

## Symposium proposal submitted to Networked Learning 2002

### "Knowledge construction and on-line environments"

To be presented by:

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### Knowledge construction and on-line environments

The purpose of this Symposium is to explore critically ideas concerning knowledge construction and on-line environments. Three papers are offered which raise some general issues grounded in particular contexts:

- Cathie Edwards explores the aspirational stance of much of the literature on networked learning and sets this in the context of her experiences of supporting adult learners within programmes offered by two departments of Continuing Education;
- Michael Hammond reviews some theories of knowledge construction in online environments and assesses their relevance in the specific context of teacher professional development;
- Philippa Levy addresses methodological challenges in carrying out sustained research into a professional development programme for information specialists.

These papers are addressing three overarching questions: what do we mean by knowledge construction? do we have a sound foundation for believing that knowledge construction takes place in on-line environments? and, what constitutes evidence for knowledge construction? The first question leads us to review attempts to theorise about knowledge creation through on-line discussion. These accounts derive from broadly social constructivist theories of learning and often place particular emphasis on communities of practice. They have a particular relevance in a 'late modern age' when professional knowledge is subject to rapid change and more open to contestation. A common point of reference in this Symposium is the distinction between propositional knowledge and 'practical' knowledge or 'know-how'. We ask how far this distinction is helpful in our consideration of constructing knowledge within and about the on-line learning community.

The second question leads us to explore specific examples of online learning and the judgements we have reached about their effectiveness. We recognise the value of on-line learning in giving learners opportunities to share knowledge; to provide peer support; to enable a more measured and reflective type of discourse. At the same time we are aware of the constraints of time and access in the forums we have evaluated and the reticence of some learners to take part. Our experience of evaluating on-line working leads to our third question concerning the evidence of knowledge construction. We have conventional means to evaluating on-line working, such as questionnaires surveys, learners diaries and interviews, as well as new possibilities including dialogues within on-line forums and access to on-line discussion transcripts. We have worked within broadly action research perspectives that have given rise to particular issues concerning the purposes and politics of research and the validation of findings in the experience of learners. Our research poses particular ethical problems to of accountability, confidentiality and permission. Writing about such research, there is a need to acknowledge the personal nature of knowledge and the issues that arise from the researcher's construction of case 'narratives'. Our attempts to

consider professional knowledge creation within on-line forums bring us back to considering how we ourselves create our own professional knowledge.

This Symposium will offer a mix of presentation and open-ended discussion and will last an hour and a half.

**Chairperson:**

To be arranged.

**CONTRIBUTION TO SYMPOSIUM ON:**

"Knowledge construction and on-line learning environments"

**TITLE OF PAPER:**

Doing constructivist action research about networked learning and teaching:  
a case study reflection

**AUTHOR:**

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**SESSION TYPE:**

Research paper (within proposed Symposium)

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## **Doing constructivist action research about networked learning and teaching: a case study reflection**

Action research is a well-established approach to the construction and sharing of practitioner knowledge within educational contexts (e.g., Carr and Kemmis, 1986; Kemmis and McTaggart, 2000). Recently, it has begun to be used within the emerging field of networked learning, as a methodology for evaluating the design, facilitation and impact of new initiatives, and for developing validated conceptual models that can be used as a resource by practitioners working in similar settings (e.g., Salmon, 2001). Case studies are a common vehicle for sharing 'practical' knowledge that has been generated through action research - as distinguished from propositional knowledge - about learning and teaching, and also offer a means of sharing understandings, experiences and models of the research process itself. However, there are as yet few accounts of how action research is being carried out in the context of networked learning.

Action research can take a variety of forms, and as a methodological tradition is subject to the influence of changing perspectives in social theory and inquiry. At the same time, the networked environment offers new possibilities for carrying out research, for example through on-line observation and dialogue, and transcript analysis. This paper will offer a personal reflection on carrying out 'networked action research' from a constructivist standpoint, by presenting a case study account of the author's approach to evaluating a networked professional development initiative involving information specialists (Levy, 1999). The evaluation strategy, which focused on examining participants' experiences of learning on-line, was developed with reference to the constructivist evaluation framework associated with Guba and Lincoln (e.g., 1989; 2000), as well as to interpretivist and critical traditions in action research methodology (e.g., McNiff, 1993; Winter, 1989; Zuber-Skerrit, 1996) and some aspects of post-modern thought (e.g, see Scott and Usher, 1996).

The paper will discuss the philosophical perspectives that informed the design of the research strategy, describe its overall framework and methods, and highlight methodological issues that arose during the process of carrying out the research. In particular, it will explore questions to do with:

- the purposes and politics of the research (i.e., the kind of knowledge that the project aimed to produce; the nature of its participatory dimension);
- aspects of constructivist epistemology and their practical implications (i.e., as regards subjectivity; reflexivity; the nature of the 'research relationship' between participants; 'case' (re)construction as a means of knowledge-construction);
- the different phases of the action research cycle, and methods used for data collection and analysis (including iterations of both on-line and off-line reflective dialogue; transcript analysis; the process of constructing 'thick' case description about experiences of networked learning);
- decisions taken about representation (i.e., as regards the case narrative and issues of authority and authenticity);
- validation criteria for the research approach, and the basis of claims that might be made about its effectiveness as a means not only of evaluating and improving practice but of building theory.

The paper will conclude by assessing the significance of the issues arising from this methodological case study in the light of current developments in the educational philosophy and practice of networked learning.

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**CONTRIBUTION TO SYMPOSIUM ON:**

"Knowledge construction and on-line learning environments"

**TITLE OF PAPER:**

Construction of professional knowledge within on-line environments

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**SESSION TYPE:**

Research paper (within proposed Symposium)

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## **Construction of professional knowledge within on-line environments**

This paper will offer a reflection on some of the issues associated with the construction of knowledge within on-line forums. It will draw on the author's own experience of working within on-line forums (Edwards and Hammond 1998, Hammond 1999) and more recent experience charting the professional development of new teachers (Hammond and Mumtaz 2001, Hammond 2001) in which on-line working has played only a very small part.

Communication within on-line environments is frequently said to allow learners to articulate knowledge; to get access to up to date information; and to reach consensus on issues in professional practice. Commentators writing about on-line learning have found social constructivism (e.g., Solomon, 1993) an important point of reference (e.g., Lewis, 1995), but there have been comparatively few attempts to provide grounded models of professional development specific to on-line environments. One early example is that of Bonamy (1995) who suggests that one possible scenario for knowledge creation is articulation, reflection and 'reification' of new knowledge through on-line discussion. McConnell (1994) argues that an engagement with on-line communities can uncover hidden knowledge as well as articulate new knowledge, and suggests there are features of on-line learning which support an 'ideal speech community'. An intriguing and more general attempt to link the creation of knowledge within an on-line forum to the content of messages was offered by Henri (1991). The idea here was to analyse messages according to function and reach conclusions about how language might scaffold learning within an on-line community.

All this has been useful and raises several questions including:

- How have our conceptions of knowledge creation moved on since these first ideas were articulated?

- Do we have adequate participant confirmation within studies? There are many general accounts of how learners have experienced on-line learning, but do we have convincing accounts validated by the learners themselves as to how reading and writing specific on-line texts has supported their professional development?
- What is 'new knowledge'? Are on-line learners engaged in constructing old knowledge which is new to them or new knowledge associated with rapidly changing knowledge bases within the professions?
- What types of reflection take place within on-line communities? In particular, are learners reflecting on what Schon (1983) would describe as propositional knowledge, or on know-how? If the latter, is this 'reflection on action' or 'reflection in action'? Are these well-rehearsed concepts even important?
- What types of learner might take best advantage of on-line learning? Do such environments best suit certain learning styles or learners in certain professions or contexts?
- Is knowledge generated within communities 'useful'; can it impact on practice, and again, how can this be validated?

An overarching issue that researchers need to address is the match between what we know about learning in on-line environments and what we know about professional learning in general. In this paper, I take the specific case of on-line learning for teachers. I want to consider how new teachers in my research describe their professional development and contrast this with the types of learning on-line forums best support. My suggestion is that on-line learning can have a significant but nevertheless limited impact.

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**CONTRIBUTION TO SYMPOSIUM ON:**

“Knowledge construction and on-line learning environments”

**TITLE OF PAPER:**

**Discourses on collaborative networked learning**

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Research paper (within proposed Symposium)

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## Discourses on collaborative networked learning

This paper will propose that much of the discourse on collaborative networked learning is based upon speculative and aspirational stances rather than strong theoretical or empirical grounds. It will explore some of the reasons why this might be the case. It will then ask how one might investigate the robustness of the claim that collaborative knowledge creation, or production, is facilitated and/or enhanced through on-line learning.

The points of departure for this exploration of theoretical stances and discourses about collaborative networked learning will be drawn from several contemporary discourses. These will start with the Giddens (1994)-influenced debate on 'the self in late modern age' found in Slevin (2000), with the intention of addressing the question of *why* the claims made for collaborative networked learning might be desired and desirable.

This will lead to an engagement with some common theoretical positions and sub-disciplines which are often 'taken as read' in the literature on on-line pedagogies; for example, constructionism, as in Hodgson (2000); social constructivism and situated learning (Lave and Wenger, 1999); and, adult learning (Edwards, 2001; Merriam, 2001).

Examples of contemporary literature on online pedagogies will then be read for traces of these theoretical positions in the text in support of collaborative knowledge production claims (Collins and Moonen, 2001; Maier and Warren 2000; Salmon 2000; Stephenson, 2001).

Some of these perspectives will be illustrated with examples from the author's own research into the use of on-line debate for teaching and learning and curriculum development (Edwards and Hammond, 1998; Edwards, 2002). They will be explored further with reference to the author's

current professional practice, working with learners in the field of continuing education.

The purpose of the critique is to support an exercise in concept framework building from which one might proceed to gather data through which a more robust theoretical stance might become available. Or indeed to pose the question of whether or not we are in a position to offer a 'better' framework than those currently being proposed.

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