learning or what is often referred to as informal methods of learning (Boud and Garrick, 1999; Tjepkema *et al.*, 2002). To some extent this has emerged in response to many of the limitations associated with formalised approaches. Critics for example, have commented that off-the-job learning can often be removed from the realities of the workplace, and as such suffer in terms of transferring learning to use on the job, and may often be seen as lacking relevance to learners' needs (Davies and Easterby-Smith, 1984; Bryans and Smith, 2000; Raelin, 2000). Informal learning by contrast, refers to that learning which occurs on-the-job, falling under the general rubric of workplace learning or development, and includes mechanisms such as mentoring, coaching, job rotation, job-shadowing and special projects or assignments (Marsick and Watkins, 1997; Gray, 2001). Also included is learning gained as employees go about their daily work referred to as incidental learning or learning by trial-and-error. As Raelin (1998) suggests:

if knowledge is viewed as arising as much from active participation in the very apparatus of our everyday life and work, then we have to expand our conventional format of the classroom and, indeed, interpret the workplace as a suitable locus of learning (Raelin, 1998: 280).

Such learning is increasingly being recognised as possibly the most important type of learning within organisations (Jones and Hendry, 1992; Coffield, 2000), and evidence suggests that such informal methods are becoming increasingly prevalent (Dench, 1993; Raper *et al.*, 1997). Workplace learning in particular is seen as a means by which

experiential and contextual knowledge arising from reflectivity on practice can best be generated, distinguishing between the notions of explicit and tacit knowledge (Brookfield, 1992; Megginson, 1996; Rigano and Edwards, 1998). The former being that which is codified and formally transmitted within organisations, while tacit forms of knowledge are those that are deeply ingrained within the actions and practices of particular social and cultural contexts within an organisation. It is this latter form of knowledge in particular that more recent attention has been drawn within the literature, where efforts have been directed at seeking to understand how tacit knowledge might be converted into explicit knowledge. So that knowledge which is hidden may be captured, released and utilised for the benefit of the organisation (Nonaka, 1994; Eraut, 2000). Within the UK and more widely in Europe in particular, there is increasing evidence regarding the efforts organisations are making in order to support informal learning and knowledge sharing (Tjepkema *et al.*, 2002). Although a clear definition of workplace learning has yet to emerge, it would appear to be centred around a number of key concepts (Eraut, 2000; Raelin, 2000; Evans *et al.*, 2002). That is, it is:

1. concerned with reflection on and learning from experience;
2. as a result of the former significantly based on real-life problem-solving;
3. acknowledges that much learning is also a function of a collective activity situated within a specific social context.

In this respect, work-based learning recognises learning from both socio-cultural and individual perspectives and does not necessarily exclude more formal learning methods, where more deliberate activities designed to focus on self-reflectivity and examining theories in action are seen as important (Pedler, 1991; Eraut, 2000).

In terms of assessment, formal learning has the longest tradition within HRD and as such there exists a multitude of methods that are generally well known to HRD practitioners. Most of these have their origins within the adult education and training disciplines and include among others knowledge tests, simulations, and case studies, usually given to learners before and after they have participated in a formal learning activity (Bramley, 1999; Noe, 1999; Wexley and Latham, 2000). Advocates from the performance paradigm would suggest that such measures of learning should include measures to assess changes in work performance, adopting an evaluation methodology similar to that offered by Kirkpatrick (1983) in his training evaluation model. Here changes in learning at the cognitive level would need to be supplemented by measures assessing changes relating to organisational performance in order for learning to have been said to have been effective.

By its very nature however, measuring or assessing informal learning outcomes can pose significant problems. Informal learning is often unplanned and *ad hoc*, and is thus, not amenable to those traditional approaches to measuring formal learning, since specific outcomes are difficult to specify *a priori*. Most informal learning may not therefore be directly testable. For the most part, writers within this area have seen learning as a means to improve the well-being of individuals within organisations and have tended to reject the learning-performance paradigm. Instead the focus has been on the need to develop mechanisms suggested as facilitating informal workplace learning (Marsick and Watkins, 1997; Raelin, 2000; Straka, 2000). Here then the focus of assessment shifts from outcomes, to assessing learning conditions or opportunities for informal learning to take place. A number of authors for example, have argued that if organisations wish to encourage informal learning, then individuals need support in maintaining an openness towards new experiences, support in reflection, and support in translating the learning into practice (Foster, 1996; Marsick and Watkins, 1997; Bryans and Smith, 2000). However much of the writing here is often limited, in that there is generally a significant lack of empirical support to justify the claims made regarding those mechanisms or conditions suggested as supporting informal learning. In this respect, work to date on designing validated tools for assessing learning context is very much in its early stages, although some work has been particularly notable. Research of a more robust nature for example, has begun examining posited links

between aspects of an individual's job and work environment, and opportunities for learning. This has the potential for offering far clearer insights into those conditions that might promote work-based learning and also offers a basis for developing tools for use by practitioners for assessing such learning conditions in the workplace. McCauley *et al.* (1994) for example, have developed a 15-item Developmental Challenge Profile questionnaire based on research that found that four key characteristics associated with managers' job tasks were associated with opportunities for on-the-job learning. These were categorised as:

1. Transitions (e.g. a new function, unusual responsibilities or proving yourself);
2. Task-related characteristics (e.g. creating change, high level of responsibility or non-authority relationships);
3. Obstacles (e.g. difficult organisational environment, lack of management support, lack of personal support or a difficult boss);
4. Support (e.g. a supportive boss).

Far more recently, Van der Sluiss *et al.* (2002) have taken this work further and suggested that dependent upon the nature of the individual's learning behaviour, these job characteristics provide an indicator of learning potential. The learning behaviour of individuals can be characterised as either instruction-oriented or meaning-oriented (Hoeksema *et al.*, 1997) with the latter being characterised by deeper self-reflection on experiences encountered during emergent forms of learning. Their research suggests that the stronger the meaning-oriented learning preference by individuals in the workplace, and the more a job is characterised as exhibiting the McCauley *et al.* (1994) task characteristics, then the more emergent learning is likely to take place. As a result these key variables have been incorporated within an instrument to measure the quality of work-based learning, which although in its early stages offers a basis from which further development of such instruments for measuring emerging learning capacity might be refined (Van der Sluiss *et al.*, 2002).

Nonetheless, questions remain as to whether merely measuring learning capacity for workplace learning is in itself sufficient. Clearly from a performance perspective this would not be. But similarly even from a learning perspective there are significant limitations with simply measuring learning capacity. The major problem being whether all learning could necessarily be seen as either *effective* or *valuable* learning. Research has shown for example that inaccuracies can often occur in learning from experience as a result of human biases and distortions (Feldman, 1986). Furthermore, it can be difficult for individuals to accurately identify cause-and-effect relationships within such complex organisational environments, again leading to inaccuracies in the knowledge gained (Huber, 1991; Levinthal and March, 1993). Tsang (1997) summarises the problem succinctly when he states,

Putting aside the complexities of putting the lessons learned into practice (i.e. the problem of implementation), learning will automatically lead to better performance only when the knowledge obtained is accurate. If the problem of implementation is taken into consideration as well, even accurate learning is neither a necessary nor a sufficient condition for improving performance (Tsang, 1997: 78).

Such arguments suggest that whether from a strictly learning or performance orientation, there should be some attempt to determine the actual impact of work-based or informal learning. However, qualitative approaches for assessing learning may well be far more appropriate in order to achieve this. Clearly determining those conditions which support informal learning are important. Indeed much effort over the past few decades in the area of training transfer research has sought to identify both individual, job and organisational conditions that maximise both the learning gained from training and its subsequent use by learners on the job, (recognising that learning should be seen within a systems' perspective based within an organisational context) (Baldwin and Ford, 1988; Ford *et al.*, 1997; Noe, 1999). Furthermore determining such conditions

are critical since they go to the heart of our understanding of how people learn in differing contexts (Elkjaer, 2000). However this does not detract from those arguments for the need to assess learning outcomes of both formal and informal types of learning, although the mechanisms used may differ in each case. These could include for example, the specific use of workplace diaries or journals and learning logs (Luckinsky, 1990), as well as more formalised mechanisms such as action learning groups for reflecting upon and analysing the learning gained (Pedler, 1991).

It would seem then that different sources of workplace learning require a flexible and variegated approach to assessment, yet much of the literature would seem to suggest that despite the tools and approaches outlined above, the evaluation or assessment of learning is far more difficult to achieve in practice (Saari *et al.*, 1988; Bassi *et al.*, 1996; Philips, 1997; Woodall, 2000). In Campbell's (1971) seminal paper on training, he suggested that part of the problem lies with the relatively low status afforded to training evaluation within organisations, and in particular the absence of effective organisational mechanisms to bring about the necessary changes to evaluation practice:

rewards are given for putting together programs, courses...that are attractive, and that elicit a favourable impression from trainers, trainees and sponsors. There are few incentives available...for...stimulating the kind of effort it will take to develop sound theoretical models (Campbell, 1971: 594).

Further research has suggested that a major problem lies in the fact that most evaluation is undertaken for the primary purpose of improving instruction, rather than demonstrating actual outcomes in terms of individual performance (Brandenburg, 1982; Brandenburg). Other explanatory factors might also include the lack of necessary knowledge and skills with which to conduct training evaluations. It is interesting to note that within the UK, most recruitment advertisements for training professionals are increasingly requiring applicants to have qualified through and be members of the Chartered Institute of Personnel and Development (CIPD). However, CIPD accreditation does not explicitly equip training professionals with the skills to undertake comprehensive training evaluations of suitable rigour. Such data would appear to support findings from survey research carried out by the UK Industrial Society which found that a lack of knowledge of evaluation techniques as well as time constraints accounted for the continued use of poor evaluation practices within organisations (The Industrial Society, 1994). Research by Grove and Ostroff (1990) in the United States identified five key barriers that appeared to explain why training evaluation was often not carried out very effectively within organisations. They suggested that this was often due to:

1. Senior management often not insisting or requesting information on the impact of the training that was provided.
2. The lack of expertise among HRD professionals regarding how to carry out training evaluations.
3. A lack of clear training objectives attached to training programmes so that actually knowing what to evaluate against is difficult if not impossible.
4. The limited budgets available to training departments means that resources are preferred to be devoted to training provision rather than training evaluation.
5. The risks associated with evaluation may be too great given that the evaluation data might reveal that the training had little impact.

Much of the research which has identified barriers to undertaking training evaluation would seem to suggest then that the characteristics of the training and development system play a significant role in determining whether training is evaluated. However the extent to which the characteristics of an organisation's training and development infrastructure influence the assessment of workplace learning more widely is a relatively unexplored area. It is therefore in this respect that this paper seeks to enhance our understanding of the assessment of learning in the workplace by examining how

differing elements of the training and development system may potentially influence the assessment of either formal or informal types of learning.

The study

Following Mabey and Thompson (2000) in their study examining the determinants of management development in UK organisations, a systems approach was also adopted here to map the potential training process or infrastructure variables likely to influence the assessment of both formal and informal learning in organisations (Figure 1). Based on the findings relating to barriers to training evaluation, as well as the training and development literature more widely concerning factors influencing training evaluation, the model posits the key elements of an organisation's training and development system considered important in the assessment or evaluation of learning (Goldstein, 1993; Stewart, 1999; Wexley and Latham, 2002) In the first column are the training and development infrastructure (policies and practices) established to support learning in the organisation and considered necessary for the effective assessment of learning:

Training and Development Processes

(1) organisation-wide training policy, (2) on-the-job learning policy, and (3) organisation-wide training & development strategy and (4) paid staff study leave. Training and development policies should outline the commitment of the organisation to learning and expectations that learning methods will be utilised to improve performance. A training and development strategy operationalises the policy in terms of the amount and sources of development to be provided in order to meet the learning goals of the organisation (Rothwell and Kazanas, 1989; Buckley and Caple, 1995; Harrison, 1997; Stewart, 1999). Both policies and strategy reflect the importance placed on learning by the organisation and provide clear objectives for learning against which will facilitate its assessment. These are therefore posited to be associated with a greater likelihood that different forms of learning will be assessed.

(5) organisation-wide staff appraisal, and (6) the use of personal development plans, are acknowledged within the training and development literature as important practices to identify learning needs and facilitate learning (Long, 1986; Higson and Wilson, 1995; Stickland, 1996; Hartle, 1997; Taylor and Edge, 1997; Eaton, 1999). Both these practices are used to identify learning goals and provide feedback on performance and are therefore considered to be key tools used to provide data regarding the effectiveness of learning undertaken by individuals. Organisations with these practices are therefore more likely to be undertaking learning assessment.

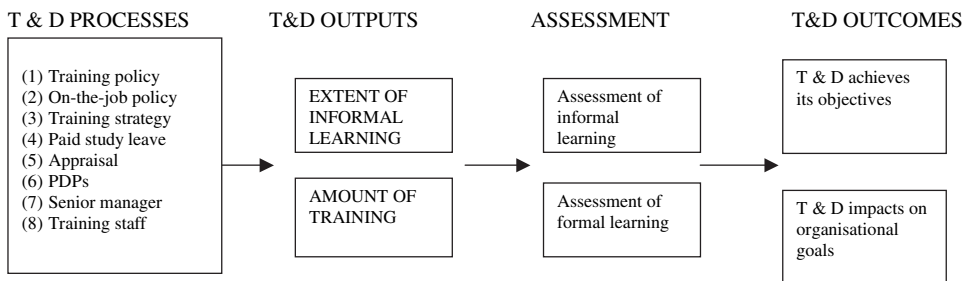


Figure 1: Training and development system.

Staffing

(7) a senior manager with responsibility for training and development, and (8) training and development staff, are posited here to be important elements of an organisation's training and development system that will influence whether assessment of learning is undertaken. A senior manager with responsibility for learning is likely to recognise the importance of assessment and be in a better position to secure resources to be allocated to this. Similarly where organisations employ training staff there should be a greater recognition of the importance of the assessment of learning (Celinksi, 1983; Harrison, 1997; Reid and Barrington, 1997). Together then, these two staffing variables are posited to drive learning evaluation or assessment.

These policy, practice and staffing variables are also considered to determine both (1) the amount of formal learning (through for example attendance on training courses and external educational programmes) and (2) the extent to which informal learning mechanisms are used by the organisation to develop their staff (Mabey and Thompson, 2000). These latter two variables are referred to as learning outputs in the model.

Opportunities for formal and informal learning

The extent to which the organisation provides opportunities for both formal and informal learning is also posited here to influence the need to assess the learning taking place. The more the organisation is actively involved in providing opportunities for staff to undertake learning, the more likely assessment is to be accorded greater status.

Assessment and Training & Development Outcomes

Given that the extent to which formal and informal learning is assessed may well differ in any one organisation, these two differing types of assessment are identified separately. Finally the model posits that the extent to which organisations assess their learning is considered to have a direct impact on learning outcomes, indicated here by the extent to which (1) staff training and development programmes achieve their objectives and (2) training and development impacts on organisational goals.

Methodology

In order to investigate the organisational influences on the assessment of learning, data was obtained from a national survey of specialised healthcare organisations (hospices) in the UK. The reasons for this were two-fold. First, these healthcare organisations are all self-contained organisations where the training and development function and activities are more likely to be centralised rather than fragmented across different departments, thus facilitating data collection. Second, within the UK healthcare system, informal learning such as that gained on the job and the importance of reflection on learning gained through practice is widely extoled within formal government policy and by the healthcare professions as a central facet of continuing professional development (DoH, 1999, 2001; Flanagan *et al.*, 2000). Given the importance placed on both informal as well as formal learning mechanisms within such work environments, the assessment of learning is more likely to be a priority. A total of 161 questionnaires were sent to all hospices throughout the UK together with a covering letter explaining the aims of the research and a guarantee of anonymity. 120 questionnaires were returned, a response rate of 74% which is considered a good response, suggesting the importance placed on learning and development by these organisations. Questionnaires were addressed to either the chief executive or the director of nursing requesting that a member of the senior management team with either responsibility for or knowledge of training and development within the organisation respond. Traditionally within such organisations the director of nursing often has responsibility for education and training issues since nursing often comprises the largest sector of the workforce. Of those completing questionnaire, 37.5 per cent (45) were nursing directors, 27.5 per

cent (33) were chief executives, 4.2 per cent (5) were medical directors, 10 per cent (12) were HR personnel and 21 per cent (25) categorised themselves as other (such as education/training specialists). Twelve per cent (14) were male and 88 per cent (105) were female. The mean age of respondents was 47 (SD 8.36).

Measures

A number of measures were included in order to examine the posited relationships contained in the model.

1. Measures of the eight training process variables were obtained by a simple dichotomous categorical coding of either yes or no. Yes was coded as 1 and a dummy variable of 0 was coded to negative answers.
2. The amount of formal learning was measured by asking respondents the amount of days off the job training received by employees during a year on a scale of 1 to 4, where 1 = 0–2 days, 2 = 3–4 days, 3 = 5–6 days and 4 = 7 days or more.
3. Based on the work of Tannenbaum (1997), respondents were asked to distribute 100 points between 12 sources of learning (including supervision, training, team meeting and mentoring) to indicate how much each of the sources are used to develop staff within the organisation. The measure of informal learning was obtained by summing all those categories classed as informal learning to provide an overall score.
4. The extent to which formal learning is assessed in the organisation was measured by asking respondents to indicate the extent to training is evaluated on a likert-scale, from 1–4, where 1 = never and 4 = always.
5. A measure of the assessment of informal learning was obtained by summing the number of mechanisms respondents indicated they formally used on a regular basis to assess such learning from a choice of seven options including learning logs, workplace diaries, guided reflection, and development counselling.
6. Size of the organisation was used in the study as a control variable and based on the number of employees.

Findings

The findings from the survey demonstrated that there is a significant recognition and use of on-the-job or informal learning within these healthcare organisations. Although formal learning mechanisms through training and education were still the most significant individual sources of learning in the organisation, combined the remaining sources of learning identified by respondents suggested that greater reliance was placed on a range of informal learning in order to support employee development (mean 68%, SD 14.31) (Table 1). Nonetheless the amount of days of off-the-job training received by staff was significant with 7 per cent (8) reporting between 0–2 days; 35 per cent (42) reporting between 3–4 days, 39 per cent (47) 5–6 days and 19 per cent (23) 7 days or more. Findings from the survey also demonstrated widespread use of the majority of those training processes detailed in the model (Table 2). The adoption of organisation-wide appraisal of staff by 91 per cent (109) of the organisations surveyed is a positive feature of these workplaces and closely linked to the provision of personal development plans for staff, identified by 78 per cent (94) of organisations. Seventy-seven per cent (93) of organisations also possessed a formal training and development policy and of these, 70 per cent (65) made particular reference to mechanisms for informal learning within these training policies.

Factors influencing the assessment of formal and informal learning

Data from the survey suggests that the assessment of training and development figured prominently within these organisations, with 98 per cent (117) of these organi-

Table 1: Mean scores for the use of learning methods by hospices

Source of learning	Mean (%)	SD
Training	16.99	8.45
Education	13.55	6.77
Supervision	12.24	8.07
Team	10.70	4.75
Mentoring	9.05	4.75
Observation	8.54	4.82
Learning fora	6.92	5.53
Self	6.82	3.77
Projects	5.78	4.00
Shadowing	4.12	3.54
Trial and error	2.97	3.28
Rotation	2.66	3.46

Table 2: Training and development infrastructure processes

Training processes	Process Present
Organisation-wide staff appraisal	91% (109)
Staff paid study leave	97% (117)
Organisation-wide personal development plans	78% (94)
Training and development (T&D) policy	77% (93)
Senior manager responsible for T&D	73% (88)
Training and development strategy	67% (80)
Training staff	63% (76)
On-the-job learning included in T&D policy	54% (65)

N = 120.

sations stating that they used appraisal and 88 per cent (105) personal development plans as a means of assessing learning on-the-job. Other methods were used to a far lesser degree with 24 per cent (29) making use of developmental counselling, 16 per cent (19) workplace diaries, 18 per cent (21) learning logs. Interestingly 66 per cent (79) of these organisations stated that they made use of guided reflection during team meetings and learning fora as a means of assessing the impact of informal learning. In order to provide insights into the drivers of this assessment, a series of regression analyses were undertaken to examine the relationships between training process and training output variables, and the extent of assessment of both formal and informal types of learning. In both instances size was entered as a control variable, followed by each of the learning process variables entered as a block, followed by the amount of formal and informal learning variables entered together as a second block and regressed against the extent of assessment of each form of learning. The key results are presented in Table 3. In relation to informal learning, organisational size was found to have a positive effect, with a beta coefficient of 0.215 ($p < 0.05$) and an R^2 value of 0.051. Of the training process variables, the presence of a senior manager with responsibility for training and development within the organisation and the use of personal development plans for all staff, were the only two variables to be positively associated with its assessment, accounting for approximately a further 11 per cent and 3.5 per cent in the value of R^2 . As suggested in the model, the greater the amount of informal learning opportunities provided is positively associated with the assessment of informal learning, with a beta coefficient of 0.211, $p < 0.05$ and increasing R^2 by a further

Table 3: The Determinants of the Assessment of Learning

Variable	Beta	Multiple R	R ²
Determinants of assessment of informal learning			
Size	0.215*	0.226	0.051
Senior manager	0.282***	0.399	0.159
Personal development plans	0.506*	0.440	0.194
Amount of informal learning	0.211*	0.488	0.238
Determinants of assessment of formal learning			
Size	0.147*	0.197	0.039
Training strategy	0.289**	0.328	0.108
Study leave	0.204*	0.384	0.148

* $p < 0.05$; ** $p < 0.01$, *** $p < 0.001$.

Table 4: The Impact of formal and informal learning

Variable	Beta	Multiple R	R ²
Training & Development Impacts on Organisational Goals			
Appraisal	0.275**	0.292	0.086
Methods of Assessment	0.234**	0.374	0.140
Training & Development Achieves its Objectives			
Training policy	0.231**	0.241	0.058
Training Staff	-0.185*	0.325	0.106
Training Evaluated	0.269**	0.420	0.177

* $p < 0.05$; ** $p < 0.01$.

4.4 per cent from 0.194 to 0.238. When the same sets of variables were regressed against the extent of assessment of formal learning, organisational size was again found to have a positive effect, but different training process variables were found to have positive associations. Training strategy was found to have the most significant effect with a beta weight of 0.289, $p < 0.01$ and changing R² from 0.039 to 0.108. The provision of study leave further determined the assessment of formal learning adding a further 4 per cent in variance.

The impact of training and development

In order to determine the impact of training and development, two questions were asked of respondents. The first was to what extent training and development achieved its objectives? The second was to what extent training and development impacted on organisational goals? All sets of variables were again entered as blocks: (1) size, (2) training & development processes, (3) the amount of formal and informal learning and (4) the extent of assessment of formal and informal learning, and regressed against both these perceptual measures of the impact of training and development (Table 4). Both the use of appraisal and the assessment of informal learning were found to be positively related to a belief that training and development impacted on organisational goals with beta coefficients of 0.275 and 0.234 ($p < 0.01$) respectively with values of R² changing from 0.086 to 0.140. By contrast, training policy (Beta 0.231, $p < 0.01$) and the assessment of formal learning (Beta 0.269, $p < 0.01$) were found to be positively related to training and development achieving its objectives.

Discussion

The aims of this article were to consider how different conceptualisations of learning influence different approaches to its assessment and examine the extent to which organisational factors potentially influence the assessment of either formal or informal learning. In this latter respect, a number of key findings were identified which provide particular insights into why some organisations may be more active in determining the impact of learning than others. The most important finding to emerge was that after controlling for organisational size, four of the eight training and development process variables demonstrated significant relationships with the assessment of training and development within the organisations surveyed. Interestingly though, these differed in their impact on the assessment of either formal or informal learning. In terms of formal learning (such as through training), paid study leave for staff and possessing a training strategy were found to be significantly related to the extent of assessment or evaluation. Whereas in relation to informal learning, a senior manager with responsibility for training and development and the use of personal development plans by the organisation, were the key training process variables related to its assessment. It is interesting then to consider why this might be the case. An organisational training strategy identifies the training and development that is required to be undertaken by the organisation generally over a set period, and according to training theory is informed by organisational-wide training needs analysis. This should outline what the training needs are and how particular training and development activities are supposed to meet these needs. This then results in a clear set of training objectives and expected outcomes identified in the strategy (Stewart, 1999; Walton, 1999; Wexley and Latham, 2002). This being the case it might therefore be expected that an organisational training strategy should facilitate the evaluation or assessment of training and development within the organisation, having specified *a priori* expected outcomes.

Furthermore given that formal learning methods such as training is off-the-job, organisations will need to both plan and budget for staff cover as well as allocate financial resources in order for training to take place, a training strategy is therefore also an important tool in budgeting. With a clear cost element attached, this may further suggest why a training strategy may exert a more profound influence on assessment or evaluation in an organisation. Supporting this latter point is the finding that paid study leave by an organisation was also associated with the assessment of formal learning. Again it would be expected that paid study leave for staff requires employees to identify the off-the-job learning programme they are undertaking, including its expected learning outcomes, as well as having a clear financial cost identified. Together this suggests that it is both the more transparent costs and greater clarity of expected outcomes generated by both these training processes, that potentially influence the assessment of formal learning.

Training strategy was not associated with the assessment of informal learning and there may be a number of possible explanations for this. First, it may indicate that despite the widespread use of informal learning in these organisations, it is undertaken far more on an *ad hoc* basis responding to the individual learning needs of employees. As a result, it would seem less likely to appear in an organisation's training strategy. Second, the *ad hoc* nature often associated with informal learning and the fact that it occurs on the job, make the cost element of informal learning far more difficult to quantify. The assessment of informal learning may be less likely to be influenced by an organisation's training strategy given the latter's close association with budgeting for training expenditure.

These latter points may well further explain the importance of the two training process conditions that were instead, found to be associated with the assessment of informal learning. Here senior management with responsibility for training and development was found to have the most significant influence. It would seem here that where senior management have responsibility for training and development decisions, the assessment of informal learning is afforded higher priority. The finding that the use of personal development plans was also related to the extent of assessment of

informal learning would seem to underscore the importance of this mechanism as a means for recording and monitoring the impact of learning gained on the job. It may well also suggest the greater use of such individual plans as a means to assess this form of learning, in the absence of other forms of data upon which managers are able to make any judgments. This seems particularly the case as the survey revealed the much lesser use of developmental counselling, learning logs and workplace diaries as a means of assessing workplace learning.

The failure to find any relationships between (1) training and development policy, (2) appraisal, (3) on-the-job learning policy, or (4) training staff, and the assessment of either formal or informal learning deserves some comment. Perhaps of most significance is the failure to find any relationships between the two relevant policy variables and either forms of assessment. Previously Mabey and Thompson (2000) demonstrated that management development policy comprising a composite score of three variables (1) the existence of written management development policy statements, (2) the degree of organisational priority given to management development and (3) who takes responsibility for driving management development in the organisation (the individual or the organisation) was the most significant factor in determining the amount of management development provided by organisations. However here it would seem that such written training and development policy statements are not associated with whether training and development is subsequently assessed.

Significantly, the presence of training staff within the organisation was found to have no effect on whether either forms of learning are assessed or not, despite 63 per cent (76) of organisations stating that they had training staff. This may suggest that the assessment or evaluation of training and development programmes does not fall within their responsibilities, or they may lack the expertise or resources. Such explanations have been cited previously as perhaps accounting for the lack of training evaluation in organisations (*Training*, 1999). However there has often also been the criticism that training staff are more interested in providing training and development activities rather than actually assessing them. Certainly the failure to find any relationship here to some extent underscores the suggestion earlier that different approaches to understanding both the nature of learning in organisations may be causing some confusion on a practical level as to how to go about assessing it. Indeed the additional finding showing a negative relationship between the presence of training staff, and a belief whether training and development achieves its objectives, seems to provide further support for this conclusion. Together both these findings suggest some concern in that HRD practitioners may not necessarily be assisting organisations to understand the contribution that training and development might be making by failing to undertake appropriate assessment.

Perhaps one of the most significant findings from this study is the extent to which the assessment of training and development in the organisation is significantly associated with perceptions regarding the impact of training and development. What is interesting is the finding that the assessment of informal learning rather than formal learning was found to be associated with the perception that learning impacts on organisational goals. The assessment of formal learning on the other hand was found to be only associated with training and development achieving its objectives. Again, this may well indicate the relevant importance of informal learning by these organisations, borne out as indicated earlier by the greater use of informal learning rather than formal learning methods. However it might also be the case that the benefits of on-the-job learning are far easier to recognise by managers, with greater relevance for providing staff with knowledge and skills for use on the job. With perhaps less problems associated with transfer, it seems likely that the linkages between on-the-job learning, improvements in performance and the contribution towards organisational goals become more transparent. Appraisal was also found to impact on a belief that learning impacted on organisational goals and supports current thinking regarding the role of appraisal in organisations in assessing learning needs, development and the performance of staff in line with organisational priorities (Walton, 1999). The finding that the presence of an organisation-wide training policy is associated with a

belief that training and development achieves its objectives is consistent with previous findings by Mabey and Thompson (2000), who also found a positive relationship between management development policy and a belief that management development achieves its objectives.

The findings here are significant however in suggesting that the assessment of both formal and informal types of learning may well be particularly important in contributing to senior management beliefs regarding the impact of training and development in an organisation. They importantly suggest that the assessment of learning outcomes is a key means through which HRD practitioners are likely to be able to demonstrate their contribution to achieving organisational strategy and goals. Nonetheless the findings here do need to be placed within the context of the limitations associated with the study. Although the findings here do demonstrate some significant relationships, the data was drawn from a cross-sectional survey of healthcare organisations preventing any conclusions regarding causality. A longitudinal study would have offered greater insights into the nature and direction of these relationships. The reliance on self-report data collected predominantly from a senior executive manager whose perceptions may well represent a biased picture of training and development within the organisation. Supplementing the data here with the perceptions of employees would have increased the validity of these findings. Finally, common source bias may have influenced the results obtained here.

Conclusions

Different conceptualisations of learning potentially lead to differing approaches to its assessment in organisations, but the literature to date on factors influencing the assessment of learning is significantly limited in being heavily training focused. Our knowledge of the extent to which those factors suggested as influencing the assessment of training are relevant for the assessment of workplace learning more widely is therefore rather limited. Findings from this study have provided some key insights into the differential impact of factors associated with an organisation's training and development that potentially influence the assessment of formal and informal types of learning. Such findings are important in directing HRD practitioners to consider how elements of their training and development system might be better developed to serve as useful drivers for the assessment of these different forms of learning. This would seem to be all the more important given the key finding from this study that where organisations undertake assessment of their training and development (both formal and informal learning) then there is a greater belief in the positive impact training and development has in the organisation. This is particularly important since much of the literature relating to informal learning, seems to suggest that merely installing particular organisational conditions will result in quality learning outcomes (Smith, 2000; Lahteenmaki *et al.*, 2001; Clarke, 2003). Although tentative, these findings would seem to urge caution in placing too much faith in such ambitious aspirations, and instead underscore the need for HRD practitioners to assess or evaluate learning outcomes in order to ensure greater recognition of the contribution HRD makes to the organisation.

Earlier this article suggested that the performance and learning paradigms of HRD place differing emphases on the importance of assessing either learning outcomes or learning context. Here it would seem that assessing learning outcomes whether performance related or not, would seem to have distinct benefits for the organisation in terms of how the impact of HRD is viewed. Based on this premise, learning context as championed by the learning paradigm, as well as outcomes as advocated by the performance perspective would seem to offer important if different foci for directing the assessment of learning in today's workplace. This being the case, far more research needs to be undertaken to determine whether these training processes typically determine the assessment of training and development. In particular qualitative studies are also required that seek to elucidate a more in-depth understanding regarding the impact of differing training processes and to identify other key variables that could

potentially be harnessed by HRD practitioners to help drive the assessment of different forms of learning.

References

- Adler, P. S. and Cole, R. E. (1993), 'Designed for Learning: A Tale of Two Auto Plants', *Sloan Management Review*, Spring, 85–94.
- Baldwin, T. T. and Ford, J. K. (1998), 'Transfer of Training: A Review and Directions for Future Research', *Personnel Psychology*, **41**, 9–21.
- Barrie, J. and Pace, R. W. (1998), 'Learning for Organizational Effectiveness: Philosophy of Education and Human Resource Development', *Human Resource Development Quarterly*, **9**, 39–54.
- Bassi, L. J., Benson, G. and Cheney, S. (1996), 'The Top Ten Trends', *Training and Development Journal*, **50**, 28–42.
- Boud, D. and Garrick, J. (eds) (1999), *Understanding Learning at Work* (London: Routledge).
- Bramley, P. (1999), 'Evaluating Effective Management Development', *Journal of European Industrial Training*, **23**, 3, 145–53.
- Brandenburgh, D. (1982), 'Training Evaluation: What's the Current Status?', *Training and Development Journal*, **36**, 8, 14–19.
- Brookfield, S. (1992), 'Uncovering Assumptions: The Key to Reflective Practice', *Adult Learning*, **3**, 4, 13–18.
- Bryans, P. and Smith, R. (2000), 'Beyond training: reconceptualising learning at work', *Journal of Workplace Learning*, **12**, 6, 228–35.
- Buckley, R. and Caple, T. (1995), *The Theory and Practice of Training*, 3rd edn. (London: Kogan Page).
- Campbell, J. P. (1971), 'Personnel Training and Development', *Annual Review of Psychology*, **22**, 565–602.
- Celinski, D. (1983), 'Trainers Manual: Formulating Training Policy Statements', *Training and Development*, June.
- Clarke, N. (2003), 'The Relationships Between Workplace Environment and Different Learning Outcomes', *Paper presented at the University of Greenwich Work and Employment Research Unit Seminar Series*, December.
- Coffield, F. (2000), *The Necessity of Informal Learning* (Bristol: The Policy Press).
- Davies, J. and Easterby-Smith, M. (1984), 'Learning and Developing from Managerial Work Experiences', *Journal of Management Studies*, **21**, 8, 169–83.
- Dench, S. (1993), 'Employers Training: Its Infrastructure and Organisation', *Employment Department Social Science Research Branch*, Working paper no. 4 December.
- DoH (1999), *Continuing Professional Development: Quality in the NHS* (London: Department of Health).
- DoH (2001), *Working Together – Learning Together. A Framework for Lifelong Learning for the NHS* (London: Department of Health).
- Easterby-Smith, M., Snell, R. and Gherardi, S. (1998), 'Organizational Learning: Diverging Communities of Practice?', *Management Learning*, **29**, 3, 259–72.
- Eaton, P. (1999), 'Coaching for Results', *Industrial and Commercial Training*, **31**, 4, 14–15.
- Elkjaer, B. (2000), 'Learning and Getting to Know: The Case of Knowledge Workers', *Human Resource Development International*, **3**, 3, 343–59.
- Eraut, M. (2000), 'Non-formal Learning and Tacit Knowledge in Professional Work', *British Journal of Educational Psychology*, **70**, 113–36.
- Evans, K., Hodkinson, P. and Unwin, L. (2002), *Working to Learn* (London: Kogan Page).
- Feldman, J. (1986), 'On the Difficulty of Learning Experience', in H. P. Sims, D. A. Gioia and associates (eds), *The Thinking Organization* (San Francisco: Jossey-Bass), pp. 403–20.
- Flanagan, J., Baldwin, S. and Clarke, D. (2000), 'Work-based Learning as a Means of Developing and Assessing Nursing Competence', *Journal of Clinical Nursing*, **9**, 3, 360–8.
- Ford, J. K., Kozlowski, S., Kraiger, K., Salas, E. and Teachout, M. (eds) (1997), *Improving Training Effectiveness in Work Organization* (Mahwah, NJ: Erlbaum).
- Foster, E. (1996), *Comparable but Different: Work-based Learning for a Learning Society, WBL Project, Final Report 1994–96*, University of Leeds.
- Garavan, T. N., Gunnigle, P. and Morley, M. (2000), 'Contemporary HRD Research: A Triarchy of Theoretical Perspectives and their Prescriptions for HRD', *Journal of European Industrial Training*, **24**, 65–93.
- Gherardi, S., Nicolini, D. and Odella, F. (1998), 'Toward a Social Understanding of How People Learn in Organizations', *Management Learning*, **29**, 3, 273–97.

- Goldstein, I. L. (1993), *Training in Organizations: Needs Assessment, Development and Evaluation*, 3rd edn., (Monterey, CA: Brooks/Cole).
- Grove, D. A. and Ostroff, C. (1990), 'Training Program Evaluation', In K. N. Wexley & J. R. Hinrichs (eds) *Developing Human Resources*. ASPA/BNA Series, Washington DC: Bureau of National Affairs.
- Hargreaves, P. and Jarvis, P. (2000), *The Human Resource Development Handbook* (London: Kogan Page).
- Harrison, R. (1997), *Employee Development* (London: IPD).
- Hartle, F. (1997), *Transforming the Performance Management Process* (London: Kogan Page).
- Higson, M. and Wilson, J. P. (1995), 'Implementing Personal Development Plans: A Model for Trainers, Managers and Supervisors', *Industrial and Commercial Training*, **27**, 6, 25–9.
- Hoeksema, L., van de Vliert, E. and Williams, R. (1997), 'The Interplay between Learning Strategy and Organizational Structure in Predicting Career Success', *The International Journal of Human Resource Management*, **8**, 3, 307–27.
- Holton, E. F. (2002), 'Theoretical Assumptions Underlying the Performance Paradigm of Human Resource Development', *Human Resource Development International*, **5**, 2, 199–215.
- Huber, G. P. (1991), 'Organizational Learning: The Contributing Processes and the Literatures', *Organization Science*, **2**, 1, 88–115.
- Huselid, M. A. (1995), 'The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance', *Academy of Management Journal*, **38**, 3, 635–72.
- Ichniowski, C., Shaw, K. and Prennusi, G. (1997), 'The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines', *American Economic Review*, **87**, 3, 291–313.
- Jones, A. M. and Hendry, C. (1992), *The Learning Organization: A Review of Literature and Practice* (London: Human Resource Development Partnership).
- Kirkpatrick, D. L. (1983), 'Four steps to measuring training effectiveness', *Personnel Administrator*, **28**, 19–25.
- Lahtemaki, S., Toivonen, J. and Mattila, M. (2001), 'Critical Aspects of Organizational Learning Research and Proposals for its Management', *British Journal of Management*, **12**, 113–29.
- Levinthal, D. A. and March, J. G. (1993), 'The Myopia of Learning', *Strategic Management Journal*, **14**, 95–112.
- Long, P. (1986), *Performance Appraisal Revisted* (London: IPM).
- Luckinsky, J. (1990), 'Reflective Withdrawal through Journal Writing', In J. Mezirow and associates (eds), *Critical Reflection in Adulthood* (San Francisco, CA: Jossey-Bass), pp. 213–34.
- Mabey, C. and Thompson, A. (2000), 'The Determinants of Management Development: The Views of MDA Graduates', *British Journal of Management*, **11**, S3–S16.
- Macduffie, J. P. (1995), 'Human Resource Bundles and Manufacturing Performance: Organisational Logic and Flexible Production Systems in the World Auto Industry', *Industrial and Labor Relations Review*, **48**, 2, 187–221.
- Marsick, V. and Watkins, K. (1994), 'The Learning Organization: An Integrative Vision of HRD', *Human Resource Development Quarterly*, **5**, 4, 353–60.
- Marsick, V. J. and Watkins, K. (1997), *Informal and Incidental Learning in the Workplace* (London and New York: Routledge).
- Mankin, D. P. (2001), 'A Model for Human Resource Development', *Human Resource Development International*, **4**, 1, 65–85.
- McCauley, C. D., Ruderman, M. N., Ohlott, P. J. and Morrow, J. E. (1994), 'Assessing the Developmental Components of Managerial Jobs', *Journal of Applied Psychology*, **79**, 4, 544–60.
- McGoldrick, J., Stewart, J. and Watson, S. (2001), 'Theorizing Human Resource Development', *Human Resource Development International*, **4**, 3, 343–56.
- McLagan, P. (1989), *Models for HRD Practice* (Alexandria, VA: ASTD).
- Meggison, D. (1996), 'Planned and Emergent Learning', *Management Learning*, **27**, 4, 411–28.
- Mezirow, J. (1996), 'Contemporary Paradigms of Learning', *Adult Education Quarterly*, **46**, 158–73.
- Miner, A. S. and Mezirow, S. J. (1996), 'Ugly Duckling No More: Past and Futures of Organizational Learning Research', *Organization Science*, **7**, 1, 88–99.
- Noe, R. A. (ed.) (1999), *Employee Training and Development* (Boston: McGraw-Hill).
- Nonaka, I. (1994), 'A Dynamic Theory of Knowledge Creation', *Organization Science*, **5**, 1, 14–37.
- Pedler, M. (ed.) (1991), *Action Learning in Practice*, 2nd edn. (Aldershot: Gower).
- Phillips, J. J. (1997), *Return on Investment in Training and Performance Improvement Programs: A Step by Step Manual for Calculating the Financial Return on Investment* (Woburn, MA: Butterworth-Heinemann).

- Raelin, J. A. (1998), 'Work-based Learning in Practice', *Journal of Workplace Learning*, **10**, 6/7, 280–83.
- Raelin, J. A. (2000), *Work-based Learning: The New Frontier of Management Development* (Prentice-Hall: New Jersey).
- Raper, P., Ashton, D., Felstead, A. and Storey, J. (1997), 'Toward a Learning Organisation? Explaining Current Trends in Training Practices in the UK', *International Journal of Training and Development* **1**, 1, 9–21.
- Reid, M. and Barrington, H. (1997), *Training Interventions*, 5th edn. (London: IPD).
- Rigano, D. and Edwards, J. (1998), 'Incorporating Reflection into Work Practice', *Management Learning*, **29**, 4, 431–46.
- Rothwell, W. J. and Kazanes, H. C. (1989), *Strategic Human Resource Development* (Englewood Cliff, NJ: Prentice-Hall).
- Ruona, W. E. A., Leimbach, M., Holton, E. F. and Bates, R. (2002), 'The Relationship between Learner Utility Reactions and Predicted Learning Transfer among Trainees', *International Journal of Training and Development*, **6**, 4, 218–28.
- Saari, L. M., Johnson, T. R., McLaughlin, S. D. and Zimmerle, D. M. (1988), 'A Survey of Management Training and Education Practices in US Companies', *Personnel Psychology*, **41**, 731–43.
- Smith, P. J. (2000), 'Flexible Delivery and Apprentice Training: Preferences, Problems and Challenges', *Journal of Vocational Education and Training*, **52**, 483–502.
- Stata, R. (1989), 'Organisational Learning – the Key to Management Innovation', *Sloan Management Review*, **30**, Spring, 63–74.
- Stata, R. (1996), 'The key to Management Innovation', in K. Starkey (ed.), *How Organizations Learn* (London: International Business Press).
- Stewart, J. (1999), *Employee Development Practice* (London: Pitman).
- Stewart, T. A. (1997), *Intellectual Capital: The New Wealth of Organizations* (New York, NY: Doubleday).
- Stickland, R. (1996), 'Self-development in a Business Organisation', *Journal of Managerial Psychology*, **11**, 7, 30–9.
- Storey, D. J. (2002), 'Education, Training and Development Policies and Practices in Medium-sized Companies in the UK: Do They Really Influence Firm Performance?', *Omega*, **30**, 249–64.
- Straka, G. A. (2000), 'Conditions Promoting Self-directed Learning at the Workplace', *Human Resource Development International*, 241–51.
- Swanson, R. A. (1995), 'Performance is the Key', *Human Resource Development Quarterly*, **6**, 2, 207–13.
- Tannenbaum, S. I. (1997), 'Enhancing Continuous Learning: Diagnostic Findings from Multiple Companies', *Human Resource Management*, **36**, 4, 437–52.
- Taylor, D. and Edge, D. (1997), 'Personal Development Plans: Unlocking the Future', *Career Development International*, **2**, 1, 21–3.
- The Industrial Society (1994), *Managing Best Practice – Training Evaluation* (London: The Industrial Society).
- Tjepkema, S., Stewart, J., Sambrook, S., Mulder, M., ter Hoerst, H. and Scheerens, J. (eds) (2002), *HRD and Learning Organisations in Europe* (London: Routledge).
- Training (1999), 'A Professional Agenda for the Millennium', *Training*, July, 8–10.
- Tsang, E. W. (1997), 'Organizational Learning and the Learning Organization: A Dichotomy between Descriptive and Prescriptive Research', *Human Relations*, **50**, 1, 73–89.
- Van der Sluis, L., Williams, R. and Hoeksema, L. (2002), 'Measuring the Quality of Managerial Learning on the Job', *International Journal of Human Resource Management*, **13**, 8, 1266–78.
- Walton, J. (1999), *Strategic Human Resource Development* (Harlow: Prentice-Hall).
- Wexley, K. N. and Latham, G. P. (2000), *Developing and Training Human Resources in Organizations*, Vol. 3 (Englewood Cliffs, NJ: Prentice-Hall).
- Woodall, J. (2000), 'Corporate Support for Work-based Management Development', *Human Resource Management Journal*, **10**, 1, 18–32.