

Blogging as pedagogic practice: artefact and ecology.

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**ABSTRACT** Much of the published discussion and research on blogs and teaching and learning in higher education focuses on evaluation of blogging as a communicative technique. This type of discussion largely assumes that successful integration of blogging into course delivery should be judged against a pre-existing and unchallenged pedagogical model. This paper argues that to leverage its full educational potential blogging must be understood not just as an isolated phenomena, but as part of a broad palette of "cybercultural" practices which provide us with both new ways of doing and new ways of thinking. The paper looks at the ways broader theoretical models associated with the development of the blogosphere might challenge or enhance current theories of teaching and learning. Spatial metaphors inherent in network models of blogging will be contrasted with the surface/depth model of student learning. The paper will argue that blogs should not be seen merely as a technological tool for teaching and learning but as a situated practice that must be brought into appropriate alignment with particular pedagogical and disciplinary practices. A model of blogging as a networked approach to learning suggests that blogging might achieve best results across the curriculum not through isolated use in individual units.

Many claims have been made for the utopic potential of blogs and blogging. They have been hailed as a revolutionary expansion of the electronic agora, holding the potential to reinvigorate the public sphere and thus foster a new participatory democracy for the young century. They have also been acclaimed as a unique tool that will improve efficiencies in everything from marketing to education.

Blogs come to us as the latest in a series of technological innovations that have been hailed for their revolutionary potential (Mitchell 1999). They share in the utopic aura of the personal computer, the internet, the mobile phone, the wireless network and most recently the ipod.

On the other hand, blogs have also been dismissed as just another software program that encourages the internet equivalent of vanity

publishing. Hailed as citizen journalists by some, bloggers are rejected, as just the latest incarnation of the scandal/attack instincts of tabloid journalism, by others. In education, blogs are pitted against their predecessors, (primarily discussion boards and email) which are now seen as “traditional” technologies.

While this is a simplistic overview of the blogosphere and its representations it begins to signal the complexity of the field in which blogging occurs and tries to understand itself. It signals something of the “it” moment in which blogging is currently being introduced to a wider public. However it is also indicative of the mechanistic way in which blogging is being explored and understood. Too many people are asking what blogs can *do* before they really understand what blogs *are*. I believe this is particularly true in the two spheres that concern me most as a journalism educator.

Although there has been some wonderfully innovative uses of blogging by both journalists and educators I believe that the media and the academy as institutions are still asking the wrong questions about this phenomenon. The standard questions are most often posed in terms of productivity: how can this technology enable us to do what we already do but more efficiently? How can we reach more people? How can we encourage more discussion?

Ulises Mejias (2004) reminds us that technologies influence not just what we do but how we think and that a mechanistic exploration of new communication technologies will not help us harness their real potential.

Each communication technology in fact reshapes our relationship with the world: how we describe the world through language affects how we think about the world, and vice versa. This process has become more complex as technologies appear more rapidly, leaving little time for reflective assimilation. Furthermore, new communication technologies bring about not just additive adjustments to already existing options to communicate, but complete changes to media environments and ways of knowing the world.

I believe we will only unleash the full practical potential of blogging when we pay due attention to its place in this complex field of new

communicative practices. We need to look at blogging, not as an isolated phenomenon, but as part of a broad palette of “cybercultural” practices, which provide us with both new ways of doing and new ways of thinking.

David Bell (2001:2) suggests that cybercultures are best understood through an integrated investigation of their “material, symbolic and experiential dimensions”.

We experience cyberspace in all its spectacular and mundane manifestations by *mediating* the material and the symbolic...thinking about what cyberspace ‘is’ and what it ‘means’ involves its own hypertextuality, as we mingle and merge the hardware, software and wetware with memories and forecasts, hopes and fears, excitement and disappointment. (2001:2)

At the material and experiential level participation in cybercultures occurs along a continuum that begins with activities which are now almost ubiquitous such as web surfing, email and googling, the use of more specialist techniques such as RSS feeds, instant messaging, peer-to-peer file transfer and podcasting through to participation in emergent movements such as those centred around open-source software or creative commons, “copyleft” initiatives. Further immersion in cybercultures would include experimentation with a range of virtually augmented realities and the cyborg amplification of the human body.

Martin Jacobsen (2002) argues that these cybercultural practices have given rise to new discursive norms that distinguish it from both literate and oral cultures.

Where oral rhetoric is embodied and literacy is disembodied, a cyberdiscursive rhetoric is virtual, characterized by remotely centred interactivity and instantaneousness...the concrete rhetoric of orality and abstract rhetoric of literacy become dynamic in cyberdiscursivity via the continuous, productive nature created by virtuality and user agency...oral rhetoric's aggregative structure and literacy's hierarchical structure give way to an emergent structure in CMC, pieced together by a user who does not recognize a structure until it develops before her through a random choice of fragments which seldom, if ever, remain cohesive, and which usually become

impossible to trace...the communal nature of oral rhetoric and the individual nature of literacy move toward an idiosyncratic rhetoric in which reader/user agency transforms the textual experience into an epistemologically challenging game which shatters rules as basic to print texts as one word following another.

So how does blogging change the way we think? How does it embody the virtual, dynamic, emergent and idiosyncratic characteristics of cyberdiscursivity?

### **Blogging as relationship and conversation**

In his important review essay on blogging and education, long time edublogger Stephen Downes (2004) urges us to think of blogging as "something defined by *format* and *process*, not by content." He continues:

A blog, therefore, is and has always been more than the online equivalent of a personal journal. Though consisting of regular (and often dated) updates, the blog adds to the form of the diary by incorporating the best features of hypertext: the capacity to link to new and useful resources. But a blog is also characterized by its reflection of a personal style, and this style may be reflected in either the writing or the selection of links passed along to readers. Blogs are, in their purest form, the core of what has come to be called *personal publishing*.

A blog is personal publishing not just in the sense of its expressive or emotional or idiosyncratic tone but also in the sense that it operates at the core of a personal network or set of personal relationships. Downes quotes Meg Hourihan (2002) to this effect:

Whether you're a warblogger who works by day as a professional journalist or you're a teenage high school student worried about your final exams, you do the same thing: you use your blog to link to your friends and rivals and comment on what they're doing. Blog posts are short, informal, sometimes controversial, and sometimes deeply personal, no matter what topic they approach.

Oliver Wrede (2003) expresses this slightly differently. He begins by emphasizing that blogs create a particular form of authorship:

Weblogs are not special because of their technology but because of the practice and authorship they shape. And it is a practice that will require a weblog author to be connected to processes, discourses and communities.

He goes on to specify this:

Weblogs combine two oppositional principles: monologue and dialogue. A reaction to a statement is not only directed to the sender but also to unknown readers. Very often the weblogger gets feedback from unexpected sources: new relations and contexts emerge. This (assumed) undirected communication develops to an open and involving activity.

Weblogs not only enable interaction with other webloggers, they offer a way to engage in a discursive exchange with the author's self (intrapersonal conversation). A weblog becomes an active partner in communication, because it demands consistent criteria for what will be posted to a weblog (and how). This "indirect monologic dialog" of weblogs allows us to conduct communicative acts that otherwise would only be possible in very particular circumstances.

Lilia Efimova and Aldo de Moor (2005) in a very interesting analysis of weblog conversations make a similar point:

Unlike other tools that support conversations, weblogs provide their authors with a personal space simultaneously with a community space. As a result, at any given time a blogger is involved in two types of conversations: (1) conversations with self and (2) conversations with others.

In the simplest case, a weblog post is fully and only embedded into "a conversation with self", a personal narrative used to articulate and to organise one's own thinking. A single blogger could have several of such conversations simultaneously, returning to ideas over time. Next, each of the posts can trigger a conversation with others that can take several rounds of discussions as well.

The personal conversation or the monologic aspect of blogging can be simply left to grow spontaneously or we can learn to work with a

blog as an evolving hypertext essay by thoughtfully linking backwards and forwards to our own as well as other's posts. In fact new software plug-ins encourage this type of practice by allowing authors to display a series of related-post-links with each entry.

Part of the freedom of blogging is its immediacy and its flexibility: it is a space where anything from brief notes, first thoughts and links, to more worked-up essay style postings can live together. However deeper dimensions are discovered if we actively mine this archive gradually shaping it through addition and juxtaposition.

Similarly the communal or dialogic aspects of the blogging-conversation are multidimensional. At the most fundamental level blogs are developed through an immersion in the ecology of the link, which situates our authorship in relation to other texts and other authors. Comments, traffic patterns, blogroll and pings develop this into an even broader conversation. Just as actively mining our own archive and adding a set of related-post links enriches our monologic conversation, active deployment of techniques such as RSS aggregation and the formation of group blogs can extend the social/communal dimensions of the blogging conversation.

My discussion of blogging, so far, has deliberately woven theoretical elements with practical parameters. Let me recap.

- Blogging is a form of personal publishing that shapes authorship through:
  - its structured yet flexible forms;
  - its network of relationships and
  - its immersion in a hypertextual ecology of the link.
- It is conversational, setting-up and supporting conversations with both self and others.
- Blogrolls, categories, links, track-backs and a variety of post-forms are elements that shape blogging practice. Plug-ins and RSS aggregation have the capacity to extend its communicative dimensions.
- Blogging is marked by flexibility and currency and connects the blogger to "processes, discourses and communities" (Wrede 2003).

- It encourages the development of emergent narratives integrating personal, peer and expert knowledges.

So does this vision of what blogging could be match the practice and intentions of educational blogging? Where do we situate blogging within a pedagogical and disciplinary framework?

### **Blogging Theory Blogging Practice**

Susan Herring (2004) and colleagues in a content analysis of 203 randomly selected blogs concluded that there was a gap between blogging rhetoric and blogging practice.

Our analyses revealed less evidence than expected of blogs as interlinked, interactive, and oriented towards external events; rather, most of the blogs in our corpus are individualistic, even intimate, forms of self-expression, and a surprising number of them contain few or no links. Based on the profile generated by the empirical analysis, we traced the historical antecedents of weblogs back to hand-written diaries. We also pointed out the hybrid nature of weblogs, suggesting that the technical affordances of the weblog format make it readily adaptable to multiple purposes of use. Finally, we suggested that these same affordances bridge, and ultimately blur the boundaries, between HTML documents and text-based CMC, as blogs and other interactive Web-based communication systems replace some of the functions of traditional Internet genres and give rise to new functions.

Herring et al's conclusions are interesting from a number of points of view. Firstly they point to the fact that there are a variety of distinctly marked blog sub-genres or a continuum of blogging practice, which stretches from the highly individualised to the highly networked. Secondly they call blogs "a bridging genre" that is bringing together coded (HTML) forms of internet communication such as homepages with more direct forms of text based peer-to-peer computer mediated communication. Blogs also bridge pre-digital formats like the hand-written diary with digital forms of self-presentation. Importantly their analysis situates blogs as an emerging genre that is currently still evolving.

That blogging remains contested territory will come as no surprise to educational bloggers. While there has been plenty of enthusiasm about the use of blogs in higher education some writers have also expressed a sense of disappointment with what blogs can accomplish (eg. Krause 2004).

There are numerous posts on both communal and individual blogs about gaps between the expected and actual outcomes of student blogging projects. The following post on "falling out of love with blogging" by Patricia Remmell from Kariosnews is typical:

I have discovered that my honeymoon with blogs is over, mostly because there really is no room for spirited interaction between my students and myself in the blogs. Yes, I can require that they respond to another person's blog, but one student said that, compared to a discussion forum, leaving responses to blogs felt more like leaving a note for someone who is out. The discussion forum, she said, felt more like an ongoing conversation which was more fun. (Remmell 2004)

This post generated a lot of comment from other educators. Many expressed relief that they had been given license to articulate their doubts about blogging in education. The complaints from teachers included:

- blogs are not good tools for facilitating discussion;
- students find the technological hurdles an unhelpful barrier;
- assigned blogging ends up being "forced writing";
- blogs focus on the personal and can be "an unwholesome celebration of one's ego".

The comments belie a tendency to think of blogging as a fixed or singular entity that is expected to perform at one end or another of the social/personal continuum of blogging experience and/or at only one point along the informal/structured spectrum.

Commenting on these posts Charlie Lowe (2004) reminds us that there are three different modes of blogging: the personal mode; the knowledge management mode and the community/social mode. But where blogging truly comes into its own is when it is able to integrate all three modes into a coherent whole.

As Herring and her colleagues identified, the wider blogosphere is a self-regulating system that gives rise to a diversity of experience, but if blogs are to be used effectively as an educational technology they require a tighter framework. This includes both a clear but broad set of intentions and an appropriate induction into this new literacy. Only then can students be expected to navigate their way through the multiple possibilities offered by blogging practice.

Clancy Ratliff (2004) further develops an analysis of the different types and purposes of educational blogging.

If your objective is to create a learning community, weblogs can help you achieve it by giving students a space to share their writing with other students in the class, who have the opportunity to leave comments under their classmates' posts. Weblogs are also a powerful tool for teaching students about writing for an audience, as they are public, and they reach an audience of not only the teacher and the other students in the class, but also readers outside the class who leave comments. If your objective is to help students synthesize information and make connections through writing, weblogs can help you meet this objective by allowing students to take advantage of the Web. Weblog software makes it easy for students to create content for the Web without knowing much HTML, find online articles related to topics discussed in class, and share them easily with other students. In my experience, blogging encourages associative thinking.

If blogging is a bridging genre it is because it enables access to some of the complex functionality of HTML coding through a much more accessible interface. While this reduces some of the technical complexities faced by the novice blogger it does not necessarily reduce the functional complexity of the system. The relative simplicity of the blogging technology opens up a complex set of choices that must be modelled by experienced practitioners.

In an old but still very relevant set of postings on blogging in the class room James McGee (2002) suggests that there are four stages to this induction.

There are four hurdles to pass to move from willing volunteer to competent blogger: learning the technology environment, developing an initial view of blogging, plugging into the

conversation, and developing a voice. These are not so much discrete phases as they are parallel tracks that can be managed.

Many of the complaints about blogging as an educational technology reflect an approach that seems to revolve around the last two elements of McGee's four points without due attention to the first two. It appears that some educators expect a vibrant conversation to emerge independent of any developmental work exploring the discursive possibilities and technical options of the software.

Blogging broadly developed is not merely a writing exercise, it is not just journal keeping, it is not an online discussion group, it is not a class intranet even though it can include elements of all of these. If we are to take educational advantage of blogging it is vital that we assist our students to come to their own view of blogging and that we help them situate this within a wider view of cyberdiscursivity.

One of the aims of using blogs in educational settings must actually be about the process itself. In the same way that one of the aims of encouraging good essay writing is to assist students to develop expressive skills that they can then apply in a range of different ways in professional or personal contexts, one of the aims of blogging ought to be to encourage cyber-literacy and an understanding of the ecology of the link in a networked society.

The initial enthusiasm about blogging in higher education arose because it seemed to easily fall within a progressive view of educational practice. It offers a socially situated, student centred, contemporary, technical solution. However blogging cannot easily be modelled on other forms of teaching and learning technology. Threaded discussion boards for example, are essentially an asynchronous version of synchronous face-to-face tutorial groups and call for a similar set of parameters such as discussion prompts and norms that encourage vigorous yet civil interaction. Blogging requires students and teachers to explore a different set of strategies. Many of these strategies are not unfamiliar but they need to be brought together in new and different ways.

### **Bloggng and Pedagogy**

Various authors have attempted to locate blogging within a broader pedagogical theory. Dickson (2003) has related blogging to the stages of learning outlined in Bloom's popular taxonomy, which sees learning in a series of cumulative stages ranging from knowledge gathering through to synthesis and evaluation. Farmer (2004) and Ferdig and Trammell (2004) have situated blogging within a social constructivist framework. Both these approaches point to blogging's usefulness in encouraging higher order learning skills and place blogging within a broadly progressive model of teaching and learning.

I would like to extend this discussion by briefly pointing to two other bodies of pedagogical theory and how they might help us think about blogging in our curricula. Firstly Seymour Papert's *constructionism* provides a theoretical framework that sheds light on blogging. Secondly blogging's ecology of the link opens up new metaphors that challenge ubiquitous deep/surface models of learning.

*Constructionism* – a reformulation of Piaget's *constructivism* – developed by Papert and his colleagues at MIT's Media Lab, highlights the personalised production of "knowledge artefacts" as well as the social nature of the learning process.

Constructionism – the N word as opposed to the V word – shares constructivism's connotation of learning as "building knowledge structures" irrespective of the circumstances of the learning. It then adds the idea that this happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity, whether it's a sand castle on the beach or a theory of the universe. (Papert 1991)

Edith Ackerman emphasises that Papert's theory concentrates on the transformation of ideas in particular contexts, through particular tools by particular minds. It shifts the epistemological emphasis from universals to "individual learners' conversation with their own favorite representations, artifacts, or objects-to-think with."

To Papert, projecting out our inner feelings and ideas is a key to learning. Expressing ideas makes them tangible and shareable which, in turn, informs, i.e., shapes and sharpens these ideas, and helps us communicate with others through

our expressions. The cycle of self-directed learning is an iterative process by which learners invent for themselves the tools and mediations that best support the exploration of what they most care about. Learners, young and old, are “worldmakers,” in Nelson Goodman’s sense. (Ackerman nd.)

Pentland another Papert colleague suggests that constructionism is particularly useful in understanding new ways of thinking that emerge from a consideration of the internet as an ecological environment or series of interacting ecosystems.

The ecologies of the Internet could be a particularly fertile ground for the development of ecological thinking because they can be designed, manipulated, and analysed much more easily than ‘natural’ ecologies. As Papert has argued, people learn with particular effectiveness when they are actively engaged in the design and construction of personally meaningful artefacts. The Internet enables people to design and play with ‘ecological artefacts’ to a far greater extent than ever before. (Pentland 2004)

Papert and colleagues thus present a vision of learning that encourage us to think of learning as an integrated suite of personal meaning making processes, content or artefact construction and ecological relations. This set of processes fits well with Lowe’s (2004) typology of blogging as occurring across three modes: personal; knowledge management and social. A constructionist approach would encourage us to ensure that each of these modes are developed in an integrated way in educational blogging projects and would discourage approaches which highlight blogs as merely communicative devices.

While Papert’s constructionism and other theories can help us understand the ways blogging might encourage learning opportunities, blogging in turn can also help us think in new ways about traditional learning theories.

Metaphors arising out of blogging practice offer a much-needed alternative to the popular deep/surface “approaches to learning model”. Tamsin Haggis (2002) has pointed out that this model, first developed by Marton and Saljo (1984), has attracted surprisingly little critique and has slowly assumed an almost uncontested status as the dominant paradigm guiding policy and

research on teaching and learning in higher education in Europe and Australia. Even supporters of the model admit that it has become so ubiquitous that it runs the risk of becoming a cliché (Richardson quoted in Haggis 2002).

However for all its apparent simplicity the deep/surface binary is little more than a deceptive tag for a confusingly complex body of research. Vivien Beattie (1997) and colleagues have pointed out that the “model” is actually an umbrella for four inter-related theories produced by four separate research centres.

Noel Entwistle (1997:214) one of the researchers associated with the approach attributes its uncontested and widespread uptake to “the need in staff development to start from a simple and powerful idea which conveys complex pedagogical principles in readily accessible ways”.

Entwistle is right. There is much that is attractive, powerful and familiar in this literature. At first glance Entwistle’s description of a deep approach to learning seems strikingly similar to many of the ideas that I have been discussing in the rest of this paper:

A deep approach derives, from the intention to understand ideas for oneself, by relating ideas to previous knowledge and experience, looking for patterns and underlying principles, checking evidence and relating it to conclusions and examining logic and argument cautiously and critically.  
(Entwistle 1997:214)

Although at a basic level this is a “meaning-making” theory of education, its techno-rational orientation can be deduced from its language of caution. There is little sense of adventurism and only a weak sense of individual agency – the learner is seen to merely look for underlying patterns rather than to actively make connections. As Haggis observes:

One of the fundamental problems with the view of learning that the model presents is that it removes the individual learner from the richness and complexity of his/her multiple contexts. It also constructs ‘the learner’ as a being passively created by ‘past experience’, and passively amenable to reconstruction as a ‘deep’ learner through a new set of molding processes that take place within the university. The

learner, in this model, is a human being without agency.  
(Haggis 2002:98)

Many of the problems that Haggis and other critics of the model (Webb 1997) point to are inherent in the metaphoric terms that Entwistle claims are so “simple and powerful”. Lakoff and Johnson (1980) have pointed out that metaphors are not neutral; they play a critical role in both producing and constraining our thinking.

The deep/surface approach uses an essentialist metaphor that relates learning to the search for an abstract buried treasure. The truth is out there (deep space) or under there (deep sea) if only the seeker is prepared to dive/fly far enough. In this metaphor truth or knowledge is clearly a “thing” that is not easily found (it’s not close by or near the surface) but it is something that definitely does exist and it’s something that requires struggle to attain.

In spatial terms the deep/surface metaphor is a vertical metaphor, which directs the search above, below or even “deep inside” and as such it is marked as distinctly individualist, with the learner upright and isolated. It lacks any sense of horizontal connectivity.

Although the web is sometimes described as a deep space it’s essential characteristic is that of a horizontal network, “web” being a spatially expansive horizontal metaphor.

Blogging can help us to understand some of the practices and principles behind the deep/surface approaches literature but does so under the guise of a new metaphor.

Blogging exemplifies an ecological model: linked, networked, embedded, organic even viral are suitable metaphors to describe this approach and its web of connectivity. A linked or network approach to learning encourages an understanding that seeks to recognize patterns and build on relationships with other knowledge domains, but unlike Entwistle’s approach these relationships are not sought in abstract deep space. They are sought in a set of loosely mapped known and unknown adjacent spaces each only a link or series of links away.

In a linked or networked approach to learning the sense of agency and individuality is powerful but it is not isolating or egocentric. Each node in a dynamic network has the ability to both send and

receive therefore this metaphor better accounts for both the given (or contextual) and the constructed aspects of the learning process.

In Jacobsen's (2002) terms the deep/surface metaphor clearly outlines a literary model: disembodied, abstract, hierarchical, individual. Whereas linked or network learning represents the virtual, dynamic, emergent, idiosyncratic characteristics of cyberdiscursivity.

So what does this mean in practice?

### **Course wide blogs**

If blogging is both the construction of a personal knowledge artefact and an ecological practice, which reveals emergent knowledges as a series of dynamically linked spaces, this immediately focuses any pedagogy of blogging on questions of connectivity and the evolution of ideas over time.

I am therefore becoming increasingly convinced that blogs used across classes over the duration of a degree course, rather than blogs focused on specific assignment tasks or blogs developed for single semester units are a more congruent use of this technology.

If students were encouraged to establish a blog at the beginning of their course and continued to use it to post research notes, stories and reflections throughout their degree studies, this would become a unique and powerful teaching and learning tool. The blog would evolve together with (and record) the student's learning and practice experience.

- Students would grow into blogging and gradually figure out what it is best for them to blog and how;
- Connections in the course blogosphere would develop organically over time;
- It becomes a metalearning tool that allows students to make connections across subjects;
- It has the potential to contribute to a department wide sense of learning community.

For journalism students this approach has particular advantages:

- It encourages the habit of writing;

- It provides a personal publication space over which they have journalistic control;
- It provides an immediate portfolio of work for future job hunting;
- It provides a single space which links the practice based elements of the course and the theory based units

An ongoing course blog takes particular advantage of the blog's flexible episodic, cumulative and open-ended form. But it can also provide a place to house particular projects and more "finished" pieces of work. Thus it offers unique opportunities that are not usually provided by traditional forms of essay writing, project work or other forms of computer based course management systems. Integration of ongoing course blogs into the curriculum would also foreground cyber-literacy as an important ongoing course objective.

Just as importantly the ongoing use of blogging as a reflective form of metalearning would also foreground broader issues of *academic* literacy. As Haggis notes many of the underlying assumptions about the "good student" which underlie current popular theories of education make unrealistic assumptions about their pre-existing skills and general academic literacy.

What often seems to remain unacknowledged is that the attitudes and values which characterise the model's description of the ideal learner have in fact taken academics themselves many years to learn. It is unlikely that even the most well-educated post-school student arrives in university with the strategies that enable them to learn in [such a developed way]. (2002:98)

If taken seriously blogging practice can help us develop a range of new ways to address our literacy as learners and educators and it can help initiate students into an understanding of learning as an ongoing, dynamic conversation with self and others.

## **References**

Downes, Stephen "Educational Blogging" EDUCAUSE Review, vol. 39, no. 5 (September/October 2004): 14–26.  
<<http://www.educause.edu/pub/er/erm04/erm0450.asp>>

Efimova, L. & de Moor, A. "Beyond personal webpublishing: An exploratory study of conversational blogging practices" Proceedings of the Hawaii International Conference on System Sciences (HICSS-38), IEEE Computer Society Press, 3-6 January 2005 <<http://blog.mathemagenic.com/2004/09/15.html#a1353>>

Farmer, James, "When blogging goes bad..." incorporated subversion 3/2/2005 <<http://incsub.org/blog/?p=237>>

Haggis, Tamsin, "Constructing Images of Ourselves? A Critical Investigation into 'Approaches to Learning' Research in Higher Education," British Educational Research Journal, Vol. 29, No. 1, 2003

Hourihan, Meg, "What We're Doing When We Blog," O'Reilly Web Devcenter, 13/6/02, <<http://www.oreillynet.com/pub/a/javascript/2002/06/13/megnut.html>>.

Jacobsen, Martin M., Transformations of Literacy in Computer-Mediated Communication: Orality, Literacy, Cyberdiscursivity Lewiston, NY: The Edwin Mellen Press, 2002. [excerpted online viewed 10/4/04] <<http://www.wtamu.edu/academic/fah/eng/wc/preface.htm>>

Lakoff, George and Johnson, Mark, Metaphors We Live By Chicago: University of Chicago Press, 1980.

McGee, James, "Blogging in the classroom, Part 2. Forced blogging = flogging?" McGees Musings 16/10/02 <<http://www.mcgeesmusings.net/2002/10/16.html>>

Ratliff, Clancy, "online writing / writing online presentation" Culture Cat 22/10/04 <<http://culturecat.net/onlinewritingDRAFT?PHPSESSID=00d3bb022ea8583fcbf3e33a03a73431>>

Patricia Rimmell "Falling out of love with blogging" Kairosnews 16/10/2004 <<http://kairosnews.org/node/4003>>

Wrede, Oliver, "Weblogs and Discourse: Weblogs as a transformational technology for higher education and academic research," Blogtalk Conference Paper, Vienna, May 23rd-24th 2003

<[http://weblogs.design.fh-aachen.de/owrede/publikationen/weblogs\\_and\\_discourse](http://weblogs.design.fh-aachen.de/owrede/publikationen/weblogs_and_discourse)>