

Chapter One

Introduction: Life as a learning context?

Richard Edwards

Research on everyday practices typically focuses on the activities of persons acting, although there is agreement that such phenomena cannot be analyzed in isolation from the socially material world of that activity. But less attention has been given to the difficult task of conceptualizing *relations* between persons acting and the social world. Nor has there been sufficient attention to rethinking the ‘social world of activity’ in relational terms. Together, these constitute the problem of context. (Lave 1996: 5, emphasis in original)

Introduction

Questions of context are not new, but are brought into particularly stark relief by developments promoted through a discourse of lifelong learning. If learning is lifelong and lifewide, what specifically then is a learning context? Are living and learning collapsed into each other? Under the sign of lifelong learning and following work on situated learning (e.g. Lave and Wenger 1991), a great deal of attention is being given to those strata outside educational institutions and other

structured learning opportunities wherein people are held to learn. The workplace, the home and the community can all be held to be strata of learning, within which there are specific situations. In this sense, there are learning contexts distributed across the associational order and embedded in practices to such an extent that this order is itself already a learning context, and potentially learning becomes undifferentiated as a practice from other practices. Here the associational order becomes by definition a learning order, and all contexts are learning contexts.

Insofar as we expand our concept of learning to embrace apparently all strata of life, we might be said to start to lose the conceptual basis for talking specifically of a learning context. This raises important questions.

- What is specific to a learning context which is not to be found in other contexts?
- What characterizes a specifically learning context?
- What is the relationship between learning and context?
- Who names these contexts as learning contexts?

The latter is particularly important insofar as the discourses of educators, policy makers and researchers are not necessarily shared by those who are engaging in practices within the stratum identified as contexts of learning. Thus, for instance, doing family history may be considered a leisure activity by those who are engaging in it, when for many educators this could be considered a form of learning. The meaning and significance of practices can therefore be scaled in various ways. Insofar as people do not identify themselves as learning in different

strata, they may not draw upon the artefacts and relationships available to them for learning in other strata. Here it is a question of what can be ascribed as learning by whom, rather than uncovering what is learnt. Learning is a discursive achievement, an effect.

However, insofar as learning is identified as taking place in a range of strata and the learners themselves move in and between them, then issues of *transfer* are raised, the presumed movement of learning from one activity to another. This may be from task to task within a single stratum or between strata, signifying different *distances* between contexts. However, even here we have to be cautious, as that notion of learning being transferred from one activity to another already assumes a certain view of learning and context, where learning is taken from one box and put into another. Here learning can be viewed metaphorically as a parcel moving from one mail box to another, an educational version of pass the parcel!

The question then emerges about how we understand a learning context, when the learning is not necessarily bound by a specific set of institutional relationships and structures. Pedagogic approaches may seek to bound the learning and the learner as belonging to a learning context, but there is also the sense in which there is a desire for learning to be mobile, to be for a purpose. This is exemplified, for instance, in the discourses of transferability and transferable skills and those of the recognition of prior experiential learning. In this sense, a context may be considered a bounded container within which the learning takes place or a more fluid and relational set of practices. In the former, there is a sense in which there is closure to contain or

structure the learning, which once acquired may, in principle, be poured from one container to another.

In all commonsense uses of the term, context refers to an empty slot, a container, into which other things are placed. It is the ‘con’ that contains the ‘text’, the bowl that contains the soup. As such, it shapes the contours of its contents: it has its effects only at the borders of the phenomenon under analysis... A static sense of context delivers a stable world. (McDermott, quoted in Lave 1996: 22-3)

The relational framings find expression in theories of learning that emphasize activity and draw upon concepts of communities and networks rather than those of context. Here, rather than a thing, context is an outcome of activity or is itself a set of practices – contextualizing rather than context becomes that upon which we focus (Nespor 2003). Practices are not bounded by context but emerge relationally and are polycontextual, i.e. have the potential to be realized in a range of strata and situations based upon participation in multiple settings (Tuomi-Grohn *et al.* 2003). Here learning is a specific effect of practices of contextualization rather than simply emerging within a context. To understand context in static and/or relational terms has effects on how we conceptualize the mobilizing of learning across strata and associated pedagogic practices. To reject the notion of context in favour of that of activity or situated practice is one strategy. To change the understanding of context is another. It is the latter that largely informs the chapters in this book.

FRAMING CONTEXTS

Once we look beyond the context of conventional situations for education and training, such as schools, colleges and universities, allowing learning contexts to be extended into the dimension of relationships between people, artefacts and variously defined others mediated through a range of social, organizational and technological factors, then the limitations of much conventional pedagogy comes into sharp focus. Pedagogy has for some been defined as contained within the ‘spaces of enclosure’ of the classroom, the book and the curriculum (Lankshear *et al.* 1996). Here learners move from one classroom to another, one curriculum area to another, one institution to another in a linear step-by-step way. Learning is linear and cumulative. Identifying pedagogy in specific sites and strata across the life course, however, may require different conceptual framings where, for instance, there is no teacher as such, or teaching is embedded in texts of various sorts or in the peer support of the team.

The interest in lifelong learning has expanded the strata in which learning is now a concern for practitioners and the range of people who might be considered to have an educational role. It is not simply educators or teachers who have an educational role, but, for instance, supervisors, mentors, software designers, architects.

Learning and pedagogy therefore have become in principle a part of many if not all aspects of social life. At least potentially, the whole of life becomes pedagogized.

This is particularly the case when we take into account the growth of the consumer market in learning opportunities (Field 1996) and the structured, if distributed, opportunities and self-structuring practices provided by the Internet and other technologies (Lea and Nicoll 2002). The growth of e-learning and borderless

education (Cunningham *et al.* 1997) raises significant questions regarding the relationships it can foster across cultures with implications regarding the different cultures of teaching and learning in different contexts and the value placed on different forms of learning. It also raises questions about how the use of computers in one strata – e.g. home, workplace - might be drawn into learning within education.

The relationship between learning in different strata is often framed by notions of informal, non-formal and formal learning, and how to mobilize the full resources – e.g. funds of knowledge, literacy practices, experiential learning - of learners within specific situations. From a search of the literature, it is possible to locate a number of areas of debate and conceptual framings relevant to the question of context in the fields of:

- socio-cultural psychology (e.g. Tochon 2000, Edwards 2001),
- applied linguistics (e.g. Barton and Hamilton 1998, Barton *et al.* 2000, Maybin 2000, Russell and Yanez 2003),
- social anthropology (e.g. Lave and Wenger 1991),
- social studies of science (e.g. Bowker and Star 2000) and
- organizational studies (e.g. Boreham *et al.* 2002).

These complement and contribute to existing work in education on areas such as

- informal and community-based learning,
- learning in the home,

- workplace learning (e.g. Eraut 2004),
- experiential and vicarious learning e.g. (Mayes *et al.* 2001),
- vertical and horizontal discourse (e.g. Bernstein 1999), and
- tacit knowledge (e.g. Eraut 2000,).

There is thus a large multi-disciplinary range of conceptual resources upon which to pull in order to explore questions of learning and context. Some of this work focuses on strata other than educational institutions e.g. the workplace, some on the relationship between stratum e.g. home-school relationships, some on the relationships between people and other groups, and some on the transferability of learning from one stratum to another (e.g. Oates 1992, Harrison 1996 and Eraut 2004). This area is enmeshed or rhizomatic in terms of the conceptual borrowings, entwinings and offshoots, which one can follow and that pop-up all over the place. It is not a tidy arena or context of debate, thereby reflexively demonstrating the very complexity it is seeking to illuminate. It is thus the case that in bringing together a collection to explore the issue of learning and context, we have not sought to produce a tidy, singular view of the issues, but to illustrate the diversity of conceptual framing available.

What is perhaps significant is that much of the literature on learning is framed within a set of binaries, which separate strata from one another. Thus, broadly within the arena of cultural psychology, there is a distinction made between everyday and formal/scientific learning (see contributions to Murphy and Ivinson 2003). In the realm of applied linguistics, the focus is on vernacular/contextualized and formal/decontextualized literacy practices (Barton and Hamilton 1998) framed

within the everyday and educational experiences of learners. In educational research, the debate has become focused around either informal or experiential learning and formal learning.

Each of these binaries identifies that learning is occurring across a range of strata and situations, but that this learning is in some senses situated or contextualized. The range of learning contexts may therefore be extended and what can be identified as learning. However, their very situatedness and pedagogical approaches that assume domains to be discrete – we leave parts of ourselves at the metaphorical door of the classroom – mean that learning from one situation is not necessarily realized in other situations by either teachers or learners. Logically also, if learning occurs in particular situations, why should or how can it be relevant to other contexts?

This is the situation to which each of the areas of research addresses itself. There is the identification of a gap and exploration of how that comes to be and how these gaps might be overcome. This is sometimes in order that learners resources can be realized in formal educational sites, but also vice versa, especially where the concern is for the transfer of learning from education to the workplace (Tuomi-Grohn and Engestrom 2003). Certain aspects of these debates might be perceived as a push-pull effect within research. Within the discourses of *education* there is tendency to centre the learning context within certain institutional sites, while within the discourses of *learning* there is a decentring of learning contexts, within which there is an identification of diverse but separate strata e.g. workplace, home, etc.

Learning in different contexts may involve different types of learning, the learning of different somethings, and for different purposes, the value of which might be variable. We might therefore need to question the extent to which, as educational researchers and pedagogic practitioners, we should try to overcome the gaps between learning in different strata. Some practices may best be left where they emerge. Learners themselves might not want to overcome these gaps and may not even identify their practices as learning. It also involves the learning of something particular to each context, even if that something is a form of abstract, generalized knowledge as in parts of the curriculum of education (Lave 1996). Given the contemporary interest in notions of situated learning (Lave and Wenger 1991), there is of course the issue whether that overcoming might be possible at all. The educational rationale for such an approach is often that education is not recognizing or developing the full potential of learners by not mobilizing their full resources in formal sites, or that what is learnt is not relevant to the 'real world'. However, this has a centring logic to it, which tends also to deny conflict and difference in and through learning. It assumes the inherent worthwhileness and benignness of education that denies the very struggles in and around it, where some people seek to keep a gap between their lives and what is educationally available. Some might argue that education and pedagogy can and should change to be more inclusive, as though inclusion can overcome all gaps and struggles. However, this is to ignore that inclusions can only occur on the basis of exclusions and the constant play of difference (Edwards, *et al.* 2001).

A concern is that in starting with these binaries, a whole discourse is produced as a result that sends us down particular pathways, looking at certain things in certain ways. As a result, we may realize only certain pedagogical issues and, perhaps more importantly, we may frame issues in educational terms when more appropriately they should be framed in other ways. With the above theories, there is a tendency for a slippage from framing literacy/learning/knowledge as practices regardless of place to framing them as spatially located practices in particular ways. As a result, we end up with discourses and practices about the inside and outside, with metaphors of scaffolding, boundary zones, boundary objects and border crossing, discourses of parity of esteem and practices such as attempts at the accreditation of prior experiential learning and the production of all encompassing credit frameworks. Similarly, simulations and boundary zones (Beach 2003, Tuomi-Grohn *et al.* 2003) are formulated as mediators between stratum within which pedagogy may seek to mobilize a fuller range of resources for learning than in the formal domain of education.

The discussion of informal and formal learning also often ignores the informality of learning in educational institutions and the formality of some learning in other organizations (Coffield 2000). Billett (2002) has argued that the informal/formal learning debate is a waste of time and that either people are learning or they are not. Colley *et al.* (2003) have argued somewhat differently that attributes of formality and informality can be found in all learning situations. These suggest that sites of learning are more complex and relational, as to produce the formal there must be a realization of that which is informal and vice versa. In other words, learning contexts are practically and discursively performed and performative. They co-

emerge with the activities by which they are shaped and vice versa. Indeed Van Oers (1998), like Nespors (2003), suggests dropping the notion of contexts altogether to focus on contextualizing as a set of practices.

CONCEPTUALIZING LEARNING CONTEXTS

In education, concepts of:

- communities of practice (Lave and Wenger 1991, Wenger 1998, Swales 1998),
- networks (Nespor 1994, Fox 2000, Poell *et al.* 2000),
- activity systems (Engestrom *et al.* 1998) and
- complexity (Haggis 2007)

have come to the fore to help frame our understanding of pedagogy and address some of the perceived weaknesses of more conventional cognitive approaches to learning. Situated learning, activity theory and actor-network theory have been drawn upon in different ways by a range of writers to help conceptualize learning that is not confined to educational institutions. Metaphorically and analytically each attempts to frame learning in alternative ways to that of the context as container. There is a paradox in some of this, as the arguments are often that learning is only meaningful within the specific situation or context, but also that the latter is not itself absolutely distinct from other contexts. Thus the significance of notions of practice, activity and polycontextuality.

Conventionally we might focus on what occurs in one context to the exclusion of others. What is suggested here is that this is only an effective pedagogic strategy if we assume context as a container and as a result contain learning. This is something which is central to the notion of education as a curricular practice and it is perhaps noticeable that the discourse of learning has come to the fore through the backgrounding of questions of curriculum. When we start to question that, the interesting pedagogic space is that in-between arena of polycontextual practices, where ‘elements from both sides are always present in the boundary zone’ (Tuomi-Grohn, *et al.* 2003: 5). These are not closed spaces but networked and mediated strata, which give rise to alternative framings and metaphors, where context is an effect and not pre-existing the practices that give rise to it.

We can begin to explore these processes by drawing upon concepts derived from actor-network theory (Latour 1993), which focuses on the people and artefacts that are networked through the practices of purification – separating out - and translation – relating together. What results is a naturalizing of certain practices as an emergent part of learning-in-context, rather than context as a bounded, pre-existing container for them. Naturalizing is itself a set of practices – of folding and purification - through which a context emerges, one form of which might be as a bounded container. Here different networking practices make different contexts, meaning that the same objects may be part of different purifications, by being networked differently. Learning therefore relies on the purification practices in play of all actors and the power and hierarchies of value that make certain naturalizations more likely than others. Purification entails work to naturalize certain practices as learning in specific forms of situatedness, which are then taken

for granted. Such views tend to view curricula as ‘trajectories’ rather than bodies of knowledge to be conveyed. ‘Schooling works by moving people and things along trajectories that ultimately situate them in spatial and temporal orders where only certain meanings, identities, and lines of action can be easily sustained’ (Nespor 2003: 98).

Different purifications and translations may bring forth different interactions or foldings in the learning of different knowledges, skills and communication practices. A question then arises whether we seek to relate different learning practices across strata within the current regime of purification or to change the regime. The former is framed within the logic of an existing semiotic landscape of situated contexts, while the latter arises in and from a more scrumpled geography in which the possibilities for purified geologies is thrown into question and a new regime for purification emerges which contains within it the desire for multiplicity and difference negotiated as a constant tension within the pedagogic (en)counter. These are not systems, nor communities of practice, each of which can be read as a series of containers, between which people, objects, practices, meanings move. Here we point to the significance of folding by contrast with notions of crossing borders or boundaries from one context to another. Folding entails work and can take multiple different forms signifying creolization and hybridity in purification practices. It also has the possibility of unfolding, which means that learning is insecure, the work to keep it contextualized and naturalized needs to be sustained if those practices are to continue.

Simple dichotomies or binaries, therefore, such as informal/formal, vernacular/formal, contextualized/decontextualized, participation/acquisition and purification/translation prove inadequate for investigating learning in and across different strata. This points to the limitations of a border crossing metaphor in conceptualizing the possible foldings between strata, despite its popularity among some as an alternative to notions of transfer (Tuomi-Grohn and Engestrom, 2003). I do not see these processes as simple border-crossings therefore, but as complex reorientations or changes in foldings, translations, purification and naturalization, which are likely to entail effort, awareness-raising, creativity and identity work on the part of the all concerned (Guile and Young 2003).

Boundary objects

What role might we identify here for boundary objects in and between learning contexts? The notion of boundary objects was developed in actor-network theory (ANT) (Star 1989), but has also been taken up by Wenger (1998) in his conceptualisation of communities of practice. It is also to be found in activity theory. For Wenger (1998: 107) boundary objects work at the edges of communities of practice mediating their external relationships; ‘they enable coordination, but they can do so without actually creating a bridge between the perspectives and the meanings of various communities’. However, some caution is necessary against a simple uptake of Wenger’s view of boundary object, as these sit at the boundary of communities. In ANT, boundary objects sit within the middle of a network. The latter is more in keeping with the theoretical position suggested here, as the former still seems to indicate the notion of context as container rather than the more relational understandings which we are exploring in this book.

In ANT, boundary objects are

both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. Like the blackboard, a boundary object 'sits in the middle' of a group of actors with divergent viewpoints.

(Star 1989: 46).

They are

plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. [. . .] They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation. The creation and maintenance of boundary objects is a key process in developing and maintaining coherence across intersecting social worlds.

(Star and Griesemer 1989: 393)

Such objects are not merely material; they can be 'stuff and things, tools, artefacts and techniques, and ideas, stories and memories' (Bowker and Star 2000: 298).

They are objects which are not contained nor containable by context, but can be folded or scrumpled between differing stratum, dependent on the various affordances at play and the work entailed in naturalizing them differently.

Objects exist, with respect to a community, along a trajectory of naturalization. This trajectory has elements of both ambiguity and duration. It is not predetermined whether an object will become naturalised, or how long it will remain so, rather practice-activity is required to make it so and keep it so.

(Bowker and Star 2000: 299)

Boundary objects do not sit between the borders of different contexts, at the edge, but express a relationship between strata brought together through the practices of folding, creolization, purification, translation and naturalization. These can be based upon pedagogic performances which seek to make certain connections rather than deny them or simply, because they are the tokens through which people relate their practices between one stratum to another. They do not pre-exist practices, but rely on those practices to make them into boundary objects. This suggests that the 'normal' condition for practices is as a boundary object with multiple possibilities or stabilizations. Rather than think of boundary objects as stable things that can be related to different contexts, we might rather think of them as fluid and capable of being stabilized within different networks.

THERE ARE MORE QUESTIONS THAN ANSWERS

I cannot begin to fully embrace the conceptual sophistication of all the positions upon which we have drawn above in this book. But we try and make a start. The question of context is large and many debates in different disciplines are relevant. In the strata of research and practice therefore, there are significant issues to be

addressed and tensions in approaches to practice and descriptions and explanation of pedagogy. How such framings constitute a learning context and their implications for learning and teaching across the life course requires closer attention therefore. It is to an exploration of some of the possibilities and issues that the chapters in this book are addressed. There are three broad questions which we try to address:

1. What are the assumptions about learning and context underpinning pedagogical practices?
2. What are the pedagogical implications of understanding learning and context in particular ways?
3. How can we best understand learning and context in order to mobilize learners' resources and relationships across domains and should we?

It is such questions that the chapters in the Part II of the book attempt to engage with, whether exploring the question of learning and context in the classroom (Jewitt), the learning relationships in community-based college provision (Crossan and Gallacher), the mobilizing of literacy practices from the everyday to the formal curriculum (Satchwell and Ivanic), the mediations of different levels of context in the workplace (Unwin and her colleagues), or the networked mediations in online learning (Thorpe). Each chapter explores specific pedagogical cases and highlights some of the issues and illustrates some of the conceptual framings through which we can explore issues of learning and context. Most draw to varying degrees upon conceptual framings which are introduced in the Part I of the book, whether these are from activity theory and genre studies (Russell), actor-network theory (Fox),

complexity theory (Haggis) or pragmatism (Biesta). While many of the chapters on Part II of the book draw primarily upon social-cultural understandings of learning and context, associated with activity theory and situated learning, the perspectives provided by Fox, Haggis and Biesta seek to challenge some aspects of emerging orthodoxy. Part III of the book draws upon what has gone before to explore the implications for pedagogy (Mayes and Thorpe) and research (Miller).

The collection as a whole does not and is not intended to suggest definitive ways of settling debates in this area. It is intended as a stimulus to further debate on a set of issues and questions which are implicit in the daily practices of pedagogy, but which are not always surfaced. It is to the exploration of the taken for grantedness of the notion of a learning context that this book is addressed as a means to build theoretical capacity in research for the future.

NOTE

The ideas explored in this chapter have been rehearsed on a number of occasions since 2005. I would like to thank the many people who have engaged on the issues raised and the formulations put forward. The chapter and those in the rest of the book are based upon work funded by the ESRC's Teaching and Learning Research Programme (ref: RES-139-25-0174) for which we express our gratitude. The chapter in this book have all been refereed by the editors.

REFERENCES

Barton, D. and Hamilton, M. (1998) *Local Literacies*, London: Routledge.

- Barton, D., Hamilton, M. and Ivanic, R. (Eds) *Situated Literacies*, London: Routledge.
- Beach, K. (2003) 'Consequential transitions: a developmental view of knowledge propagation through social organisations', in T. Tuomi-Grohn and Y. Engestrom (Eds) *Between Work and School: New Perspectives on Transfer and Boundary-crossing*, London: Pergamon.
- Bernstein, B. (1999) 'Vertical and horizontal discourse: an essay', *British Journal of Sociology of Education*, 20, 2: 157-73.
- Billett, S. (2002) 'Critiquing workplace learning discourses: participation and continuity at work', *Studies in the Education of Adults*, 34, 1: 65-67.
- Boreham, N., Samurcay, R. and Fischer, M. (Eds) (2002) *Work Process Knowledge*, London: Routledge.
- Bowker, G. and Star, S. (2000) *Sorting Things Out: Classification and its Consequences*, Cambridge, Mass.: MIT Press.
- Chaiklin, S. and Lave, J. (Eds) (1996) *Understanding Practice: Perspectives on Activity and Context*, Cambridge: Cambridge University Press.
- Coffield, F. (2000) 'Introduction: the structure below the surface: reassessing the significance of informal learning', in F. Coffield (ed.) *The Necessity of Informal Learning*, Bristol: Policy Press.
- Colley, H., Hodkinson, P., Malcolm, J. (2003) *Informality and Formality in Learning*, London: LSDA.
- Cunningham, S., Tapsall, S., Ryan, Y., Stedman, L., Bagdon, K. and Flew, T. (1997) *New Media and Borderless Education: a Review of the Convergence Between Global Media Networks and Higher Education Provision*, Canberra: Department of Employment, Education, Training and Youth Affairs.

- Edwards, A. (2001) 'Researching pedagogy: a sociocultural agenda', *Pedagogy, Culture, Society*, 9, 2: 161-86.
- Edwards, R., Armstrong, P. and Miller, N. (2001) 'Include me out: critical readings of social exclusion, social inclusion and lifelong learning', *International Journal of Lifelong Education*, 20, 5: 417-28.
- Engestrom, Y., Miettinen, R. and Punamaki, R-L. (Eds) (1999) *Perspectives on Activity Theory*, Cambridge: Cambridge University Press.
- Eraut, M. (2000) 'Non-formal learning, implicit learning and tacit knowledge in professional work', in F. Coffield (ed) *The Necessity of Informal Learning*, Bristol: Policy Press.
- Eraut, M. (2004) 'Informal learning in the workplace', *Studies in Continuing Education* 26, 2: 247-74.
- Field, J. (1996) 'Open learning and consumer culture', in P. Raggatt, R. Edwards and N. Small (Eds) *The Learning Society: Trends and Issues*, London: Routledge.
- Fox, S. (2000) 'Communities of practice, Foucault and actor-network theory', *Journal of Management Studies*, 37, 6: 853-67.
- Haggis, T. (2007) 'Conceptualizing the case in adult and higher education research: a dynamic systems view', in J. Bogg and R. Geyer (Eds) *Complexity, Science and Society*, Oxford: Radcliff.
- Hughes, C. (2004) 'The supervisor's influence on workplace learning', *Studies in Continuing Education*, 26, 2: 275-88.
- Lankshear, C., Peters, M. and Knobel, M. (1996) 'Critical pedagogy and cyberspace', in H. Giroux, C. Lankshear, P. McLaren and M. Peters (Eds) *Counternarratives*, London: Routledge.

- Latour, B. (1993) *We Have Never Been Modern*, Harlow: Harvester Wheatcheaf.
- Lave, J. (1996) 'The practice of learning', in S. Chaiklin and J. Lave (Eds) (1996) *Understanding Practice: Perspectives on Activity and Context*, Cambridge: Cambridge University Press.
- Lave, J. and Wenger, E. (1991) *Situated Learning*, Cambridge: Cambridge University Press.
- Lea, M. and Nicoll, K. (Eds) (2002) *Distributed Learning*, London: Routledge.
- Maybin, J. (2000) 'The New Literacy Studies: context, intertextuality and discourse', in D. Barton, M. Hamilton and R. Ivanic (Eds) *Situated Literacies: Reading and Writing in Context*, London: Routledge.
- Mayes, J.T, Dineen, F., McKendree, J., and Lee, J. (2001) 'Learning from watching others learn', in C. Steeples and C. Jones (Eds) *Networked Learning: Perspectives and Issues*, London: Springer.
- Murphy, P. and Ivinson, G (2003) 'Pedagogy and cultural knowledge', special issue of *Pedagogy, Culture and Society*, 11, 1.
- Nespor, J. (1994) *Knowledge in Motion*, London: Falmer.
- Nespor, J. (2003) 'Undergraduate curricula as networks and trajectories', in R. Edwards and R. Usher (Eds) *Space, Curriculum and Learning*, Greenwich: IAP.
- Oates, T. (1992) 'Core skills and transfer: aiming high', *Educational Technology and Training International*, 29, 3.
- Poell, R., Chivers, G., Van der Krogt, F and Wildemeersch, D. (2000) 'Learning-network theory', *Management Learning*, 31, 1: 25-49.

- Russell, D. and Yanez, A. (2003) “‘Big picture people rarely become historians’: genre systems and the contradictions of general education’, available at http://wac.colostate.edu/books/selves_societies/ (accessed 25 March 2004).
- Star, S. L. (1989) ‘The structure of ill-structured solutions: boundary objects and heterogeneous distributed problem solving’, in L. Gasser and M. Huhns (Eds) *Distributed Artificial Intelligence*, Vol. II, London: Pitman.
- Swales, J. (1998) *Other Floors, Other Voices: a Textography of a Small University Building*, Mahwah, NJ: Lawrence Earlbaum.
- Tochon, F. (2000) ‘When authentic experiences are “enminded” into disciplinary genres: crossing biographic and situated knowledge’, *Learning and Instruction*, 10: 331-59.
- Tuomi-Grohn, T. and Engestrom, Y. (Eds) (2003) *Between Work and School: New Perspectives on Transfer and Boundary-crossing*, London: Pergamon.
- Tuomi-Grohn, T. and Engestrom, Y. (2003a) ‘Conceptualizing transfer: from standard notions to developmental notions’, in T. Tuomi-Grohn and Y. Engestrom (Eds) *Between Work and School: New Perspectives on Transfer and Boundary-crossing*, London: Pergamon.
- Tuomi-Grohn, T., Engestrom, Y. and Young, M. (2003) ‘From transfer to boundary-crossing between school and work as a tool for developing vocational education: an introduction’, in T. Tuomi-Grohn and Y. Engestrom (Eds) *Between Work and School: New Perspectives on Transfer and Boundary-crossing*, London: Pergamon.
- Van Oers, B. (1998) ‘From context to contextualizing’, *Learning and Instruction*, 8, 6: 473-88.

Wenger, E. (1988) *Communities of Practice*, Cambridge: Cambridge University
Press.