Organisational Factors Influencing the Assessment of Formal and Informal Learning

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Increasingly the different ways in which learning can be conceptualised alongside debates within the field of HRD regarding its nature and purpose, potentially lead to confusion regarding how learning is to be assessed in the workplace. This paper 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.

Keywords: Learning, Assessment, Evaluation.

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 upon which organisational success is contingent (Barrie & Pace 1998; Easterby-Smith et al 1998). Recent empirical findings are also beginning to confirm the importance of providing suitable opportunities for developing individuals and for enhancing learning as being related to better organisational performance when measured as either an individual HR practice or as part of a bundle of HR practices within 'high performance work systems' (Ichinowski 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. 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, 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 2000; McGoldrick et al 2001). 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. 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) state, 'how you categorize and measure something depends on how you look at it' (p267). Complicating assessment further, is whether learning can be said to have occurred as a result of a change in cognition or whether a change in behaviour is required. In this respect there are two contrasting schools of thought within the HRD field. 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 (McGoldrick et al 2001). 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 & Latham 2002), these differing perspectives are of no small significance (Ruona et al 2002).Much of the literature relating to training evaluation however suggests that this tends to be given very little priority within organisations (Philips 1997; The Industrial Society 1994; 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 in a study examining workplace learning concluded that,

> "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" (p27).

Yet 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. Furthermore 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 paper considers how different conceptualisations of learning as either formal or informal may impact on our understanding of how to undertake effective assessment and presents empirical findings suggesting that particular organisational factors are differentially associated with the assessment of both forms of learning within the workplace.

Assessing Formal & 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. Critics however have commented that formalised approaches to 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. 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 & Watkins 1997). Also included is learning gained as employees go about their daily work referred to as incidental learning or learning by trial-and-error. Such learning is increasingly being recognised as possibly the most important type of learning within organisations (Coffield 2000) and evidence suggests that such informal methods are becoming increasingly prevalent (Dench 1993). 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). 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; and (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 (Eraut 2000; Pedler 1991). 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 amongst others knowledge tests, simulations, and case studies, usually given to learners before and after they have participated in a formal learning activity (Wexley & Latham 2000). By its very nature however measuring or assessing informal learning outcomes can pose significant problems. Informal learning is often both unplanned and ad hoc and thus is not amenable to those traditional approaches used to measuring formal learning, since specific outcomes are difficult to specify apriori. 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 & Watkins 1997; Raelin 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 (Marsick & Watkins 1997). 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. 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 (Tsang 1997). 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, although qualitative approaches for assessing learning are likely to be far more appropriate in this instance. Clearly determining those conditions which support informal learning are important not least 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 (Bassi et al 1996; Philips 1997; Woodall 2000). Research suggests 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). Other explanatory factors might also include the lack of necessary knowledge and skills with which to conduct training evaluations (The UK Industrial Society 1994). Research by Grove & Ostroff (1990) in the US 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 amongst 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; and finally (5) that 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 & 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 & Latham 2002)

Policy Variables

Policy variables include (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 (Buckley & Caple 1995; Rothwell & Kazanas 1989; Stewart 1999). Both policies and strategy reflect the importance placed on learning by the organisation and provide clear objectives for learning which will facilitate its assessment. These are therefore posited to be associated with a greater likelihood that different forms of learning will be assessed.

Practices Variables

Practice variables include (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 (Eaton 1999; Taylor & Edge 1997). 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.
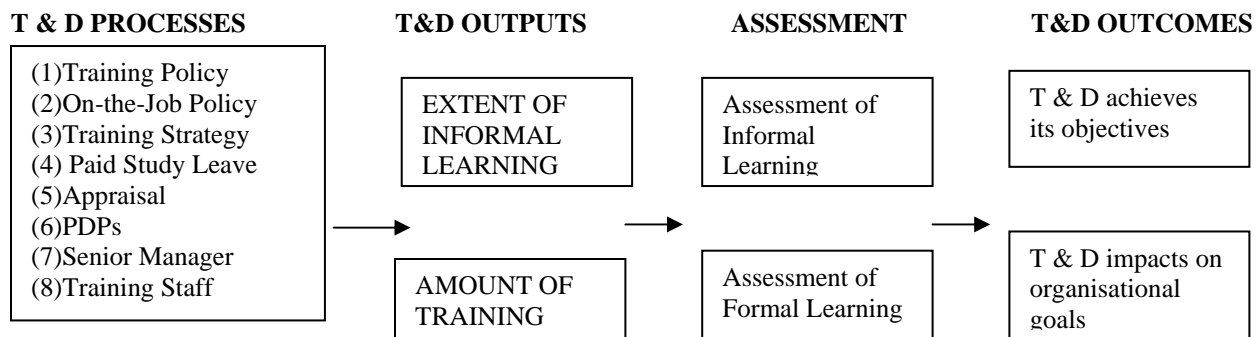
Staffing Variables

Staffing variables include (7) a senior manager with responsibility for training & development, and (8) training & 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; Reid & Barrington 1997). Together then these two staffing variables are posited to drive learning evaluation or assessment.

Learning Outputs and Assessing 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. 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 & development programmes achieve their objectives and (2) training and development impacts on organisational goals.

Figure 1. Training & Development System

T & D PROCESSES

(1) Training Policy
(2) On-the-Job Policy
(3) Training Strategy
(4) Paid Study Leave
(5) Appraisal
(6) PDPs
(7) Senior Manager
(8) Training Staff

T&D OUTPUTS

EXTENT OF INFORMAL LEARNING

AMOUNT OF TRAINING

ASSESSMENT

Assessment of Informal Learning

Assessment of Formal Learning

T&D OUTCOMES

T & D achieves its objectives

T & D 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. A total of 161 questionnaires were sent to hospices throughout Britain 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. 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. Of those completing questionnaire, 37.5% (45) were nursing directors, 27.5% (33) were chief executives, 4.2% (5) were medical directors, 10% (12) were HR personnel and 21% (25) categorised themselves as other (such as education/training specialists). 12% (14) were male and 88% (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) The amount of informal learning was measured by asking respondents to allocate 100 points between a range of 12 learning sources including supervision, training, team meeting and mentoring that were used within the organisation for developing the knowledge and skills of staff. The measure of informal learning was obtained by summing all those categories classed as informal learning. (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 7 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

Data from the survey suggests that the assessment of training and development figured prominently within these organisations, with 98% (117) of these organisations stating that they used appraisal and 88% (105) personal development plans as a means of assessing learning on-the-job. Other methods were used to a far lesser degree with 24% (29) making use of developmental counselling, 16% (19) workplace diaries, 18% (21) learning logs.

Table 1. *The Determinants of the Assessment of Learning*

Variable	Beta	Multiple R	RSquared
Determinants of Assessment of Informal Learning			
Size	.215*	.226	.051
Senior Manager	.282***	.399	.159
Personal Development Plans	.506*	.440	.194
Amount of Informal Learning	.211*	.488	.238
Determinants of Assessment of formal Learning			
Size	.147*	.197	.039
Training Strategy	.289**	.328	.108
Study Leave	.204*	.384	.148

p<.05; **p<.01; ***p<.001

A series of regression analyses were undertaken to examine relationships between training process and training output variables on the extent of the assessment of both formal and informal 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 1. In relation to informal learning, organisational size was found to have a positive effect, with a beta coefficient of .215 (p<.05) and an Rsquared value of .051. 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% and 3.5% in the value of Rsquared. 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 .211, p<.05 and increasing Rsquared by a further 4.4% from .194 to .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 .289, p<.01 and changing Rsquared from .039 to .108. The provision of study leave further determined the assessment of formal learning adding a further 4.0% in variance.

The Impact of Training & Development

Table 2. *The Impact of Formal and Informal Learning*

Variable	Beta	Multiple R	RSquared
Training & Development Impacts on Organisational Goals			
Appraisal	.275**	.292	.086
Methods of Assessment	.234**	.374	.140
Training & Development Achieves its Objectives			
Training policy	.231**	.241	.058
Training Staff	-.185*	.325	.106
Training Evaluated	.269**	.420	.177

*p<.05; **p<.01

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 the two perceptual measures of the impact of training and development (table 2). 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 .275 and .234 (p<.01) respectively with

values of Rsquare changing from .086 to .140. By contrast, training policy (Beta .231, p<.01) and the assessment of formal learning (Beta .269, p<.01) were found to be positively related to training and development achieving its objectives.

Discussion

The most important finding to emerge from this study was that after controlling for organisational size, four of the eight training and development process variables were significant in determining the extent to which the assessment of training and development actually occurs within these organisations. 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 identified as the key drivers determining whether any assessment or evaluation took place. 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 determining its assessment. It is interesting then to consider why this should 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 (Wexley & 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 apriori 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 again suggests why a training strategy influences the assessment or evaluation in the organisation. Supporting this latter point is the finding that paid study leave by an organisation also determines whether the assessment of formal learning takes place. 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 cost and greater clarity of expected outcomes generated by both these training processes, that may be responsible for the greater use of assessment, with organisational investment predicated on the basis of some organisational return.

That training strategy was not associated with the assessment of informal learning is interesting and there may be a number of reasons for this. Firstly, 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, and as a result is less likely to appear in an organisation's training strategy. Secondly, 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. 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 responsibility for training and development was found to have the most significant influence. The finding that the use of personal development plans by the organisation 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 judgements. The failure to find any relationships here between the two relevant policy variables (T&D policy & On-the-job learning policy) and either forms of assessment was surprising. Previously Mabey & Thompson (2000) demonstrated that management development policy was the most significant factor in determining the amount of management development provided by organisations. It would seem that although written training and development policy statements may influence its provision, it does not then follow that this then influences assessment. Perhaps of more interest though is that the presence of training staff within the organisation has no effect on whether either forms of learning are assessed or not, despite 63% (76) of organisations stating that they had training staff. It may be that the assessment or evaluation of training and development programmes might not fall within the responsibilities of training staff within the organisation, or they may lack the expertise or resources. Such explanations have been cited previously as perhaps accounting for the lack of training evaluation (Training 1999). There has often also been the criticism that training staff are more interested in providing training and development activities within an organisation rather than actually assessing them. Certainly the failure to find any relationship here suggests that different approaches to understanding both the nature of learning in organisations may be causing

some confusion on a practical level as to go about assessing it. Indeed the additional finding showing a negative relationship between the presence of training staff, and training and development achieving 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 contributes significantly to perceptions regarding the impact of training and development in the organisation. In particular 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. It might 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. 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 & 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 forms of learning may well be particularly important in contributing to senior management beliefs regarding the impact of training and development in an organisation. Nonetheless the findings here do need to be placed within the context of the limitations associated with the study which prevent any firm conclusions being drawn regarding any causal relationships between the variables examined. Although the findings here do demonstrate some significant relationships, the data is drawn from a cross-sectional survey of healthcare organisations. A longitudinal study would have offered greater insights into the nature and direction of these relationships. A reliance on self-report data which was collected from in most instances a senior executive manager from within the organisation whose perceptions may well represent a distorted picture of training and development within the organisation is also a limitation. Supplementing the data here with the perceptions of employees would have offered a more accurate picture of organisational reality. Common source bias might also have accounted for 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 considering how elements of their training and development system might be 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, both in terms of it achieving its objectives and more significantly in terms of its impact on organisational goals. 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. These findings would refute such ambitious aspirations and underscore the need for HRD practitioners to assess or evaluate learning outcomes in order to ensure greater recognition of the contribution HRD makes in the organisation. Far more research needs to be undertaken to determine whether these training processes typically determine the assessment of training and development more widely. In particular qualitative studies are required that seek to elucidate a more in-depth understanding regarding the impact of differing training processes. Further research is also required to focus on identifying other key variables that could potentially be harnessed by HRD practitioners to help drive the assessment of different forms of learning.

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