



Pedagogy of work-based learning: the role of the learning group

Pedagogy of
work-based
learning

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Abstract

Purpose – The aim of this paper is to evaluate the role of learning from participation in a group of work-based learners.

Design/methodology/approach – This study relies on qualitative data obtained from a survey of perspectives of students on two work-based learning programmes. A group of 16 undergraduate and seven postgraduate students participated in a focus group and a number of one-to-one interviews.

Findings – It was found that work-based learners learn effectively from both their community of practice in the workplace and their learning group of work-based learners within the university. The study suggests that a learning group experience is valued highly by work-based students and that dialogue with other students in the learning group appears to make a significant contribution to enhancing their knowledge.

Practical implications – The findings have implications for the design of work-based learning programmes. The approach which integrates learning from the students' workplace community of practice and learning from the learning group at the university appears to be most effective.

Originality/value – The paper discusses the relationship between the nature of work-based learning and the structure and pedagogy underlying such learning. Whilst the paper recognises that there are benefits to the individualised approach to work-based learning, it nevertheless argues for more focus on the social aspect of learning, and emphasises the role of interaction with other learners in the learning group.

Keywords Workplace learning, Teaching, Communities

Paper type Research paper

This paper is a voice in the debate on the relationship between the nature of work-based learning and the structure and pedagogy underlying such learning. Pedagogical issues of work-based learning are sometimes conspicuously absent from major publications on the subject, and the discourse of work-based learning tends to focus either on the complex relationship between the university, the employer and the student, or on the nature of knowledge created in the workplace (Boud, 2001; Costley, 2000; Eraut, 1994). The prime focus of the study is the experience of work-based learning students on two programmes at a Scottish university.

The literature on work-based learning seems to promote individualised approaches. Boud and Solomon (2001) suggest that work-based learning typically involves partnership between the academy and the employer; work-based learners negotiate individualised learning plans; the programme of learning derives from the needs of the workplace rather than being framed by the academy; the starting point of the programme is set only after some cognisance is taken of the learner's current competences and the learning they wish to engage in; the learning projects are undertaken in the workplace and the educational institution assesses the learning



outcomes against a trans-disciplinary framework. While Boud and Solomon's tenets do not necessarily imply that a pedagogy more suited to individualised learning is inherent in work-based learning, it does appear that such a pedagogy fits most neatly.

The discourse of learning at work, however, is dominated by the social view of learning, which places the social and cultural context at the centre of the theoretical frame. According to Coffield (2002), a social theory of learning is based on an assumption that learning is located in social participation and dialogue – the focus is shifted from individual cognitive processes to the social relationships which shape learner identities that “may differ over time and from place to place” (Coffield, 2002, p. 191). In the light of social theory of learning, the social and cultural environment constructs the learner; learning is a social process, and it takes place not only in the classroom, but also in informal contexts. The knowledge and skills learned are context-dependent. The socially situated emphasis displaces “learning as acquisition” and replaces it with “learning as participation” (Felstead *et al.*, 2005, p. 362), where gaining knowledge is often an issue of becoming a full participant of a community of practice (Lave and Wenger, 1991). A social theory of learning, according to Wenger, integrates four interconnected components:

- (1) community (“learning as belonging”);
- (2) practice (“learning as doing”);
- (3) identity (“learning as becoming”); and
- (4) meaning (“learning as experience”) (Wenger, 1998, p. 5).

For Wenger, communities of practice are the key components of a social learning system, and learning as social participation is “a more encompassing process of being active participants in the practices of social communities and constructing identities in relation to these communities” (Wenger, 1998, p. 4).

Lave and Wenger (1991) focus on newcomers' journey from the periphery to the centre of the community of practice. This journey is made possible through increasing participation in the activities of and interaction with more experienced members (“old-timers”). In this model the learning that emerges from interpersonal relationships takes the central position. In a community of practice participants learn from daily round of tasks that have to be undertaken in order to sustain the community. Indeed, the meaning given to these tasks can only be understood through the practice of that community. A community of practice is necessary for the existence and transfer of knowledge, and it is the social structure of practice, including its power relations, that provides the opportunities for learning. Consequently, Lave and Wenger offer an alternative theoretical model about the nature of learning by participation, which is based on the nature of cultural practice.

Related to the concept of cultural practice is the language of practice. Lave and Wenger make the point that didactic language is not the discourse of practice, but rather a new linguistic form which has an existence of its own. They argue that there is a crucial difference in talking *about* and talking *within* a practice: “for newcomers then the purpose is not to learn *from* talk as a substitute for legitimate peripheral participation; it is to learn *to* talk as a key to legitimate peripheral participation” (Lave and Wenger, 2002, p. 121). Lave and Wenger argue that by abstracting knowledge we

no longer use the discourse of practice but another discourse *about* the practice which is fundamentally different.

The basic assumption behind Lave and Wenger's (1991) theory is that learning is situated and that it cannot be considered in isolation from the social relations that shape legitimate participation. This constitutes a shift of focus from teaching/training to the focus on the communities' learning resources. Lave and Wenger (1991) argue that notions of learning by observation and imitation are not accurate as newcomers are more than observers, they are participants in a culture of practice, and they assimilate this culture over a period of legitimate participation.

The central message of Lave and Wenger's theory is echoed in Eraut *et al.* (2002). Examples of informal learning investigated by these authors are highly situated and dependent on social relationships within the workplace. There are two types of relationships:

- (1) with people within groups of employees at work; and
- (2) with people from outside these groups, for example through professional networks.

The authors conclude that although some knowledge is embedded in organisational activities, other knowledge is located with individuals – co-workers and holders of specialist knowledge. This concept is referred to as “a continuum from knowledge that is individually situated, to knowledge which is organisationally situated” (Eraut *et al.*, 2002, p. 145). Eraut *et al.*'s examples point to the pace of change in the patterns of employment, and consequently, question the meaning of communities of practice over short time spans. Also, Eraut *et al.* observe that individuals may be members of a number of communities of practice at one time, hence their individual learning and their histories may influence the learning taking place in different communities. This is a crucial insight since, according to Eraut, it means that learning acquired in one context can be re-situated in a new context, and then integrated with new knowledge acquired in this new situation.

The respective roles of individual and social learning are also explored by Eraut (2000), who considers two arguments against regarding knowledge as solely individual in nature. One argument is that in some situations individual knowledge is necessary but not sufficient, and workers are not able to perform on their own. The second argument presented by Eraut is that knowledge is shaped by context, embedded in a situation which comprises a location, a set of activities and a set of social relations in which these activities are placed. In conclusion, Eraut argues against the “simplistic” concept of situated learning which ignores the influence of different learning histories that learners bring with them, and fails to recognise the different types of learning taking place in different situations. In order to understand learning, Eraut suggests, we need to look at the situation itself and the contributions of the learning careers of individual participants. Eraut believes that knowledge can be abstracted from one context and re-situated in another. Other participants bring into the situation their own understanding, knowledge and interpretation. In other words, individual processes of learning are impacted on by a wider range of what Eraut calls “cognitive resources”. As a result of this process, the individual's learning is enhanced by being re-situated in the new context, and the context is enriched by the contribution of the individual's

personal knowledge. Integration of personal and re-situated knowledge leads to the creation of new knowledge.

The theoretical model proposed by Eraut (2000) poses a combination of an individual's prior learning and experience and the social dimension of a situation in which the process is embedded. Similarly, Billett (2004) argues that individuals' agency (through, for example, their personal histories) engenders identities and subjectivities which affect the ways the workplace is approached and understood; consequently individuals can choose not to identify with the norms and practices of the workplace if these clash with their own values and norms. Literature on workplace learning, according to Billett (2004), opposes the situational determinism which ignores the role of human agency in the construction of knowledge, and argues that it is wrong to assume that the process of learning occurs entirely in terms of the circumstances in which it is situated.

In his later writings Wenger (2000) explores some of the limitations of communities of practice, and draws on the idea of a boundary between communities. Such boundaries are fluid, unspoken and originate from different histories and different capabilities. Boundaries are important for learning because they lead to interaction and exposure to "foreign" competence (Wenger, 2000, p. 233). According to Wenger (2000), boundaries can create divisions, but they are also sites of learning – this is where different perspectives meet and new possibilities arise. The author suggests a few ways in which boundaries between communities of practice can be bridged – for example through brokering, boundary objects, boundary interactions and cross-disciplinary objects (Wenger, 2000).

The problem of transferability of learning between different contexts is explored by Guile and Young (2002). Arguing against the narrow transmission model of learning, the authors emphasise the importance of transferability of knowledge and skills between organisational contexts. The transfer of learning is a complex and challenging process, according to the authors, as it involves people developing an ability to "think beyond the immediate situation they find themselves in" (Guile and Young, 2002, p. 153). Guile and Young further argue that workers collectively learn and create new knowledge, but only if the focus of learning is not limited to "here-and-now", and if the external concepts and technologies are allowed to have an explicit role. Learning then becomes a process of mediating ideas and concepts developed over a period of time in other social contexts to new contexts.

Cultural historical activity theory may offer some suggestions on how to address the limitations of the situated approach (Evans *et al.*, 2008). Engeström *et al.* (1995) elaborate the concept of boundary crossing in the context of activity theory and argue for a "broader, multi-dimensional view of expertise" in organisations. Expansive learning theory (Engeström, 1987, 2001) leads to the production of new patterns of work activity, and the object of such learning is the entire activity system in which the learners participate. Engeström's model takes into consideration diversity and dialogue between different traditions and perspectives; it is based on understanding multiple perspectives, networks of interacting activity and boundary crossing (Engeström, 2001). The purpose of such learning is to implement change at the organisational level.

In distinction to Engeström's model of expansive learning, Fuller and Unwin (2004) concentrate on the restrictive-expansive continuum of learning in the workplace.

The authors focus on identifying features of the work situation which have an impact on opportunities or barriers to learning, and suggest that an expansive approach to workforce development can be achieved by “moving beyond a tightly situated and context-bound approach to participation” (Fuller and Unwin, 2004, p. 134). One of the features of the expansive approach to learning is participation in multiple communities of practice inside and outside the workplace (Fuller and Unwin, 2004, p. 134).

An example of a community of practice from outside the workplace is a learning group discussed by Mayes (2002). Even though it is the practice itself that identifies the community, Mayes emphasises the individual’s relationships with a group of people rather than the relationship of an activity to the wider practice. Mayes *et al.* (2001) look at the situatedness of the learning group in which the learner identifies strongly with other learners in the same group. Such a group usually has characteristics of a community of practice where the practice is the learning itself. At the first level, the community of practice provides the learner with real-world examples of practice and links what is being studied with real-world application in the community. This process in Lave and Wenger’s account is moving from peripheral to full participation in the community of practice. At the next level though, as Mayes argues, the learner learns from the vicarious material of other learners who are peers in the same learning context, not only from participation but from stories representing packages of situated learning. This kind of vicariousness involves observation of learners in the context of a similar learning activity, and identifying with the dialogues of other learners.

The importance of constructing an identity in relation to the community of practice is explored by Whittaker and Mayes (2001). The authors focus specifically on learning groups, which are more likely to be artificially constructed than communities of practice; they have relatively determined boundaries, a shorter lifespan and their members usually take on membership of the group voluntarily. As in the communities of practice, learning groups’ members share common perceptions, beliefs and norms. Whittaker and Mayes (2001) warn that artificial learning groups with their limited lifespan may not be plausible communities of practice; however, in both a community of practice and in a learning group, identity is seen as an outcome of learning, and the membership of them will influence the formation of the identity of “learner” or a “participant”.

The theoretical debate on individualised and social approaches to work-based learning raises a question – how can learning environments be designed around social relationships (Whittaker and Mayes, 2001)? The literature on work-based learning emphasises the importance of such relationships (for example Critten and Moteleb, 2007; Young and Stephenson, 2007) but answers to this question are not easily found. This study explores the benefits of dialogue in a learning group as a community of practice in two work-based learning programmes in a Scottish university.

The study

The focus of the study is the experience of work-based learning students at the Scottish Centre for Work Based Learning. The Centre negotiates programmes of study, tailored to the student’s individual learning needs, position in the organisation and the type of work they engage in. The Scottish Centre for Work Based Learning espouses the position that work-based learning entails learning at work, for work and through work, and this position suggests a situated approach. The students are encouraged to draw

on learning from the communities of practice in their workplace, and most students may, if they wish to do so, choose to participate in campus-based tutorials and/or online discussions with other learners. In other words, learning is supported through communities of practice at work, but students' experience of learning from other people in the learning group plays a significant role in this model as well. Inevitably, this constitutes a departure from the "work is the curriculum" approach (reference). The preceding discussion raises questions about the adequacy of such a position, and we undertook a short study to explore some of the issues raised.

The overall aim of the study was to investigate students' perceptions of individualised and "social" perspectives on work-based learning. In particular the research objectives were to analyse the perceived benefits and concerns relating to the individualised approach to work-based learning, and to evaluate the perceived benefits of participation in a learning group of work-based learners.

In order to answer the research questions posed in this study, the Centre carried out a survey of students' views. A group of 16 undergraduate and seven postgraduate students were invited to participate in the study, all of whom were undertaking the course through a work-based learning route. All undergraduate students interviewed were part of the Learn@Work HND "Top Up" programme, and the majority of them worked as middle-managers in the public and private sectors. The students participating in the focus group had been studying together for ten months prior to this study, and formed a cohesive learning group. A focus group was used to collect data as it was believed that group dynamics and group interaction would bring to the surface aspects of the problem which a one-to-one interview might not have exposed. The postgraduate students (studying for Masters of Science in Lifelong Learning and Development) worked in a variety of roles with responsibility for either policy or practice of learning and development in their organisations. They joined the programme at different times and had different experiences of the individualised and "group" approaches; hence, one-to-one interviews were chosen as a way of collecting data. The one-to-one interviews allowed for greater depth of enquiry, and enabled us to investigate respondents' opinions as well as factual matters. We employed qualitative methods of investigation which allowed for the collection and analysis of information with a focus on detail and depth, and this enabled us to identify patterns, trends and relationships between the issues discussed by the students. The interview schedule consisted mainly of open-ended questions around three themes:

- (1) the benefits of the individualised approach to work-based study;
- (2) possible concerns behind this approach; and
- (3) the value of learning from participation in a group of work-based learners in the university.

Findings

The main benefit of an individualised approach to work-based learning identified by the respondents was a possibility to develop their own study plan relevant to the needs of the student and the needs of the organisation. Individually negotiated learning outcomes were perceived to be more relevant to the organisational objectives. Secondly, the students appeared to value the possibility of designing their own assessment, and embed it in the context of their practice in their organisation. This had

an impact on the perceived usefulness of the learning to the individual's employing organisation. Thirdly, the students commented on the applicability of research findings to the organisational context, and their potential to improve professional practice. The individualised approach to work-based learning in higher education appeared particularly helpful in the face of significant changes in the students' organisational contexts. Four of the 23 respondents moved to a new post or became self-employed during the course of the study, and it was noted that redesigning the work-based programme while taking account of these changes was best done on an individual basis.

Although the benefits of the individualised approach featured strongly in the interviews and in the focus group, the respondents also commented on the importance of social interaction and interpersonal relationships in work-based learning. They emphasised the importance of learning from other people at work, but also stressed the role of participation in a new community of practice of work-based learners at the university. They observed a number of limitations of learning from the workplace only – limited transferability of learning, inadequate support from work colleagues, a lack of exposure to new ideas and inability to divert from established practices. Responses suggest that the theoretical framework combined with critical analysis skills make learning more transferable. Nearly all respondents agreed that “looking beyond” their context and being able to conceptualise ideas equipped them with a more in-depth learning which could be applied in other contexts – organisationally or culturally.

The participation of workers from other organisations in the learning group appears to offer a number of benefits. It enables the student to learn from other members of the group, for example by finding out about other organisations' structures, cultures, policies and practices. By identifying similarities and differences in organisational practices, the students were able to apply the theory to practice, and to a certain extent they were able to validate the theory by analysing examples of practice from entirely different contexts. They valued the exposure to different perspectives, and learning about different (sometimes surprising) solutions to the same problems. A multiplicity of voices and perspectives in the group appeared to broaden their understanding of the matter studied. Such a multiplicity was possible thanks to the diverse backgrounds of the learning group members. Nearly all respondents agreed that “looking beyond” their context and being able to conceptualise ideas equipped them with a more in-depth learning which could be applied in other contexts – organisationally or culturally. This freedom to discuss examples of organisational practice required a certain level of trust amongst the learners, and it was noted that the detachment from power relations in the workplace was conducive to trust within the learning group.

Also, the students perceived themselves not only as workers/learners in their own organisations, but also formed an identity as work-based students in the university. They were able to engage in discussions on the nature of higher education study, i.e. the challenges, demands and problems experienced by most of the students who were “returners” to education. The phrase “community of practice” in relation to the learning group appeared in a number of responses. This suggests an acknowledgement that a new community of practice was formed, where the “practice” was the study rather than the work itself. Interestingly, the sense of being part of a community of learners was also shared by the respondents who interacted with others mainly through virtual learning environments. Consequently, changes in the workplace which were taking

place during their time at the university, in some cases significant in nature, or changes in their parent organisation did not appear to affect their sense of identity as participants in the learning group. The learning group appears to offer valuable pastoral support, mainly in relation to motivation to continue with the study. Good advice on how to study effectively was shared among students, and most respondents commented on the usefulness of the vicarious aspect of learning.

The study identified some drawbacks of participation in the learning group. Some of these drawbacks were:

- an uneven pace of learning;
- different levels of achievement;
- imbalance of power within the group;
- feeling of inadequacy in comparison with others; and
- inadequate focus on one's own individual study plan.

Discussion and analysis

The responses collected here appear to indicate that individualised pedagogy fits neatly with work-based learning. The benefits outlined in this study resonate with the main themes in Boud and Solomon's (2001) book – work-based learners are attracted to the idea of individually negotiated study plans, and value the alignment of learning objectives with the needs of the workplace. The individualised approach also allows for taking some cognisance of the learner's current competences and their learning needs.

The empirical data indicate that social relationships should also be taken into consideration in the design of work-based learning. Lave and Wenger's (1991) notion of legitimate peripheral participation is key, as it is by reference to their professional practice that the learners can fully learn "at work and through work". Learning embedded in the social relationships at work has its limitations, and the data collected in this study echoes the concerns expressed in the literature – about the limited transferability of learning (Guile and Young, 2002), about the nature of what is learned being limited to the context of its construction (Billett, 2004) and about an individual's agency in learning by participation (Eraut *et al.*, 2002). The point made by Eraut *et al.* (2002) and Fuller and Unwin (2004) that individuals may be members of a number of communities of practice at one time is crucial in the design of work-based learning. Learning from multiple communities of practice means that learning acquired in one context can be re-situated in a new context, and the empirical data suggest that participation in the learning group allows the students to look beyond the "here-and-now" (Guile and Young, 2002).

The empirical data collected here echo Mayes's (2002) discussion of individual's relationship with other members of the community of practice. The learning group with its social relationships is not unlike the community of practice in the workplace (Mayes *et al.*, 2001), except here the practice is the learning itself. The empirical evidence suggests that the learning group allows the students to learn from others either by drawing on other participants' understanding, knowledge and interpretation of this situation (Eraut, 2000), or by watching other learners learn. Our respondents appear to identify themselves strongly with the group, and stress the value of learning from each other. The data collected suggests that the existence of an "academic" learning group was perceived as key to validating learning. By verifying what they

learn by participation in their communities of practice with other students from completely different organisational contexts, students collectively create new solutions, and are able to transform their workplace practice.

However, what also emerged from this analysis is that they appear to learn by observing others learn and cope with challenges of returning to education. This echoes Mayes's notion of vicarious learning. At the first level, students learn by participation in the workplace community of practice in line with what Lave and Wenger describe as legitimate peripheral participation – by moving from peripheral to full participation in the community of practice. At the next level though, the learners learn from the vicarious material of other group members, or from what Mayes describes as stories representing packages of situated learning. This kind of vicariousness involves, for example, observation of learners tackling work-based projects, applying theory to practice, or managing the positive and negative influences of the employer on students' learning.

The analysis appears to suggest that although work provides a basis for learning, the learners on both of the programmes we investigated benefited greatly from participation in campus-based activities and/or moderated online activities. This, combined with a certain level of criticality offered by the university, allows the learners to “look beyond” the most immediate context. The benefits of the community of practice of learners, or a learning group, for the process of learning (either in the traditional campus-based setting, or in a virtual learning environment) should not be underestimated in designing work-based learning programmes.

Within their communities of practice at work learners *talk the language* of that community; however, by becoming learners within a university-based learning group, they learn to talk *about* the practice – i.e. use the language of theory, which allows them to discuss their practice from a more detached perspective. This new discourse is based on a theoretical abstraction, which might not otherwise have been possible in learning the work context only. Central to the degree level of study is the concept of critical analysis, and according to the Scottish Credit and Qualifications Framework, all degree-level programmes of studies are required to contain a strong element of critical analysis and critical evaluation of subject-related problems. Evidence suggests that for work-based students, the conceptual framework provides a basis for critical analysis. The theoretical/analytical approach also facilitates the detached approach to professional practice, whereby the learner/worker achieves a more detached perspective on his/her own workplace. Consequently, learners/workers broaden their perspective and learn to “look beyond” the most obvious solutions and begin to question previously unquestioned practices.

It may be useful to seek to clarify the position developed so far. While it is recognised in this paper that much learning is situated, this does not mean that learners do not socially develop forms of knowledge which can be expressed in non-situated discourse and used in contexts different from those in which they were learned. The situated learning approach and a social view of learning open a wider range of contexts for learning and have an impact on teaching and assessment strategies in work-based learning.

Both perspectives – i.e. individualised and social – appear to be crucial in the design of work-based learning programmes. Some work-based learners undertake individualised programmes of study; hence the needs and circumstances of an

individual must be taken into account in the design of a learning contract. However, Lave and Wenger's model of learning from a community of practice also offers powerful insights into the process of learning from work. Wenger (1998) recommends engaging students in practices aimed at enhancing their participation, "involving them in actions, discussions, and reflections that make a difference to the communities they value" (Wenger, 1998, p. 10). The effective design of a work-based learning programme should integrate different forms of learning, and different approaches to knowledge, and should encourage the students to participate in the practices of their community, as Wenger suggests, and in their learning group within the university. An effective work-based learning programme also requires the understanding of the vicarious nature of some learning in the workplace. What needs to be remembered is that a single pedagogical approach to work-based learning is unlikely to satisfy the needs of every learner. In the design of work-based programmes, careful consideration needs to be given to the nature of learners' work, the type of projects in which they engage and the amount of support they receive from their organisations.

Conclusion

The experience of staff in the Scottish Centre for Work Based Learning appears to suggest that work-based learners learn effectively from both their community of practice in the workplace, and their learning group of work-based learners within the university. An individualised pedagogy underlying the learning contract approach may limit interaction with learners from other contexts. Our study suggests that a learning group experience is valued by work-based students and the existence of an "academic" learning group appears effective. By verifying their learning from working with other students from different contexts, learners collectively validate their learning and are in a position to take new learning back to their workplaces. This integrated approach to learning appears to bring benefits for those who participate in the "academic" community of practice either in the traditional campus-based setting, or in a virtual learning environment or, as is the case for many of our learners, a combination of both.

References

- Billett, S. (2004), "Learning through work: workplace participatory practices", in Rainbird, H., Fuller, A. and Munro, A. (Eds), *Workplace Learning in Context*, Routledge, London.
- Boud, D. (2001), "Knowledge at work: issues of learning", in Boud, D. and Solomon, N. (Eds), *Work-based Learning: A New Higher Education?*, Open University Press, Buckingham, pp. 34-43.
- Boud, D. and Solomon, N. (Eds) (2001), *Work Based Learning: A New Higher Education?*, Open University Press, Buckingham.
- Coffield, F. (2002), "Breaking the consensus: lifelong learning as social control", SEDA Paper No. 109, in Edwards, R., Miller, N., Small, N. and Tait, A. (Eds), *Supporting Lifelong Learning: Making Policy Work*, The Open University and Routledge/Falmer, London, pp. 174-200.
- Costley, C. (2000), "The boundaries and frontiers of work based knowledge", in Portwood, D. and Costley, C. (Eds), *Work Based Learning and the University: New Perspectives and Practices*, Staff and Educational Development Association, Birmingham, pp. 23-34.

-
- Critten, P. and Moteleb, A. (2007), "Towards a second generation of work-based learning: supporting social knowledge", in Young, D. and Garnett, J. (Eds), *Work-based Learning Futures*, University Vocational Awards Council, Bolton, pp. 141-50.
- Engeström, Y. (1987), *Learning by Expanding: An Activity-Theoretical Approach to Developmental Research*, Orienta-Konsultit, Helsinki.
- Engeström, Y. (2001), "Expansive learning at work: toward an activity theoretical reconceptualization", *Journal of Education and Work*, Vol. 14 No. 1, pp. 133-56.
- Engeström, Y., Engeström, R. and Karkkainen, M. (1995), "Polycontextuality and boundary crossing in expert cognition: learning and problem solving in complex work activities", *Learning and Instruction*, Vol. 5, pp. 319-36.
- Eraut, M. (1994), *Developing Professional Knowledge and Competence*, Routledge/Falmer, London.
- Eraut, M. (2000), "Non-formal learning and tacit knowledge in professional work", *British Journal of Educational Psychology*, Vol. 70, pp. 113-36.
- Eraut, M., Alderton, J., Cole, G. and Senker, P. (2002), "Learning from other people at work", in Harrison, R., Reeve, F., Hanson, A. and Clarke, J. (Eds), *Supporting Lifelong Learning: Perspectives on Learning*, Routledge/Falmer, London, pp. 127-45.
- Evans, K., Hodgkinson, P., Rainbird, H. and Unwin, L. (2008), *Improving Workplace Learning*, Routledge, London.
- Felstead, A., Fuller, A., Unwin, L., Ashton, D., Butler, P. and Lee, T. (2005), "Surveying the scene: learning metaphors, survey design and the workplace context", *Journal of Education and Work*, Vol. 18 No. 4, pp. 359-83.
- Fuller, A. and Unwin, L. (2004), "Integrating organisational and personal development", in Rainbird, H., Fuller, A. and Munro, A. (Eds), *Workplace Learning in Context*, Routledge, London, pp. 126-44.
- Guile, D. and Young, M. (2002), "Beyond the institution of apprenticeship: towards a social theory of learning as the production of knowledge", in Harrison, R., Reeve, F., Hanson, A. and Clarke, J. (Eds), *Supporting Lifelong Learning: Perspectives on Learning*, Routledge/Falmer, London, pp. 146-62.
- Lave, J. and Wenger, E. (1991), *Situated Learning: Legitimate Peripheral Participation*, Cambridge University Press, Cambridge.
- Lave, J. and Wenger, E. (2002), "Legitimate peripheral participation in communities of practice", in Harrison, R., Reeve, F., Hanson, A. and Clarke, J. (Eds), *Supporting Lifelong Learning: Perspectives on Learning*, Routledge/Falmer, London, pp. 111-26.
- Mayes, T. (2002), "The technology of learning in a social world", in Harrison, R., Reeve, R., Hanson, A. and Clarke, J. (Eds), *Supporting Lifelong Learning: Perspectives on Learning*, Routledge/Falmer, London, pp. 163-75.
- Mayes, T., Dineen, F., McKendree, J. and Lee, J. (2001), "Learning from watching others learn", in Steeples, C. and Jones, C. (Eds), *Networked Learning in Higher Education*, Springer Verlag, London, pp. 1-16.
- Wenger, E. (1998), *Communities of Practice: Learning, Meaning, and Identity*, Cambridge University Press, Cambridge.
- Wenger, E. (2000), "Communities of practice and social learning systems", *Organization*, Vol. 7 No. 2, pp. 225-46.
- Whittaker, S. and Mayes, T. (2001), "Learner identity, motivation and relationships: a theoretical framework for the design of effective learning environments", *Researching Widening Access: International Perspectives, Conference Proceedings, The Centre for Research in Lifelong Learning, Glasgow*, pp. 422-7.

Young, D. and Stephenson, J. (2007), "The use of interactive learning environment to support learning through work", in Young, D. and Garnett, J. (Eds), *Work-based Learning Futures*, University Vocational Awards Council, Bolton, pp. 84-97.

Further reading

Engeström, Y. (2004), "The new generation of expertise: seven theses", in Rainbird, H., Fuller, A. and Munro, A. (Eds), *Workplace Learning in Context*, Routledge, London, pp. 145-65.

Engeström, Y. and Kerosuo, H. (2007), "From workplace learning to inter-organisational learning and back: the contribution of activity theory", *Journal of Workplace Learning*, Vol. 19 No. 6, pp. 336-42.

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