

# ***Reconceptualising space in networked learning***

*Susan M Smith*

*Lancaster University, Lancaster, Lancashire, UK*

## **Abstract**

Our understanding about learning using technology is changing our ideas about learning spaces. Space and learning spaces are of particular interest to networked learning scholars. This paper reconceptualises learning spaces and calls for a different understanding of space within learning communities and networked learning. The four learning spaces proposed are; 1) peer-to-peer, 2) informal, 3) reflective and 4) peripheral. It is argued they represent the social and cultural ways of being a member of a learning community. They are conceived of as both constructs and effects of the learning community's engagement with networked learning. Used in this way they can be seen as a compelling way to rethink how facilitators in networked learning can support the learners. Understanding the practices of this community can contribute to social theories of learning in order to develop our understanding of the complexities of learning within networked learning. Arguably the learning spaces themselves are a social theory of learning.

## **Keywords**

Learning spaces, reconceptualising space, networked learning, peer learning, SMEs

## **Introduction**

Networked learning is gaining increasing momentum in higher education as an approach to learning which is based on participative pedagogies supporting collaboration between learners. This paper explores the learning processes within a higher education networked learning leadership programme made up of owner-managers of small to medium sized enterprises (SMEs). Networked learning still has some way to go to fully realise its potential within and by the higher education sector and this paper seeks to contribute to our understanding of how to support networked learning communities and maximise their learning potential. The central argument follows that space in learning can be reconceptualised through a different way of thinking about learning spaces. These learning spaces provide a compelling way of understanding the learning processes within networked learning and can be used as a litmus test to indicate whether a learning community is maximising its learning potential. The paper will first consider space and learning generally within networked learning before outlining the research study from which inductive analysis led to the proposal of reconceptualising space. The paper finishes by urging facilitators to nurture opportunities for the conceptual learning spaces in order to help the learning community maximise its learning potential.

## **Space and learning in Networked Learning**

Space has been a topic of discussion in much of the literature on learning and more often than not it focuses on the physical spaces and design for teaching and learning (see Temple, 2007). Brown and Long (2006) look at the whole campus as a learning space providing environments for learning; for them learning is not confined to scheduled classroom spaces and times. This is particularly relevant for networked learning as our understanding about learning using technology is changing our ideas about learning spaces (see Oblinger, 2006). In addition networked learning is often underpinned with participative pedagogies which see learning as a relational and dialogical process (see Hodgson and Watland, 2004). Often the concept of learning space is used to present frameworks for networked learning design. Chan et al. (2001) present four spaces of learning models, namely, the future-classroom, the community-based, the structural-knowledge, and the complex learning models. These spaces, they hope, will provide a profound grasp of the future changes in education and form the basis of a theory for networked learning (Chan et al., 2001, p. 144). Other discussions look at the implications of ICT in the design of distance learning (Twining, 2001) or the sociocultural context in online learning (Warschauer, 2001). Jones and Dirckinck-Holmfeld (2009, p. 12) talk about the concept of learning environment which:

points towards the physical environment alongside the social organisation of the setting and as a consequence the idea of a networked learning environment points towards the socially and physically networked nature of learning environments distributed over space and time.

Ryberg and Larsen (2008, p.105) argue that sociocultural learning theorists are becoming increasingly interested in learning that happens across and between discrete constellations. This paper proposes four conceptual learning spaces as a way of understanding where learning takes place across these 'discrete constellations' and how they provide environments for people to learn. Learning spaces can also be thought of in relation to the construction of identities. Hodgson's (2008) paper, for example, suggests that online learning communities can be considered as learning spaces which participants occupy and in which they construct individual and collective identities. Similarly, Ferreday et al. (2005) show that space has an important role in creating a sense of belonging, stating: "What is important is not just the space itself (whether this is a physical place or an online learning environment), but the way that members engage with it" (Ferreday et al., 2005, p.4). Building on this the learning spaces presented highlight the way in which members of learning communities engage with networked learning. In terms of networked learning I specifically refer to the definition of networked learning as drawing mostly on theories supporting social learning and social constructionism in relation to technology-supported management education (see E-Quality Network, 2002, p. 5).

## Context

This paper focuses on a leadership networked learning programme called LEAD which takes place over ten months in cohorts of up to 25 owner-managers of SMEs (referred to as delegates). The SMEs come from a wide range of sectors which is representative of the heterogeneity of SMEs in the UK, i.e. no two cohorts are made up of SMEs in similar sectors. LEAD adopts an integrated learning approach to develop both the owner-manager and the business through master classes, coaching, action learning, learning and reflection sessions, business shadowing and exchanges. A virtual learning environment supports communication and peer-to-peer interaction between the delegates and facilitators when not physically together. Each element of LEAD is designed to meet the needs of SME owner-managers as learners and over the last seven years the programme has changed in response to an ongoing dialogue with the delegates and the research and evaluation data. The programme began in 2004 led by a university in the North West of England. Subsequently LEAD has been rolled out to 15 institutions across England and Wales and to date the programme has been delivered to nearly 1500 SME owner-managers. To ensure consistency and rigour pertaining to the quality standards and to maintain the philosophy of networked learning that underpins the programme a network of providers was established. This network communicates regularly through discussion forums and meets physically every three months.

The literature on small businesses highlights the isolation experienced by owner-managers (see Smith and Peters, 2006); the collaborative and participative pedagogy underpinning the programme responds to these feelings. Through an integrated learning model LEAD relies on the dialogical creation of meaning (as discussed by Hodgson and Watland, 2004) and construction of knowledge through peer-to-peer learning. It assumes a social view of learning and includes learner-directed styles of learning and interactive approaches for the delegates to learn from each other and the knowledge they have about running small businesses. Accordingly, the programme is based on the relationship between teachers and learners, itself based on collaboration and co-construction of knowledge rather than on that of expert and acolyte (E-Quality Network, 2002, p.6). Emphasis is placed on encouraging the participants to learn from each other, relying less on the tutor(s) as the "sage on the stage" but as the "guide on the side" (Jones and Steeples, 2002, p.9). The pedagogy is based on constructionist views of knowledge which requires the delegates to engage with the ideas that come from the different elements of the programme and to develop skills and capabilities relevant to their own situations back in their businesses.

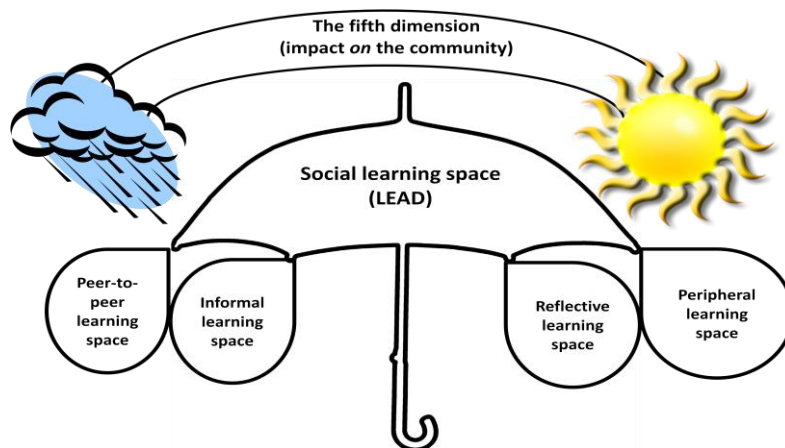
## Methodology

This is a qualitative interpretive study which draws upon interviews with delegates across five cohorts of LEAD and an in depth ethnography with one cohort of 25 delegates. The research asked: "how and where does learning take place?" The methods included participant observation and interviews supported by other data such as the discussion on the virtual learning environment, follow up interviews with delegates and observations in their place of work, the researcher's own diary and reflections plus emails from the research subjects. From the outset the study was conceived of as a qualitative study which is needed in order to understand the meanings and nuances associated with the learning experiences which, it is argued, are socially constructed.

The data analysis was inductive and the data were thematically analysed relying on systematic processes common to grounded theory's 'methodological package'. Although this research is not conceived of as grounded theory per se as set out in the original presentation of the method by Glaser and Strauss (1967), Langley (1999) claims that the grounded theory has become a synonym for any kind of inductive theorizing. The study did not set out to develop a theory as such and data collection and analysis were not conducted together, each informing the next stage but the analysis has similarities to grounded theory in that it is an approach that develops the theory from the data collected rather than applying a theory to the data. Mason (2002, p. 80) calls this inductive reasoning whereby the researcher will develop theoretical propositions or explanations out of the data. Once themes were identified a constant comparison method was followed broadly using these steps as set out by Lincoln & Guba (1985, p.339): comparing incidents applicable to each category, integrating categories and their properties, delimiting the theory, and writing the theory. Accordingly, the concept of learning spaces came from thinking with the data (see Cousin, 2007) and the initial interpretations were presented by Peters (2010). These interpretations have since been applied to and tested on subsequent cohorts. Additionally, the research has been presented to the provider network of the 15 additional providers who have then actively tested the assumptions about learning spaces on their own cohorts. They set about looking for the learning spaces and were invited to contribute their own experiences, interpretations and also to challenge the concept of the learning spaces. Over the space of a year the concept of learning spaces was tested on 32 cohorts across the providers. The provider network has proved a fruitful basis for which to test the generalizability of this research and has provided rigour to the process of analysis. It has also shown that the learning spaces take place beyond this one study. It is argued then that the findings can be applied to other learning communities.

## **Reconceptualising space in networked learning: Learning Spaces**

This paper urges us to reconceptualise space within networked learning. As such four learning spaces are presented to provide a different way of conceptualising learning spaces and learning generally in networked learning. They are conceived of as the result of learners engaging with the networked learning programme. Arguably, they can be seen as the effect of any learning community. These learning spaces are less visible and tangible than those discussed in the learning literature. They can contribute to our understanding of learning because they can demonstrate evidence of the desired learning outcomes of a programme, or at least activity related to the desired outcomes. Used in this way they can be seen as a very compelling way to rethink how facilitators in networked learning can support the learners. They are both constructs and effects of the learning community's engagement with the programme. Goodyear (2009) looks at the idea of networked learning systems and argues that they evolve through the actions of teachers and students and others, like IT developers. The learning spaces can also be used to help our understanding of these actions. Accordingly, they can be used to think about the design of networked learning in which the possibility of creating the four learning spaces could be built in. This is not a technologically deterministic argument. More so it centres very sharply on the social view of learning advocated in this study. As such it is argued that each learning space is socially constructed by the delegates viewing learning as situated or embedded within activity (see Lave and Wenger, 1991; Wenger, 1998). To contextualise the learning spaces I draw upon Wenger's (2009) concept of social learning space as the framework which enables the construction of the four conceptual spaces. Wenger states social learning spaces are: "social containers that enable genuine interactions among participants, who can bring to the learning table both their experience of practice and their experience of themselves in that practice" (2009, p.3). I argue that LEAD is a social learning space or, in Wenger's words, the social container for learning. This is depicted as the umbrella in figure 1 from which the proposed learning spaces have the potential to be created.



**Figure 1: Learning spaces as an effect of networked learning**

LEAD provides opportunities for engagement in different physical and virtual learning spaces. Engaging with the social learning space (i.e. LEAD) is a process that is visible, i.e. the delegates arrive at the university, enter an online discussion forum etc. The learning spaces proposed here, on the other hand, are a product of the engagement with the networked learning programme and are at times less visible than the social learning space. The social learning space has the potential to create the conceptual learning spaces. From an analytical point of view the learning spaces are presented as discrete spaces but they are heavily intertwined. Ryberg and Larsen (2008, p. 105) urge us not to focus on bounded spaces or separated contexts of activity but to enhance our analytic focus on movements, flows and a continua of activities across domains. The following section presents each space along with how each is socially constructed but in reality any number of these spaces could take place at the same time. They are socially constructed by the peer learning community and cut across the social learning space. As discussed the concept of learning spaces is an alternative way of conceiving learning space within networked learning. These learning spaces are relational with one another and how, to use Ryberg and Larsen's terminology, they can be seen as 'continua of activity across domains.'

### Learning space 1: Peer-to-peer

The social theory of learning underpinning the networked learning programme relies on peer learning. A lot of attention is given by the facilitators to creating a learning environment where trust and respect are fostered between the delegates. Issues concerning confidentiality are addressed and each cohort creates a learning contract and sets of 'ground rules' which are revisited throughout the programme. These exercises help to lay the foundations for peer-to-peer learning which arises because the delegates feel they are in 'the same boat' and are not there to sell to one another or impress (like they do in other communities made up of SMEs), rather they are there to seek help and share their own experiences. As well as sharing their experiences of the different elements of the programme they continue to be surprised at how similar the issues they face are and how their own situations as owner-managers of small businesses are relevant and salient to each other. It is recognised that owner-managers often feel lonely and isolated (Smith and Peters, 2006), having no one around them who they can learn leadership from. Kempster (2009) presents a case for learning leadership through 'notable people' and how the self-employed have limited opportunities (and motivation) to observe notable people. The programme provides them the opportunities to learn from one another, and the peer-to-peer learning space is a result of this.

#### *Social Construction of the peer-to-peer learning space*

The peer-to-peer learning space is a result of the salience of the knowledge being shared between the delegates. It emerges through the practice of being both an SME owner-manager and becoming a delegate / member of the learning community. The social construction of this learning space is a cyclical process whereby the SME owner-manager learns how to become a delegate through the engagement with the programme. This process leads to the construction of a peer-to-peer learning space through salient conversations with other delegates which in turn help the SME owner-manager to learn how to become a delegate.



Simon has been working on an issue during the action learning set and the six other delegates have been helping him think about different solutions. He says, "I feel like talking it through is helping, I know you understand.... you've actually just given me an idea of what to do with my Manchester office, I hadn't thought of that before". The fact that they are all owner-managers means that they understand identify with each other's issues. Their experience (and identity) is part of this.

Excerpt from ethnographic diary: observation of the action learning set

**Figure 2: Peer-to-peer learning space**

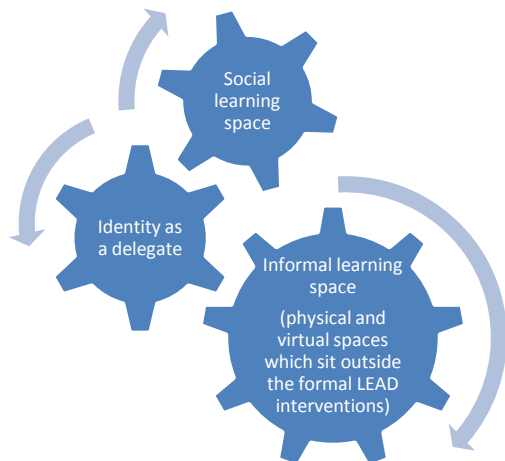
### Learning space 2: Informal

The informal learning space is experienced outside of the formal or prescribed learning interventions. It is experienced for example during the tea breaks when they are at the university, lunches, meeting up 'outside of the programme, lift sharing and online discussions about social events such as arranging nights out. The programme is underpinned by a social constructionist view of learning that assumes the learning is collaborative and knowledge co-constructed. The informal learning space is experienced through social interaction that is not part of the formal structures of the programme.

#### *Social construction of the informal learning space*

The informal learning space is more somewhere where the delegates gather socially either physically or virtually in the virtual learning environment (or emails and other forms of electronic communication). It is closely intertwined with the peer-to-peer learning spaces as it is argued argue that salient conversations are guaranteed to take place within the informal learning space. The identity of 'delegate' is part of the construction; they talk about the programme and other conversations such as business issues, work-life balance and general social 'chat'. These all serve to construct and reaffirm their identities as SME owner-managers and delegates who are sharing this collective experience. It is a cyclical process because it happens continuously throughout the programme.

Ponti and Ryberg (2004) offer theoretical reflections on the notion of place in networked learning. This is particularly relevant to the informal learning space because they look at how learners develop and evolve a structure of social interactions in networked learning environments. They claim that social artefacts can be developed in order to help learners organise the virtual place in a way that is meaningful to them and helps foster their social presence. Social artefacts are "tools that play a part in constructing a sense of mutual accountability, belonging, negotiation of identity and roles between the learners" (Ponti and Ryberg, 2004). Examples of social artefacts for the delegates are the biscuit tin which is only available to this community (see Smith, 2011) and certain threads on the LEAD forum asking for and giving help and advice.



Andy: "I know you will agree with me when I say that the LEAD journey that has brought a bunch of us together and given us a good shake, but we must remember this journey started with alcohol and so I suggest that that we get together to continue with this practice."

Nicola: "I absolutely agree that we should be planning something - Happy to go wherever the majority vote."

Post on the online forum

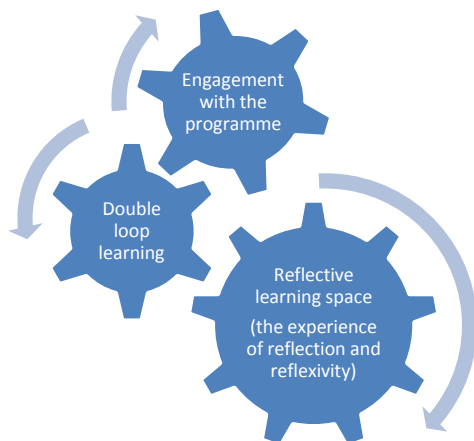
**Figure 3: Informal learning space**

**Learning space 3: Reflective**

It is proposed the act of being reflective creates a learning space. Reflection is an activity that is encouraged across the programme, indeed there are whole days dedicated to helping the delegates understand and process their learning, aptly named 'learning and reflection days'. The reflective learning space is conceived of as a space for processing information reflectively and often this results in self-affirmation, i.e. that they are doing some things well, or a re-appraisal of their actions, i.e. thinking about how they might do something differently.

*Social construction of the reflective learning space*

Reflection is an activity that the delegates learn how to do across the programme sometimes with specific activities contrived to produce reflection. The construction of the reflective learning space is the result of engaging with the programme and experiencing Argyris' (1976) double loop learning. A central component of Argyris' theory is the distinction between the individual's espoused theory and their 'theory-in-use' (what we say we do and what we end up doing). Typically, interaction with others is necessary to identify this conflict. Like the other learning spaces, it is a cyclical process; the delegate questions assumptions and values and modifies them in order to make a change.



"I've been sitting her reflecting on this and the activity is actually more useful than I realised at the time. The ability to be reflective is a new skill I am learning and I can see that I have a lot to learn".

Quote from delegate

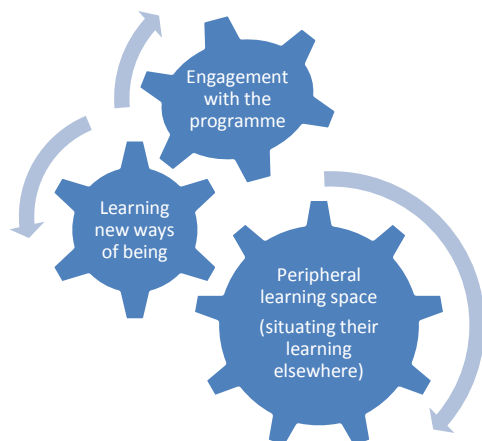
**Figure 4: reflective learning space**

**Learning space 4: Peripheral**

Predominantly, delegates come on the programme to develop themselves personally and professionally in order to grow their businesses. It is expected that learning from the programme will be applied to their businesses and it is natural to see the learning impacting other areas of their personal lives too. In this sense the learning often leaks into or infiltrates other spaces of the delegates' lives.

*Social construction of the peripheral learning space*

This learning space is experienced when the delegates take their learning somewhere else, for example back to the workplace or into the family. Engagement with the networked learning programme affects other areas of the delegate's lives. The peripheral learning space is socially constructed through the process of taking the learning elsewhere.



Paul: "The strangest thing for me is not only is this working in the work place, but I also now find myself helping my children and coming out with some quite profound inspiring statements and it really works! Also in the gym I now know that I have still got a little bit more to give"

Post on the online forum

**Figure 5: Peripheral learning space**

**The Fifth Dimension: External influence on the learning the community**

The four learning spaces are both constructs and effects of the learning community engaging with the programme. However, the learning community does not operate in isolation and is also exposed to factors which influence its learning potential; this is referred to as the 'fifth dimension'. Whilst much emphasis is placed on peer learning throughout LEAD there are also purposeful instances of external influence such as the facilitators, guest speakers, business coaches and indeed staff members of the delegates' companies who attend events as guests. These all have an influence on the learning community. This is depicted in figure 1 with the sunshine and the rain as (albeit crude) metaphors to show that external factors can have negative and positive impacts on the learning community which is shown through the following data:



My time spent on the [work] situation has unfortunately detracted from my time spent on course matters, so my contribution is less than I expected it to be.

Post on the online forum

I'm sorry to say that work pressures are so great that I can no longer continue with LEAD. I've given it careful consideration and I wish you all the very best.

Post on the online forum

My dairy manager was so inspired by my shadowing experience that she has shadowed Mary in [another delegate's company]. The experience has been enlightening and I would encourage you to think about how our own staff members could link up with each other. Just think what we could learn from this.

Post on the online forum

After John's masterclass I asked whether he would come and look at the operations of our company....I am bowled over by what he has had to offer and we are going to undertake a restructure which I know that the staff are keen to do.

Post on the online forum

The fifth dimension is proposed as a way of thinking about other influences on the learning community itself. In terms of design and facilitation it is argued that the fifth dimension should be considered as an opportunity for the learning community not to become too introspective and as a way of helping the community to construct meaning (and learning) from external influences. With programmes such as LEAD, which are based on an integrated learning model underpinned with a participative pedagogy, the four learning spaces should be experienced.

## Summary and recommendation

This paper has proposed a different way of looking at learning spaces which has not been conceptualised before within the networked learning (or other learning) literature. As effects of the learning community it is argued that the four conceptual learning spaces matter because they can both help us understand the learning processes within networked learning better and they can be used like a litmus test to show how effective the learning community is. It is argued that facilitators in (and designers of) networked learning can support the learners by creating and maximising opportunities for these four learning spaces and be mindful of the fifth dimension of having an impact and the learning community which can be seen as an opportunity for helping to maximise the learning potential. The fifth dimension can be used as a tool for critical reflection to look at what and how they are learning and what they are doing as a result. The following table offers some very basic recommendations for creating opportunities for the learning spaces. It should be noted that the recommendations should be contextualised for each programme and designers / facilitators will need to think about what is appropriate for the learners.

Table 1: A sample table

Learning space	Recommendations
Peer-to-peer	Allow time for exchanging knowledge and experiences between members
Informal	Create opportunities such as through coffee breaks and communal lunches and encourage the community to socialise or at least get to know each other more socially
Reflective	Create opportunities for reflection and encourage reflective (and reflexive) practice
Peripheral	Encourage the community to demonstrate how and where they are 'taking' their learning, i.e. what are they doing differently

## References

- Argyris, C. (1976) "Single-loop and double-loop models in research on decision making", *Administrative Science Quarterly*, vol. 21 (3), pp. 363-375
- Beaty, L., Cousin, G., Hodgson, V. (2010) "Revisiting the e-quality in networked learning manifesto", paper presented at the 7th International Conference on Networked Learning, Aalborg, Denmark, 3rd and 4th May, 2010. <http://www.lancs.ac.uk/fss/organisations/netlc/past/nlc2010/abstracts/Hodgson.html>
- Brown, M. and Long, P. D. (2006) "Trends", in Oblinger, D.G (ed) *Learning Space Design in Learning Spaces*, Educase ebook available at: <http://www.educause.edu/learningspacesch9>
- Chan, T.W. et al. (2001). Four spaces of network learning models. *Computers & Education* 37(2), 141-161
- Cousin, G. (2007) "Thinking with data", *Educational Developments*, March 2007  
Available at: [http://www.seda.ac.uk/resources/files/publications\\_16\\_eddev8\\_1.pdf](http://www.seda.ac.uk/resources/files/publications_16_eddev8_1.pdf)
- E-Quality Network (2002) "E-quality in e-learning Manifesto" presented at the Networked Learning 2002 conference, Sheffield, available at: <http://csalt.lancs.ac.uk/esrc/>
- Ferreday, D., Hodgson, V., and Jones, C. (2005) "'Just having a moan': leadership, space and resistance in FE principals", *Online Networks. Working Paper 4*, Lancaster, Centre for Excellence in Leadership. Available at: <http://www.centreforexcellence.org.uk/UsersDoc/NetManFEPrincipalsNetwork.pdf>
- Glaser, B.G. and Strauss, A.L. (1967) *The Discovery of Grounded Theory*, Chicago, Aldine.
- Goodyear, P. (2009) "Foreword" in Dirckinck-Holmfeld, L., Jones, C. and Lindström, B. (eds.), *Analysing Networked Learning Practices in Higher Education and Continuing Professional Development*, Rotterdam, Sense Publishers, pp. 1-27.
- Hodgson, V. (2008), "Learning spaces, context and auto/biography in online learning communities", *International Journal of Web Based Communities*, 4 (2), pp. 159-172.
- Hodgson, V. and Watland P. A. (2004) "The social constructionist case for researching networked management learning: a postscript and reply to Arbaugh and Benbunan-Fich", *Management Learning*, 35 (2), pp. 125-132
- Jones, C. and Dirckinck-Holmfeld, L. (2009) "An introduction", in Dirckinck-Holmfeld, L., Jones, C. and Lindström, B. (eds), *Analysing Networked Learning Practices in Higher Education and Continuing Professional Development*, 1-27.
- Jones, C. and Steeples, C. (2002) "Perspectives and issues in networked learning", in Steeples, C. and Jones, C. (eds), *Networked Learning: Perspectives and Issues*, London, Springer-Verlag, pp. 1-14.
- Kempster, S.J. (2009) *How Managers Have Learnt to Lead: Exploring the Development of Leadership Practice*, Basingstoke, Palgrave Macmillan



- Langley, A. (1999). Strategies for Theorizing from Process Data. *The Academy of Management Review*, 24(4), 691-710
- Lave, J. and Wenger, E. (1991) *Situated Learning: Legitimate Peripheral Participation*, Cambridge, Cambridge University Press.
- Lincoln, Y. S and E. Guba, G. (1985) *Naturalistic Inquiry*, Beverley Hills, Sage
- Mason, J. (2002) *Qualitative Researching*, 2nd Edition, London, Sage.
- Oblinger, D.G (ed) *Learning Space Design in Learning Spaces*, Educase ebook available at: <http://www.educause.edu/learningspacesch9>
- Peters, S. (2010) "Where does the learning take place? Learning spaces and the situated curriculum within networked learning" paper presented at the Networked Learning Conference, Aalborg.
- Poni, M and Ryber, T. (2004) "Rethinking virtual space as a place for sociability: theory and design implications", paper presented at the Networked Learning Conference, Sheffield. Available at:
- Ryberg, T., & Larsen, M. C. (2008). *Networked identities: Understanding relationships between strong and weak ties in networked environments*. *Journal of Computer Assisted Learning*
- Smith, S.M. (2011) "How do small business owner-managers learn leadership through networked learning?" in Dirckinck, L., Hodgson, V., and McConnell, D. (2011) *Exploring the Theory, Pedagogy and Practice of Networked Learning*, Springer
- Smith, L. and Peters, S. (2006) "Leading by design: the case of LEAD", paper presented at Symposium: *Entrepreneurial Leadership Learning*, Belfast, British Academy of Management.
- Temple, P. (2007) *Learning Spaces for the 21st Century*, download from: [http://www.heacademy.ac.uk/assets/documents/research/Learning\\_spaces\\_v3.pdf](http://www.heacademy.ac.uk/assets/documents/research/Learning_spaces_v3.pdf)
- Twining, P.(2001) *ICT and the nature of learning: implications for the design of a distance education course*. In Paechter, C., Edwards, R. Harrison & Twining, P.(Eds), *Learning, Space and Identity* (pp.102-120) London: Sage
- Warschauer, M. (2001) *Online learning in a sociocultural context*. In C. Paechter, R. Edwards, R. Harrison & P. Twining (Eds.), *Learning, Space and Identity*. (pp. 121-141) London: Sage
- Wenger, E. (1998) *Communities of Practice: Learning, Meaning, and Identity*, Cambridge, Cambridge University Press
- Wenger, E. (2009) *Essays on social learning capability*, <http://wenger-trayner.com/resources/publications/essays-on-social-learning-capability/> [accessed 31st December, 2011]