

Dialectical approaches to theory and methodology in e-learning: implications for dialogic teaching and learning

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Journal Title: Discourse

ISSN: 2040-3674

ISSN-L:

Volume: 8

Number: 3

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Introduction

Last year, after two years of preparation, commissioning and editing, Caroline Haythornthwaite and I published, with Sage, a ***Handbook of E-learning Research***. The book emerged partly from a seminar series sponsored by the UK's Economic and Social Research Council on dialogue and communities of enquiry in higher education; but also from our trying to help out, as supervisors, some of our Masters and research students who were interested in researching the field. The problem that these students had was twofold: first, they did not know where to look for a theory or theories to underpin their research; and second, they often had difficulties in framing the design for research and / or in working out how to do the empirical part.

Theoretical (and personal) issues

In the Introduction to the Sage handbook, we posited three theoretical models for investigating the field. One of these derived from Kinneavy's rhetorical model of communication; one depicted a reciprocal, co-evolutionary approach to understanding the relationship between information communication technologies and learning; and one was a

taxonomic table, categorizing different aspects of e-learning. Subsequently, in Haythornthwaite et al. (2007), the thinking was developed yet further. Most of the writers who contribute to the joint article published in the online journal *First Monday* focused on communities of learning of one sort or another: whether these are online networks, communities with strong and/or weak ties; textual communities, joined together by verbal textual exchanges; and so on.

Haythornthwaite, in her introduction to the article, in addition to an emphasis on communities and on the embeddedness/situatedness of individuals within those communities in the workplace, kitchen, classroom, study or bedroom, saw **emergence** as one of the common features identified by the co-writers of the article. What this means is that not only is the field of networked learning emerging and changing fast, being pinned down in models from time to time, but escaping them all the time; but that also **the learner is emerging**.

The emergent learner in a networked, e-learning, m-learning or u-learning context is a good focus for reflection, because he or she is a different kind of animal from the conventional learner who turns up at a classroom for a series of tutorials, seminars or lectures.

In the model of reciprocal co-evolution between new technologies on the one hand, and learning on the other (Andrews and Haythornthwaite 2007, pp34ff.), we depicted the learner's perspective with the phrase 'the determinants of longitudinal growth': as a dimension running through and between new technologies and learning. It is clear that some of the determinants are the natural maturation processes of cognitive, physical, moral and emotional/affective development. But once these determinants are mapped and their influence accounted for, how can we best describe the actual nature and actions of the emergent e-learner: the learner who draws on all the resources available to him/her? Let me give a personal account of a few hours in the life of my own learning to ground the debate; I will then go on to theorize from this (albeit modest, personal) instance about the processes of learning involved.

I happen to be interested, along with a colleague in my department, in the thinking of the German contemporary philosopher, Jürgen Habermas. My colleague and I met in the department and thought that there was a possibility that Habermas' work might provide a new foundation for English studies (our own field), particularly in concert with Vygotskian approaches which now form a kind of orthodoxy for those in the field. Habermas, it seems, might offer the notion of a social construction of consensus through argumentation and other forms of dialogic exchange. We could see how this might operate in the English classroom as well as in the street, the home, the workplace, the debating chamber. So, after a conversation about the notion, I sketched out (literally) with a pencil on a piece of paper some ideas. I then wordprocessed these into what looked like a first initial draft of an outline book proposal. I sent this to my colleague, who tracked changes and send back other comments with a covering email. I did not know if he was down the corridor in his office or in transit or at home or elsewhere. It didn't matter. I made appropriate changes, sent it back to him, and then sent the revised draft off to the series editor (whom I didn't know at the time was coming into London on a train from Brighton). We had arranged a meeting for that afternoon, and by the time we met he had read the outline proposal. He made suggestions for significant changes to meet the requirements of the series and the publisher. I said I'd consider them with my colleague, which I did. In order to relay the views of the series editor to my colleague, I felt the need to meet him face to face, as I believe the nature of the changes required (a change of title, a change of emphasis and style and possibly a different set of indicative chapter-headings as well as a re-arrangement of those chapters) required a complex, negotiated conversation. My colleague is more ruminative than I am; I tend to be a fast change-maker (perhaps too fast), so I didn't want to put my colleague in the position of just responding to another emailed re-draft on my part. I wanted him to be able to think aloud. In order to expand my own understanding of Habermas, I

took a couple of books from the library, bought his latest work, *The Future of Human Nature*, from the bookshop, and went online to wikipedia and via Google to find out some more sources of information on Habermas?particularly to see if there has been any work on Habermas and language education. Not much, as far as I could see, so I sensed that a new book might fill a gap.

On my way home that evening?a three-hour train ride to Yorkshire in northern England?I finished reading *The Future of Human Nature*, and started browsing through at the Theory of Communicative Action-supposedly the key work. I made a few notes, mostly in the form of quotations from the books, on my laptop. I couldn't help thinking, influenced by my reading, and as I observed other fellow late-night travellers, that Habermas' reflections on the changing nature of human nature strikes a chord of prescience, hope and anxiety all at the same time-almost like reading a fiction. The next day, at home on the computer, I typed out more sections of The Future of Human Nature that seemed relevant, and which I had flagged with post-its the night before on the train, into a depository Word file. I received an email from my colleague with a few initial ideas for revisions to the second draft of the proposal, with a promise of more reflective thinking to come. So a third draft developed which I marinated for a little longer to see if we were happy with it before sending it back to the series editor.

What does this anecdote reveal, if anything, about the emergent learner?

I think it could reveal a number of things about learning. Let's array these first, and then try to winnow out anything salient about the emergent e-learner or, to take a slightly different angle, the learner in a networked, mobile and digital age. Aspects of learning seem to be:

- motivation to pursue an idea?the idea of a book based on Habermas' thinking
- an integrating imagination at work: integrating various elements (Habermas, English teaching, observations of strangers on train)
- concentration: reading late at night on train, not least some German philosophy
- the creation of a short text?the initial book proposal
- dialogic interaction with existing voices (Bakhtin's idea of the dialogic imagination)
- using electronic media?email, the Net, wordprocessing-to converse, to research, to record
- face-to-face exchanges
- reflection, taking the form of reading, thinking and re-creation in verbal text
- design, in the form of initial sketches of an idea for a book
- composition and re-composition/re-arrangement (Latin *dispositio*) of the order of ideas
- the turning of a half-felt hunch into an articulated proposal
- revision, re-drafting
- the coordination of different views in an emerging discussion or argument about what form the proposal should take
- sensitivity to rhythmic shifts in the development of the ideas
- transformation of ideas from one state to another: initially, from common responses to reading; and then to deep revision of the ideas in the form of the drafts of the book proposal

I am going to suggest that only a small proportion of these modes of operating or aspects of the learning process are affordances of networked learning in a digital, mobile age; and that it doesn't matter whether we call the new forms of learning e-learning, m-learning or u-learning. Using electronic media-email, the Net, wordprocessing?to converse, to research, to record is a distinctively late 20th century/early 21st century activity. The train had wireless connectivity: I could have keyed in to more websites on Habermas and continued my research in that way. I could, no doubt, have participated in live blogs on Habermas, or submitted a few more lines to wikipedia; perhaps, even , accessed film of Habermas giving lectures or in conversation. But this is the only element of those listed above that is different from what could have been the case in, say 1980, before computers became widely available, or before 1990 when the Internet began to make its presence felt.

Nevertheless, I do not want to suggest that the networked, mobile, digital age is just a surface manifestation of what was already going on. Rather, I would like to see it as something that has changed me, and others, as emergent learners. Perhaps one of the differences it has made is to enable us to undertake a process of creation and revision at a much faster pace than would have been possible pre-1990. It has also enabled us to catch the moment for learning, and to pursue a half-formed idea as it develops; such flexibility and potential for collaboration allows a rhythmic shaping to take place, alternating between periods of reflection and production, listening and speaking, reading and writing. I am also able to enter networks at will to offer, exchange and trade ideas.

In terms of my own development as a learner in time, new technologies bring new affordances. Inevitably, some I will take up faster than others. The whole time, the question of the 'economics of attention' comes back to remind me that I cannot take up one new avenue of communication without, in a sense, closing down another; or, if I keep open a larger number of channels, I either have to rise above them to a higher level of integration (and perhaps become a better learner, a wiser one) or I have to be selective and close down some in order to open up others. My own capacity as a learner might diminish in some ways?for example, as a foreign language learner?as it opens up in others (say, as evidenced above, to develop an interest in philosophy).

Crucially, I am able to choose the media and modes of communication that best suit my learning rhythm at any particular point. And, at times, I need to switch off, literally and metaphorically.

So, to come back to the theoretical level, what theory or theories are most useful to explain such complex experience for the emergent learner? What kinds of research are most interesting and most useful in the field?

The nature of learning

Theories of learning abound, arraying themselves on a spectrum from what looks very like 'experience' at one end of the spectrum; to what looks very like the mirror of 'teaching' at the other. In between there is a broad area of activity that I will characterize as different from everyday experience, and certainly different from teaching. In this broad area, learning looks like a **transformation** of existing knowledge (whether that knowledge is personal, emotional, intellectual, physical and/or spiritual) and an **effect of networked communities**.

Perhaps the best initial and fairly recent guide to the field has been the Demos report (Hargreaves 2005), **About Learning**. This report is interestingly circumlocutory about the nature of learning *per se*, spending much of its first half looking at a range of characterizations of learning, and also reflecting on the business of learning to learn, or meta-cognitive approaches to understanding learning. It then cites Bransford, Brown and Cocking (1999) as providing the best evidence to date on the nature of learning. In the second half, the report focuses on ways forward for a better understanding of learning, and promotes as one of these the notion of **development and research** rather than the more conventional (but less effective) sequence of research and development.

Bransford, Brown and Cocking (1999) themselves put forward three key findings. They suggest that:

- Students come to the classroom with preconceptions about how the world works. If their initial understanding

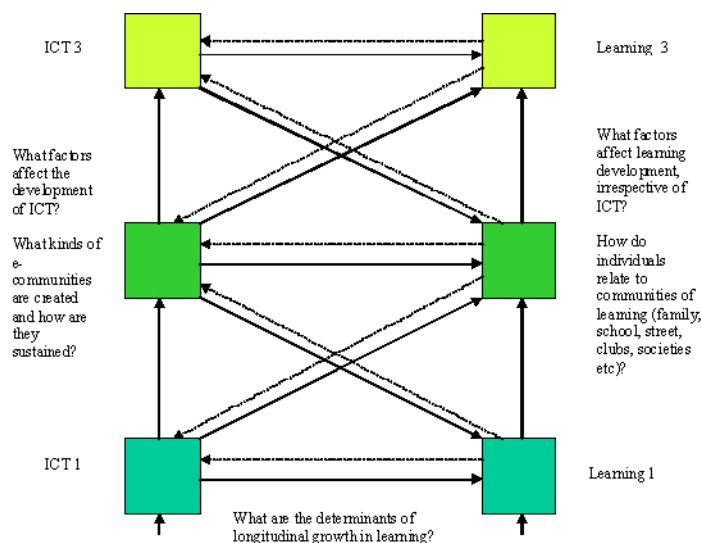
is not engaged, they may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom.

- To develop competence in an area of inquiry, students must: (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application.
- A 'metacognitive' approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them.

It is interesting that these findings are more or less self-evident, and that they do not add anything significant to our knowledge of the nature of learning. Both Hargreaves (2005) and Bransford, Brown and Cocking (1999) talk **about** learning or about the **conditions for learning**; neither gets to the heart of learning **per se**.

Given the lack of a fundamental theory of learning beyond that of neo-Piagetians, Vygotskians or those who follow Gardner's notion of multiple intelligences, we are thrown back on a simple definition of learning as a **transformational** activity that moves an individual from one state of knowledge to an improved state; and which is **an effect of networked (both online and offline) communities**, to adapt a phrase of Rogoff's (1990). The other recent work that has begun to chart the field is Illeris's (2007) **How We Learn**, perhaps the most comprehensive account so far this century. To summarize such a comprehensive account is hazardous, but Illeris himself does so in the words '[learning is] an entity uniting both a direct or media-disseminated interaction process between the individual and his/her material and social environment and an inner mental process of acquisition' (p253). The core psychological processes are characterized as 'cumulative (mechanical), assimilative (additive), accommodative (transcendent) and transformative (personality changing)' (p254). The notion of **acquisition**, however, skews the picture as far as e-learning is concerned. Rather, I would wish to de-emphasize the first three processes as principally acquisitional, and to focus attention on what I take to be fundamental to all learning (and not just concerned with personality changing): transformation. Such a focus allows a more dynamic relationship between the learner's 'material and social environment' on the one hand, and his/her 'inner mental process' (which processes I would characterize as not only mental) on the other. It also allows space for mediation and intervention by a teacher.

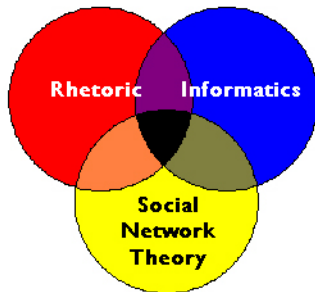
The progress of the e-learner through the model we have depicted both in the Introduction to the Sage **Handbook of E-learning Research** (Andrews and Haythornthwaite 2007), and in the subsequent article in **First Monday** (Haythornthwaite et al. 2007) has yet to be charted fully.



I can make a start in the present paper by suggesting that the co-evolutionary model for e-learning research needs to

be seen as three-dimensional, rather like a constructed and transparent building (think of Norman Foster's Hongkong and Shanghai Bank headquarters in Hong Kong, or Richard Rogers' Pompidou Centre in Paris). The learner enters the building and develops as he/she moves up the building. He or she moves in a spiral, first aware of the affordances of technology on each floor; then aware of the communities and e-communities on each floor; and being able to make connections between them. This isn't a static, completed building, however; it is one which continually evolves, which rise upward as the learner him/herself develops and ages?and which not only continually creates new relationships between technologies and learning at a societal level, but which evolves with the learner in a mutually dynamic way. The 'building' then?which we must remind ourselves, is a metaphor for understanding the learning process?is organic: it 'grows' along with the learner. But it is an undeniably public construction, and it takes its place alongside other such constructions?some skyscrapers, others more modest constructions?in a city of knowledge.

Given the nature and progress of the emergent learner within his/her social and political and pedagogical environments, it is proposed that a combination of rhetoric, informatics and social network theory is best suited to the study of e-learning and networked learning. How can such vast tracts of theory be 'combined'? The short answer to this problem is through an integrative model. The long answer is to explore the backing, in Toulminian terms, of the three bodies of theory, and to see where the common ground lies. The partial solutions are best conveyed in a Venn diagram:



Rhetoric, the arts of discourse, locates the activities of e-learning within a political framework of communication that asks questions like: who is speaking to whom? With what authority/power? What is the subject-matter? What weight does context lend to the exchange? What devices or techniques are used to convey the message? To what degree is the exchange dialogic?

Informatics?or, as we call it in Andrews and Haythornthwaite (2007), educational informatics?is concerned with the shaping, format and management (delivery) of information. That information can range from inert but substantial data conveyed from A to B on the one hand (e.g. the results of an experiment); to seeing the very act of communication as being about the exchange of 'information' (e.g. digital data, pixels) on the other.

Social network theory describes, explains and analyses the nature of connections between people, often in terms of 'strong' and 'weak' ties.

To begin to address the problem outlined above about the integration of these theories, the backing in each case is slightly different and is to do with the focus of attention in each of the theories. In rhetoric, the focus of attention is on communication itself, not primarily on the sender(s) of the message nor its receiver(s); nor, indeed, on the substance of the message. In informatics, by contrast, the attention is on the substance and nature of the message and the ways it is framed (informatics thus has a closer connection to epistemology). Social network theory is interested in focussing on exactly what it says: the social networks of people that are brought together by the information and the means of communication, as well as the existing social networks (usually defined and sustained by communication and information) which the participants take as given. We can see from the diagram and from this brief exegesis that the differences between these theories are principally differences in perspective. Fundamentally, they are all interested in the same phenomena: networked electronic communication in the service of learning. The overlapping

dark area in the middle of the diagram, then, is the fertile ground for theory-building in the field; or the point of reference from which studies in e-learning and networked learning can orient themselves.

Methodological issues

Given the nature of the emergent learner and of emergent learning in the field, it has to be said that any kind of methodological approach, and any method selected as part of that approach, could be useful to researchers. The range could be from randomized controlled experimental studies with large samples at one end of the spectrum to in-depth holistic case studies of individuals at the other end; from positivist studies that undertake an intervention at one end, to non-interventionist ethnographic studies at the other. Again, the approaches are not that different from pre-1980 (pre-computer) or pre-1990 (pre-Internet) methodological approaches. The same principles apply: the importance of framing a research question; the way that methodology and methods follow from the question; the fact that mixed methods is invariably more useful and comprehensive than a one-dimensional approach. What *is* new is that, for example, interviews and surveys can now be conducted synchronously or asynchronously online; skype or other Net-based telephonic media can be used to conduct interviews at distance; records of Internet use and interaction can be gathered and processed easily; reports can be composed more fluently, with graphics and tables, and presented more professionally and more quickly; searching has been revolutionized. Reports can also take various forms (summaries, full technical reports etc.) and be re-purposed according to need. Dissemination is exponentially improved. Archiving, though in itself a complex and emerging field, can make reports available via downloads.

Not much in the above account of methodological advances is particularly new or exciting. What is more engaging is what learners are able to do as a result of research and new technologies. For example, Laurillard (2007) suggests that a typical m-learning situation 'could build in more opportunities for digitally-facilitated, site-specific activities, and for ownership and control over what learners do' (p165). These activities include on-site downloading to mobile devices, the creation of a shared and updatable website for the purposes of the learning session(s) and for that particular learning community; using a whiteboard to display the results of their research; the creation of collaborative texts, built up over the course of the learning and available to a wider audience. Although these affordances and activities are not the sole preserve of mobile learning, they do help clarify the research question of 'What are the pedagogic forms specific to m-learning that both fully support the learning process and exploit the richness of the remote environment?' and 'What are the best ways for teachers to construct different kinds of remote environment in support of the learning process?' (ibid, p174).

What is important is that research students are not constrained by the formats in which they are asked to present their work. The **problem** that the conventional printed thesis presents for research students who are exploring e-learning, especially where multimodality is foregrounded, is that such a printed format necessitates a linear, largely monomodal (i.e. verbal) medium for the presentation and conveying of the research. In much contemporary research, the print format is not problematic; even where screen shots and other images need to be included, they can be incorporated into the print medium of the conventional thesis. These images, plus moving images, can be appended in a CD that can be bound into the back cover of the thesis. Such a solution can be said to address issues of multimodality to an extent, but not to address issues of mixed media.

But such solutions are partial and transitional. The deeper problem is that a linear print-based format may not be suitable for the subject-matter of the thesis, which may require a different logic and a different rhetorical shape. For example, a research study on complexity theory or on a problem with many variables may require different points of entry, allowing the reader/user to choose which point of entry, and which navigational route through the material, best suits their ends. Furthermore, in terms of curation, dissemination and speed of access, electronic formats for the PhD thesis will make it more readily available to other researchers and users. A 2007 survey of policies relating to electronic theses by the Consortium of Research Libraries in the UK, however, suggests considerable variation between British universities in approach to this matter.¹

Three examples of recent and current doctoral research projects can be used to illustrate how practice is developing in this respect. I will concentrate here not so much on the content of the thesis in each case, as on the structure of the submission and the modes of presentation. Perez (2005) looked at the impact of the Internet on second language learning and teaching. It takes conventional print-based and hardbound form, is lodged in the library and is accessible via Inter-library loan or via microfiche. Sharma (1993) though completed in the 1990s, represents a stage further forward in terms of format and presentation. Although the thesis takes conventional print-based and hard-copy format, it includes an appended floppy disk (many theses have since been submitted with CDRoms as appendices) containing files from the data collected in the research, some of which are new primary data. The next stage moves beyond the conventional, with a number of significant implications for the structuring, presentation, examining and archiving of the thesis. Parnell-Parmley (forthcoming) is a study of complexity theory and contingency in relation to teaching and learning in e-learning communities. The student is working toward a structure that is not bound by linearity (i.e. the conventional sequence of 'introduction', 'literature review', 'methodology', 'results' and 'conclusion') but that allows the reader to determine the sequence in which the thesis is read. Rather than a print-bound book, the thesis will take the form of a website with sections ('chapters') that be accessed and read in any order. The current plan?university regulations permitting?is to present an on-line resource that could continue to be updated right up to the moment of the examination, and which will continue to change after it.

Questions will be raised about the argumentation of such a submission, which is not pre-determined by the student. Rather, the student presents material?no doubt well-argued in each section?and an overall rationale that will set out for the examiners and future readers how the argument does and could develop in a reading of the thesis. The reading process will look more like a web of interconnections (more like a social network theory map) than a steady progress from chapter 1 to the end of the thesis. The argumentational links will be rich in their possibility, and could be enriched further in the reading and subsequent discussion as part of the examination. Entry points to the argument will be determined by the reader from a limited set of options, rather than pre-determined by the writer/researcher.

It can thus be seen that new formats for the submission of the PhD?a key *rite de passage* for research in any field?will change not only the surface and operational matters of the way theses are presented, archived and accessed. It will also change the way they are constructed. Such construction reflects a deeper concern with the way thought, reflection and the creation of knowledge are constructed. So, what appears on the surface to be a rhetorical shift actually will mark an intellectual and epistemological shift in the way knowledge is moved forward, at both the level of the emergent learner him- or herself, and in society more generally.

Implications for dialogic teaching and learning

I have suggested so far that models of e-learning need to draw on a range of bodies of theory; need to accept the reciprocal, co-evolutionary nature of the relationship between new technologies and learning; and have some (not as huge as we might imagine) implications for methodology. What are the implications for dialogic teaching and learning? Dialogic teaching and learning in philosophical and religious studies must, I imagine, have some of the same qualities and characteristics as dialogic teaching in any field or discipline: it assumes that teachers learn as they teach; that the exchange of understanding is mutual between teacher and learner; that learners can offer much to the learning process; that there is a more egalitarian structure to exchanges in the classrooms than in a conventional, hierarchical setting where the teacher transmits rather than enabling a transformation of knowledge. Certainly, in such dialogic teaching and learning, the learners talk more, and contribute more to the learning exchange.

What I have set out in the first part of this paper as far as the relationship goes between new technologies and e-learning, would seem to fit well with practices of dialogic learning and teaching. At a general, theoretical level, the reciprocal, co-evolutionary nature of the relationship between the learner and e-learning is evident. The teacher fits into this model as another learner; albeit one with 'extra' knowledge and experience that can be fed into the dialogue. In more practical terms, the teacher can take part in or chair a blog, set assignments, respond to learners' questions, and so on. I have found it much more productive when all the learners in an electric community of enquiry have 'tutor

privileges'. In other words, every single learner can start threads of enquiry, provide information and answers, start debates, ask questions, support and/or challenge others' contributions. Whether such electronic exchanges are mere supplements to face-to-face classes or the principal means by which a course is conducted does not really matter; and whether the learning is blended, or, more accurately, a bricolage of face-to-face, online and asynchronous offline engagement, seems not to matter. Their sustainability is a matter of whether the communities of learning that are established for the purposes of the particular course or occasion are, in fact, sustained by individual links between participants. In this way, e-communities are no different from face-to-face learning communities.

As far as the present conference and journal are concerned, the obvious link between philosophical and religious studies on the one hand, and dialectical approaches to theory and methodology in e-learning on the other, is via argumentation. Thus much has been hinted at in the paper so far. Argumentation is dialogic and dialectical by nature. It thrives when there is no single orthodoxy, but when there are contested systems of belief and values to explore. Its bases are in democracy, and it serves, among other functions to elucidate, clarify, defend, persuade and, if not always to bring about consensus (Habermas' dream, if you like, of the function of argumentation in communicative action), then at least to encourage the toleration and understanding of difference. When the lineaments of argument and argumentation are brought to the surface in academic disciplines, and the ground rules of the subject or discipline are made transparent and available to learners as well as teachers, then students are likely to be more successful and to gain more from engagement in their studies. The e-dimension of learning, as has been depicted in the paper, may not add that much to the process of dialectical thinking in any particular subject or discipline; but what it can do is provide more egalitarian forums for discussion and exchange via threaded dialogues; web logs; extended debates on- and off-line, and empower the learner by enabling him/her to search a wider range of sources than would have been possible without such means. In short, the learner who is aware of the argumentational possibilities of the topic and subject/discipline they are working in can extend these possibilities in space and compress them in time, attuning their learning to rhythms that are more in accord with those of life outside, as well as inside the academy.

Conclusion

It is difficult and perhaps unwise to attempt to conclude in an emerging and fast-changing field like networked learning theory. What can be said by way of tentative conclusion is that:

- new research and practice will push the boundaries of what is thought possible in networked learning
- such new work will require new formats, and universities and other gatekeepers of such knowledge will need to adapt to such formats
- learning theory will need significant new breakthroughs if it is to keep up to speed with developments in networked learning
- such breakthroughs are likely to include an understanding of learning as transformational and as an effect of networked (online and offline) communities
- in theories of learning, power relations will need to be carefully charted and monitored
- argumentation via online communities offers possibilities for threaded discussions and web logs that take place over a greater space, and potentially in more compressed time, than via conventional teaching and learning situations.

Progress will be marked by a willingness to consider the theoretical underpinnings, however complex, of new empirical and reflective work in e-learning; and by a subsequent consideration of the methodologies and methods (not all of them 'electronic') that are best used to investigate such complexity.

Footnotes

1 I do not underestimate that such changes require significant changes to university regulations and procedures in the presentation and examination of doctoral theses. Currently practice is varied at PhD level in the social sciences, though it has been changing already in regard to professional and arts-based doctorates. It may be that some universities will resist such change on the basis that 'ancient salt is best packing'; but it is more likely that the contexts of research at doctoral level in society, and supply and demands side economics in the production and use of new knowledge?as well as student motivation and preference?will move such changes along more quickly than we might think. Such changes are important to freeing up space for the next generation of doctoral students to push forward knowledge in the field; and to make it more relevant to practice, policy and design.

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Created on: April 2nd 2009

Updated on: August 19th 2010