

DOCUMENT RESUME

ED 454 438

CE 081 957

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 TITLE Working Knowledge and Work-Based Learning: Research Implications. Working Paper.
 INSTITUTION Technology Univ.-Sydney, Broadway (Australia). Research Centre for Vocational Education and Training.
 SPONS AGENCY Australian National Training Authority, Melbourne.
 REPORT NO RCVET-WP-00.16
 PUB DATE 2000-12-00
 NOTE 11p.; Paper presented at the Working Knowledge: Productive Learning at Work International Conference (Sydney, Australia, December 10-13, 2000). For full proceedings from the Working Knowledge conference, see ED 451 388.
 AVAILABLE FROM For full text:
<http://www.uts.edu.au/fac/edu/rcvet/working%20papers/0016%20WorkKnow.pdf>.
 PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS Adjustment (to Environment); Adult Learning; Colleges; Comparative Analysis; *Education Work Relationship; Educational Environment; *Educational Research; Employee Attitudes; Foreign Countries; *Learning Processes; Organizational Climate; Organizational Development; Postsecondary Education; *Research Methodology; Research Needs; Secondary Education; Theory Practice Relationship; Universities; *Vocational Education; Work Environment
 IDENTIFIERS *Australia; Impact Studies; Knowledge Development; *Learning Organizations; Work Based Learning

ABSTRACT

The research implications of the concepts of working knowledge and work-based learning were examined. A research agenda for work-based learning arising from the analysis of "working knowledge" was presented. The agenda listed questions pertaining to the following areas: (1) the conditions bringing about work-based learning; (2) the nature of working knowledge; (3) knowledge formation and learning at work; (4) academic institutions and their knowledge codes; (5) contemporary knowledge formation; and (6) working identity. The impact of the "embeddedness" of learning in the workplace on attempts to research how knowledge is produced in workplaces was discussed, focusing on the following items: (1) what employees deem to be learning practices and how they understand these practices by their various conceptions of learning; (2) the work relationships and social learning that occur among employees and their influence on formation and modification of worksites' learning practices; and (3) the organizational culture that provides a context for learning. The following factors conditioning a learning culture were explored in an analysis of the problem of researching how an organizational "learning culture" is produced in enterprises: environments pressing the organization to change; organizational systems promoting learning; and practices securing employee commitment. (Contains 18 references.) (MN)

Working knowledge and work-based learning: research implications

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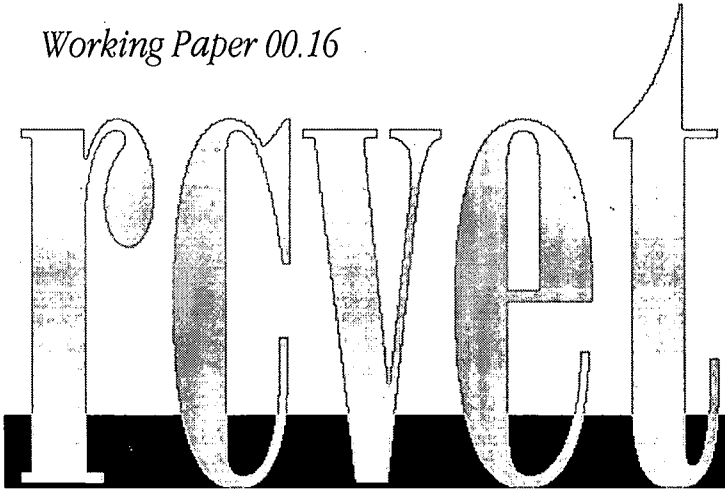
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Paper prepared for *Working Knowledge, Productive Learning At Work*, an International Conference organised by the Researching Adult and Vocational Learning group, University of Technology, Sydney. December 10-13, 2000, Sydney.

This paper arises from the work of the UTS researching adult and vocational learning group and its analysis of work-based learning in higher education (Symes & McIntyre 2000). One aspect of that analysis is the 'de-institutionalisation' thesis— that work-based learning programs represent, on the one hand, a de-institutionalisation of vocational learning, a movement of learning out of formal institutions, and on the other, a new institutionalisation of learning in workplaces, where what was informal, embedded and unrecognised is now to be recognised, valued and promoted by enterprises which desire more productive and 'performative' workplaces (Solomon & McIntyre 2000).

Underlying this analysis is a theorisation of the nature of educational institutions and institutionalisation. It is a paradox of so much scholarship in education takes for granted the nature of its institutions. At the same time, it is natural to analyse work-based learning in terms of its distinctiveness, its informality, lack of structure and other features, through accounts which emphasise its difference from schooling and formal learning. Work-based learning can be readily portrayed in terms of theories of informal learning, and the attributes of 'adult learning'.

Though it is important to examine such features as 'informality' of work-based learning in comparison to formal courses, it is as important to understand how learning is embedded in work practices, and how employee learning is structured into organisational systems, and how individual commitment to learning within these systems is secured. Work-based learning, as distinct from workplace learning in general, refers to the formalisation of learning at work. From this point of view, then, what needs analysis is the ways that contemporary workplaces seek to develop a culture of productivity and performance—in other words, what it is about organisations that creates a press for employees to learn and how learning is structured into organisation systems. This is as much about industrial relations as educational issues.

This paper will discuss—

- a research agenda for work-based learning arising from the analysis of 'working knowledge'
- a line of inquiry into the problem of the 'embeddedness' of learning in the workplace
- the related problem of researching how an organisational 'learning culture' is produced in enterprises.

A RESEARCH AGENDA FOR WORK-BASED LEARNING

To return briefly to the ‘de-institutionalisation’ theme, it is apparent this line of thinking could be quite productive in furthering research on work-based learning. As the ‘Working Knowledge’ essays suggest (Symes & McIntyre 2000), the emergence of work-based learning *award programs* raises a host of issues that go well beyond the pragmatics of ‘doing work-based learning’. The trend is seen as a symptom of fundamental challenges to vocational education. Thus, work-based learning in its radical form may be seen as a cause for rethinking our educational institutions, and educational practice in general. Work-based learning is taken to be a harbinger of fundamental change in institutions and not a temporary aberration soon to disappear.

A broad research agenda arising from the emergence of work-based learning is outlined in Symes & McIntyre (2000, Introduction). This includes—

- Questions about the conditions bringing about work-based learning. How might it be possible to conceptualise the broad social and economic changes that are bringing about new partnerships between corporations and the academy and endorsing work-based learning programs as a leading educational innovation? To what extent is the state-led restructuring of educational institutions forcing this accommodation, and to what extent is it conditioned by other pressures for a ‘convergence’ of developments in the corporation and the academy and indeed, in society at large?
- Questions about the nature of working knowledge. In attempting to conceptualise the nature of working knowledge, what understandings of ‘knowledge’ are we working with? How does work-based learning challenge our existing theories of knowledge, particularly as these have been shaped by academic experiences that are traditionally at odds with workplace learning? How might the idea of the ‘production’ of knowledge through learning at work, offer a perspective on the formation of human capital?
- Questions about knowledge formation and learning at work. How might current approaches to workplace learning be reconceptualised to better take into account concepts of knowledge production? How can workplace learning be theorised in terms of the way knowledge is taken up and transformed through professional judgements and other processes at work? How do the demands of the contemporary workplace demand higher order cognition in this way?
- Questions about academic institutions and their knowledge codes. If it is true that work-based learning challenges those knowledge-codes that are historically the basis for framing the formal curriculum, what new knowledge-codes are required by the different conditions of learning in the workplace? To what extent are concepts such as productive learning useful to the task of designing educational practice around a ‘curriculum of work’? What might be some of the educational implications of a rethinking of curriculum knowledge codes in the light of work-based learning? If work-based learning represents a ‘weakening’ of boundaries of work and education, to what extent will the strong divisions between higher and further education institutions be sustained in the future?

- Questions about contemporary knowledge formation. Much of the argument takes current theorisations of ‘new modes’ of knowledge production as a reference point. There are questions about the adequacy of this theory of contemporary knowledge formation, including how the supposed shift to knowledge-production in its contexts of application is to be understood. What might the debate about knowledge-production imply for the rethinking of educational institutions and the formal curriculum? How does this debate provide a broader context for arguments about workplace learning as situated knowledge-production?
- Questions about working identity. What do the changing parameters of work and learning imply for the management of identity in workplaces? How does work-based learning present limits and possibilities for defining working identity? How can working knowledge be understood as including the processes by which employees manage their identities as workers? What kinds of capacities or competencies must workers have developed to take advantage of opportunities in the ‘humanised workplace’ to be able to fashion work identities? To what extent are current theories of learning from experience useful in this task? How do power and authority relationships govern the processes involved? How in its nature is ‘working identity’ accomplished in specific workplaces and in terms of local and situated working knowledges?

The remainder of this paper presents some current thinking about researching workplace learning that is informed by this broad research agenda.

THE PROBLEM OF THE ‘EMBEDDEDNESS’ OF WORKPLACE LEARNING

The difficulties of researching how knowledge is ‘produced’ in the workplace in relation to work-based learning are not to be under-estimated. One such difficulty is the ‘embeddedness’ of learning at work. If knowledge is being ‘produced’ through learning at work, how is this to be observed and understood if learning is part and parcel of the ordinary texture of work activity? How is research to uncover the learning that occurs associated with workplace activities? A major research project underway at UTS is focusing on this question. It asks:

- How do employees construct learning through their work relationships for their own benefit and for that of their work, thereby furthering the strategic goals of the organisation?
- What conceptions of learning do employees hold and how do these limit their opportunities and those of the organisation for learning?
- What formal interventions can be made in the organisation to maximise the identification and utilisation of learning opportunities without undermining the effectiveness of existing informal learning processes?

Obviously, it is difficult to answer such questions without some kind of social analysis of workplace learning—that is, an approach which seeks to understand the ways in which organisational culture and systems encourage or inhibit learning. Such an approach needs to take account of the complexities of the contemporary workplace. Learning is negotiated through work relationships and networks (Poell, van der Krogt & Wildermeersch 1999) and it is necessary to have theoretical perspectives that recognise this. It is essential to draw on

theoretical resources from human resource development, workplace learning and adult and experiential learning (eg Watkins & Marsick 1993, Argyris 1996, McIntyre 1996, Boud 1998, Denton 1998, Boud & Garrick 1999, Garrick 1999).

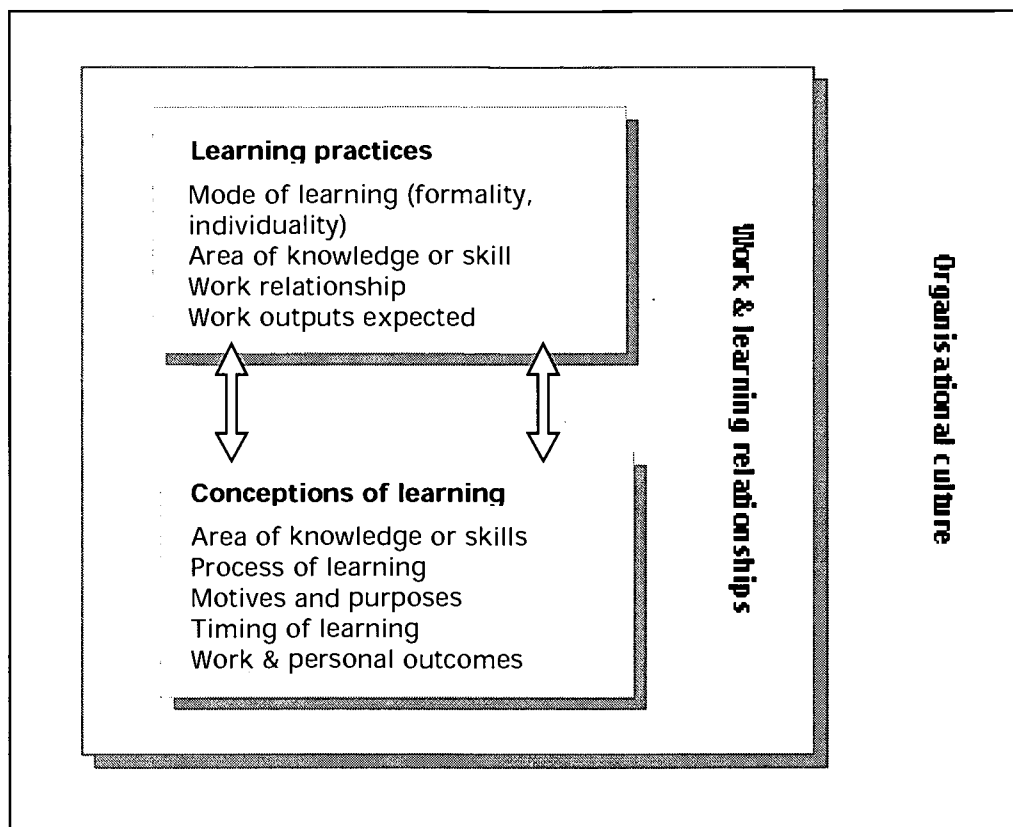
However, there is a relative poverty of theorisation of workplace learning. Though the term 'learning organisation' has been common in corporate discourse, its characteristics are not well understood. Related terms such as 'empowerment', drawn from radical pedagogy, are also used with uncritical ease of the changes in contemporary work (Gee et al 1996). Recent research offers both a critique and theorisation of the learning organisation in various ways. One set challenges the prevailing philosophical and organisational rationales for workplace learning (Garrick 1999); another set seeks to explain the relationship between organisational and individual learning as a relationship of power and subjectivity (du Gay 1996, Rose 1989, Miller & Rose 1990); yet another, the gap that exists between the rhetoric about 'learning organisations' and the realities of the workplace.

In short, it is far from clear how learning is organised in workplaces and how it is to be understood. Empirical investigation of the embedded nature of learning in workplaces is needed to understand the nature of learning organisations. There are many issues arising from what is learned in the contemporary workplace—questions about how human capital is generated or deployed, and how occupational knowledge relates to vocational qualifications. There are also questions regarding the organisational impacts of learning in the workplace, including the economic contribution that learning makes to productivity.

Such questions cannot be answered before research has been conducted into the embedded nature of learning in the workplace. Other research inquiring into these questions (eg Lave 1991, Watkins & Marsick 1993) has glossed over the matter of the organisation of learning and its identification, or focused, narrowly, for example, on the role of communication in such learning. To reiterate the point, it is necessary to take a social theoretical perspective in which work is understood as a 'community of practice' with many situated learning elements (Billet 1998, Lave 1991).

Thus learning has to be understood as organised and enacted through work relationships, rather than as a psychological process. This kind of understanding is linked to current thinking about the new 'learner worker' or 'knowledge worker', the 'self-regulating employee' who is encouraged to assume responsibility for their work and learning. A conceptual framework developing such an approach can be outlined (Figure 1):

Figure 1. Conceptual framework for analysing workplace learning



First, there is what employees *deem to be learning practices* and how they understand these practices by their various conceptions of learning. ‘Learning practices’ means what employees do to organise their activities with learning in mind, individually or collectively. The term ‘conception of learning’ refers to how employees understand their work-related learning, how learning is conducted in relation to individual and organisational goals and values. It refers to a set of ‘understandings’ which include beliefs about the nature of learning processes as they relate to tacit and everyday knowledge about what learning is possible and how it occurs.

Second, there are the *work relationships* and the social learning that occurs among employees and how this influences the formation and modification of learning practices on work sites. By highlighting work relationships, it is implied that learning practices have a ‘negotiated’ character. They are to be found in ‘learning networks’, as they are organised through relationships, including authority relationships with managers and supervisors. Obviously, learning is shaped by various kinds of responses, including that relating to the worth or priority of the learning practices themselves, or information about learning and its results.

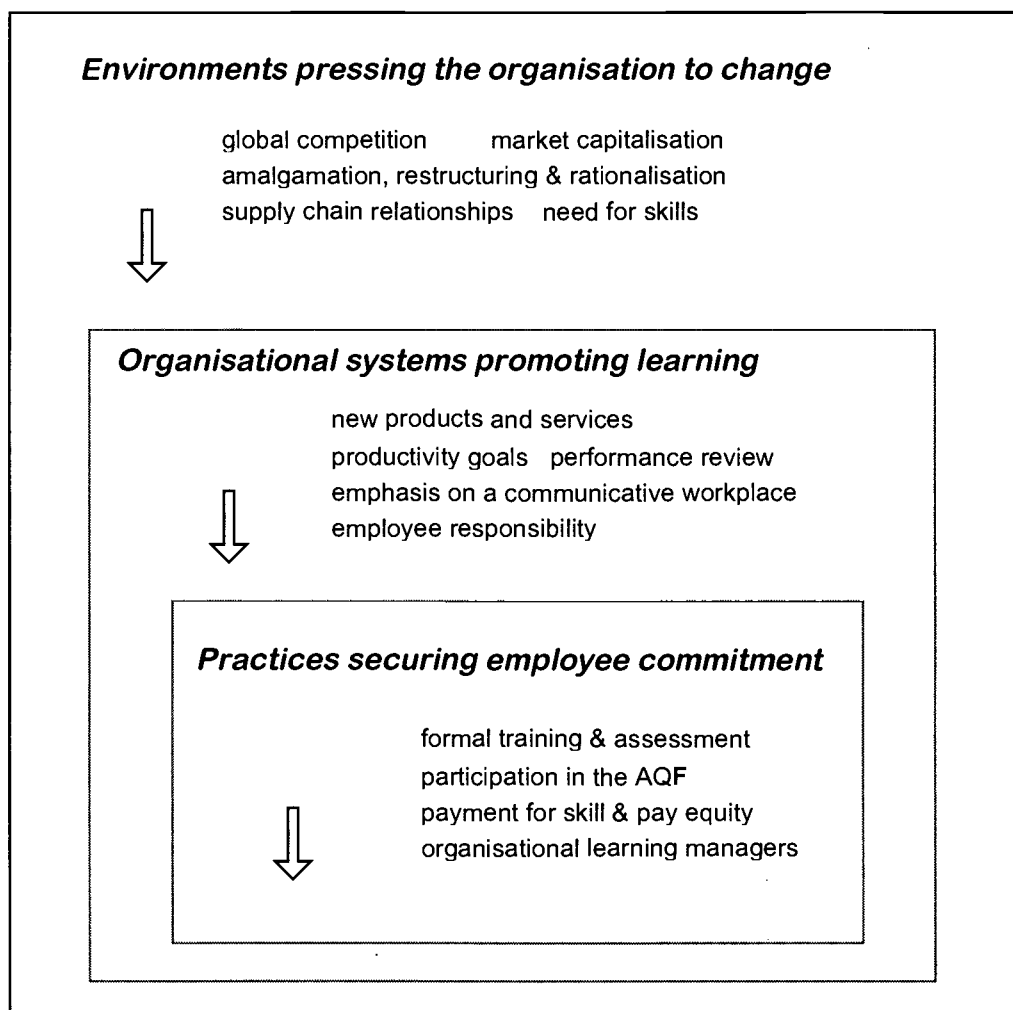
Third, there is the *organisational culture* that provides a context for learning, influencing the work relationships that modify and mediate the learning that takes place. Questions then arise about what organisational factors—systems, or ways of organising and managing work—are linked to the shaping and negotiation of learning practices.

ANALYSING CONDITIONS FOR A LEARNING CULTURE

This framework may be extended by examining further how organisational culture acts upon the matrix of work relationships to condition learning. There is a need to see learning and a 'learning culture' as 'produced' in an organisation. While the educational position is often that learning is an unquestioned good, it cannot be thereby assumed that learning simply happens produced by an exhortation to employees to create a learning culture.

Drawing on current work being conducted by the UTS Research Centre for Vocational Education and Training, it is possible to suggest what conditions help to create a learning culture (Johnston et al 2000). This research has arrived at the view that a 'learning culture' and increased workplace learning is the result of deliberate restructuring of organisational systems and changes to work relationships and work performance. The shift to a learning culture is conditioned by a shift to a culture of productivity and performance demanded by a highly competitive business environment (Figure 2):

Figure 2. Factors conditioning a learning culture (Johnston et al 2000)



In Johnston et al's model, the enterprise is seen as adapting to a change environment which presses it to develop organisational systems that will enable it to adapt, survive and prosper. There are a range of catalysts for organisational change that will tend to demand work-related learning by employees, including the wholesale restructuring of a company following market capitalisation, acquisition or expansion, amalgamation and rationalisation, or public sector reform.

The 'press' on the organisation is addressed by developing systems that deliberately promote learning by employees that will assist them to adapt to changed work demands. Often these systems will demand greater productivity and higher performance – the matrix for learning is the creation of a culture of productivity and performance, for example, through performance review and the shifting of responsibility and initiative to teams within a context that emphasises communication about work. Though it has become commonplace to assert that there is a great deal of informal learning going on as a result of organisational change, the point being made here is that systems are designed to promote learning as part of enhanced performance.

Thus, the model suggests that there is a further dimension where the organisational systems need to have features that will secure employee commitment to learning through particular work practices. Such practices, it might be said, institute learning for work and include the development of formal training or assessment systems, participation in the Australian Qualifications Framework through formal courses or other arrangements, the creation of pay-for-skill incentives through enterprise bargaining, and the creation of learning managers whose primary role is not to train, in the narrow sense, but to 'embed' learning in work practices and organisational systems (Johnston et al 2000).

This model represents the development of a learning culture in a certain way. It suggests that a 'learning culture' is something achieved through the deliberate arrangements designed to maximise productive work in a highly competitive environment, where the organisations systems have to be designed to support the development of employees if productivity goals are to be achieved. In short, this model does not idealise 'learning culture' as a mysterious ethos that comes about through exhortation of managers alone or the goodwill of employees persuaded that it is a 'good thing', but as a result of organisational change managed in this direction.

CONCLUSION

The research agenda arising from contemporary 'working knowledge' is broad indeed. If work-based learning is to be researched, it is necessary for researchers to go beyond their professional concern with educational issues and understand how learning in the workplace is embedded in workplace practices and relationships. Though theories of adult learning are a first resource for understanding workplace learning, they are not adequate in themselves as an account of the complexities of contemporary workplaces where 'learning' is being demanded of employees as part of their working conditions. It is essential to have a social analysis of skill and knowledge as it is configured by changing employment conditions and as it is embedded in work relationships.

Where work-based learning programs are negotiated with employers as part of managerial efforts to create a 'learning organisation' operating in a highly competitive business environment, sufficient attention has to be paid to the fact that workplace learning is being engineered, or 'structured in' to organisational systems designed to increase employee productivity and work performance. In this way, the broader meanings of work-based learning as it reflects a shift of vocational education and training out of institutions and into the workplace, driven by competitive pressures of a globalisation and the emerging 'knowledge economy', can be explored. Researchers interested in the link between the trend to work-based learning and the 'production' of knowledge at work have a task ahead of them.

Note: This paper draws extensively on material developed with colleagues David Boud, Nicky Solomon and Colin Symes for an Australian Research Council SPIRT grant on 'uncovering embedded learning at work'.

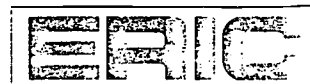
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