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Shifting themes, shifting roles: the development of research blogs

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I. Introduction

Learning is fundamentally social in nature, with knowledge co-constructed by learners whose understandings are mediated by meaning-making tools such as language (Vygotsky, 1987, 1997). This sociocultural view of education emphasizes the importance of learners' social and temporal settings and of the tools they employ (Wells & Claxton, 2002). It therefore views 'usage of a specialist discourse and membership of a specialist discourse community' (Northedge, 2002, p52) as key goals for a student.

During the past decade, this discourse has increasingly involved the use of blogs. These frequently updated websites consist of short posts, usually personal, with commentary and links (Mortensen & Walker, 2002). At undergraduate level, blogs have been integrated into assessment, and used to develop critical engagement and reflection on course material (Burgess, 2006). At postgraduate level and beyond, doctoral students have begun to use research blogs in place of research journals (Ferguson, et al., 2007; Walker, 2006). At a professional level, scholars are using blogs as spaces in which to develop the social networks that support research (Halavais, 2006).

A related shift in practice, stemming from the participatory, collaborative and distributed potential of Web 2.0 technologies including blogs, has resulted in the emergence of 'edupunk' – a learner-centred, community-created, progressive and relevant approach to education (for a summary of significant edupunk blog posts, see (Madsen Brooks, 2008)). Blogging, and its associated literacies, are increasingly important aspects of academic and scholarly practice and academic bloggers can be viewed as a community of practice (Wenger, 1998). In such communities, different levels of expertise are present simultaneously, there is a fluid progression from novice to expert and the community engages in completely authentic tasks and progression. However, the collaborative, participatory and distributed aspects of blogging imply

a community of practice that is very different from the traditional academic community with its emphasis on individual possessive intelligence, individuated authorship, stability and fixity (Walker, 2006). Indeed with the introduction of new social networking tools such as Facebook, MySpace and micro-blogging tools such Twitter alongside blogs, the collaboration practices within the community of practice is dynamic. The research set out in this paper investigates this dynamic evolution of new budding academic researchers (PhD students) as they transitioned into independent academic researchers (early-career) and how their blogging activities and related social networking activities over this period have helped (or not) them engage with their academic communities.

2. Background

The asynchronous environments of blogs offer opportunities to construct personal meaning alongside written text (Lapadat, 2002), time to make considered contributions (Hawkes, 2001) and opportunities for both reflection and critique (Conole & Dyke, 2004). These factors are significant affordances of academic blogs and illustrate the perceived and actual properties that determine their possible utility (Gibson, 1986). Viewed in these terms, blogs are an online extension of traditional scholarly activities, with hyperlinks and blogrolls taking the place of bibliographies, keywords replacing indexes and comments sometimes functioning as peer review. Reading and writing academic blogs thus require digital literacies, 'the myriad social practices and conceptions of engaging in meaning making mediated by texts that are produced, received, distributed, exchanged etc, via digital codification' (Lankshear & Knobel, 2008, p4). More radically, the participatory, collaborative and distributed affordances of blogs offer the possibility that knowledge construction within the 'blogosphere' could involve entirely new practices.

The more a literacy practice privileges participation over publishing, distributed expertise over centralized expertise, collective intelligence over individual possessive intelligence, collaboration over individuated authorship, dispersion over scarcity, sharing over ownership, experimentation over "normalization," innovation and evolution over stability and fixity, creative-innovative rule breaking over generic purity and policing, relationship over information broadcast, and so on, the more we should regard it as a "new" literacy (Knobel & Lankshear, 2007, p21).

Thus computer literacy can be characterized as a digital literacy – the ability to use specific tools, in this case hardware and software applications – for instrumental purposes. Critical technological literacy is new in that it is associated with a deep knowledge of the affordances and possibilities of those tools, and creative literacies are associated with a willingness to experiment with technology in order to create and manipulate new forms of content. Network literacies include 'the ability and the impulse to effectively and ethically manipulate a range of technologies to communicate and collaboratively construct and share knowledge' (Burgess, 2006, p107). These emergent literacies require a shift in practice towards intellectual and creative autonomy, as well as a willingness to engage with unstable, contested genres (Burgess, 2006). It is not yet clear whether academic blogging supports the development of academic communities of practice or whether the tensions between blogging and academia limit the possibilities for digital scholarship. It is also not clear whether academic bloggers are developing and employing new literacies rather than reworking traditional literacies in a new setting.

3. Method

In order to investigate the practices of academic bloggers, a four-year study of three such bloggers was carried out as they worked on and completed their doctoral studies into areas of educational technology and began work as early-career researchers. In the first year of their PhD, these three bloggers — Author A, Author B and Author C had three individual research blogs and a community blog. The blogs were set up as an online research journal to assist these new researchers on their journey. Two of the authors had moved from industry to start their PhDs as a late career change whilst the other author had changed from a budding engineering academic career. Author A's research investigated learning in online communities, Author B's research was on mobile technologies and informal learning whilst Author C looked at students'

mathematical understanding with software. Author C's blog and the community blog were open blogs in that anyone could have accessed them but Author A and B's blogs were dark blogs in that they were private and only approved readers could access them. The initial findings from their first year of blogging during their PhD are reported in Ferguson et al (2007). The longitudinal aspect of this research provided an opportunity for exploring in what ways a changing community of practice influenced how the researchers used their blogs.

The community blog ended at the end of the first year but all three continued with their research blogs. Authors A and B started a new open collaborative blog with the intention of sharing information on research activities around the university and they also opened their research blogs, whilst Author C started another open blog with the intention of sharing research tips with new postgraduate students. At the end of the PhD, when all three star ted academic research jobs (in educational technology), Author A found herself creating two blogs for her work. One blog was her official work blog and it was open in that it was outward facing to the internet audience and the intention of the blog was to act as a public relations outlet. Her second work blog was a dark blog where information on the project on which she was working was kept private. Author B found herself in a similar situation to Author A, and she also created a new dark work blog. The content of this blog related closely to the active work of her project and was intended to feed into the project evaluation activities. Author C continued using her research blog as her work blog but created private and password-entry posts for work-related posts that might contain sensitive information.

To analyse the eight current blogs (three research blogs, one collaborative blog, one additional blog and three work blogs), we used the 31 blogging posts categories that we identified in Ferguson et al (2007) based on a grounded theory approach. The categories were based on the purpose of the posts. The categories were also grouped into six overall themes (see Table 1). Each blog was analysed based on these 31 categories and were assessed on whether:

- I. The blogs were still being used for the same purposes
- 2. If not, whether a new software or social networking application (Twitter, Facebook etc) was being used for the same purpose
- 3. When and why blogs were no longer used for a particular purpose It was important to look at how the authors changed their usage of blogs as when they initially started blogging in 2005, new social networking technologies were not widely available. Technologies such as Facebook and Twitter did not become mainstream until during or after 2006.

Table 1. Overall identified themes of the blogging posts

The remainder of this paper summarises the findings from the main study, outlining how the blogging practices evolved and how these new practices measure up to the themes identified in the pilot study.

Overall Themes	Description of Blogging Posts
Community	A high degree of interactivity and collaboration between the bloggers
Reflective	Discussion on research ideas, progress, methods, methodology, theoretical frameworks and academic writing
Environmental	Discussion on shared experiences of the research environment, or the physical environment to describing their immediate situation (noise, temperature, mood).
Memos	Organisational posts listing things to do and remember, and links and references to external material and websites
Emotive	Indication of how the author was feeling at the time, expressing such feelings as doubt, uncertainty or humour
Blogging-Related Posts	Discussion on blogging as an activity and as a tool for data analysis

Table 1. Overall identified themes of the blogging posts

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4. Contribution

4.1 Shifting roles within a community of practice

The changing roles of the authors as researchers were reflected in their blogging practice. This was associated with an awareness that their audience was changing and, with it, their reasons for blogging. As first-year doctoral students a concern had been to acquire readers; the pilot study found that some 'posts were designed to elicit expert help' and Author A was looking for ways to make it 'easier to sign up new readers'. By the third year of their doctoral study, they had set up additional blogs intended, at least in part, to pass on expertise. For example, Author C wrote 'This blog is intended to give tips or tricks etc. to any new researcher starting out. I am a PhD student so within the last 3 years I've done some stuff that I would like to share.' Author C's new blog contained resources for new researchers, including videos and hyperlinks relating to the use of software and research blogs.

Author A and Author B set up a jointly authored blog in order to interact with other academics and to pass on expertise. The first post in this blog was a link to the pilot study (Ferguson, et al., 2007). The second post was entitled RSS Feeds and read:

A few months back, I spent some time at http://zetoc.mimas.ac.uk/rssjnllist.html setting up RSS feeds for all the journals I receive Zetoc alerts for. A good feed contains a list of all the articles in the current issue . You can click to get authors, and then drill down to more information. Looking at my Netvibes page where I keep these feeds, I'm disappointed by the amount of journals, many of them focused on online technology, which aren't supplying materials to these feeds. Cyberpsychology and behaviour, International Journal of Web- based Communities, Learning and Instruction, ALT-J, Active Learning in Higher Education and Computers in Education all have no items in their RSS feed. I think they need to get on the case.

This represents a shift from the fringes of academia to active participation within a community of practice. Both blogs take the view that they already have expertise to share with novices, and this expertise is related to their familiarity with and development of new and digital literacies. Both blogs are sites for the development and display of digital literacies. Moreover, the authors were confident enough to comment on, and even try to change, the practice of more experienced academics who possibly have less awareness of these literacies, or less time available in which to employ them.

Some of the themes that emerged in the pilot study appeared more rarely or were no longer evident by the end of the main study. The early blogs contained 'rants' that detailed the frustrations and brick walls the authors had faced. These rants had largely been transferred to become short outbursts in Twitter – but one author specified that she ranted in a dark blog, where other members of her team would not be able to see her comments. This was also where she chose to record her self-doubt and uncertainty, away from the eyes of her line manager and project team.

More negative, from the point of view of academic collaboration and participation, was a perceived need to hide the emergence of ideas, data analysis and reflection on the research process. These concerns had prompted Author A and Author B to set up dark blogs, accessible only to certain members of their project team, and had prompted Author C to password-protect many postings on her otherwise open blog. They agreed that noting the emergence of ideas is important. This corresponds with one of the main roles of the blog in that it acted as a repository for emergent ideas and reflections. The use of their blogs in this manner continued for the duration of the study for reflections relating to their post-doctoral work. However, unlike in their PhD blogs, these reflections were all kept in dark blogs. This was a significant shift away from their original openness and willingness to share both ideas and reflections, representing a move toward use of dark blogs for personal knowledge management, event logging and knowledge sharing within a limited work- related circle (Charman, 2006). They noted that this reticence had significant limitations – they had stopped commenting on each other's blogs because so many postings were hidden or inaccessible. They related this shift in practice to their role in the academic hierarchy - PhD research had been under their control, while funders, principal investigators and other team members controlled their work as early-career researchers. Another concern was the importance of

their new projects, all of which were aiming to have long-term international impact that could be jeopardised by team members writing the wrong thing in the wrong place.

At the same time, there was a growing awareness of blogging as evidence of digital scholarship and of the need to become an established and significant contributor to the genre in order to progress within the academic hierarchy. One of the authors included her blogging activity within her curriculum vitae, and was required to write for the project blog as part of a planned communication strategy. She commented that this involved conscious effort and a shift in style. For example, although she uses emoticons on Twitter and within her own research blog, she explained that she 'won't do it in the outward facing [project] blog because it is professional writing and requires a more formal style.'

4.2 Developing literacies

Running in parallel with changes in the authors' blogging that related to their role in an academic community of practice were shifts that related to their development of the associated new and digital literacies. First of these was their growing computer literacy – their increasing familiarity with the use of a variety of software and applications. As a result, significant amounts of blog content had been transferred to other sites – most of which did not exist, or were far less significant when the authors began their blogging. All three had moved their humorous comments and their references to their physical environment into the microblog Twitter. Communication about research questions, and communication with other academics had shifted to Cloudworks (Conole & Culver, 2009) – a site for sharing, finding and discussing ideas. Pictures and links still appeared in blogs, but also in Facebook; collaboration increasingly involved Google Docs or Google Wave, and previously public notes and planning were stored privately on OneNote.

The reasons for these moves displayed increasing critical technical literacy, and a sophisticated understanding of the affordances of these different tools.All three authors were using Twitter streams from conferences, and hash tags, to stay in touch with current debate and discussion in their field, and to source relevant links, resources and ideas. When they had sourced these, they had a variety of choices when passing them on to others. Author C used to use her blog to share links, resources and ideas. However she now noted that when she wanted someone to comment on what she had written: 'If I put it on my blog no one will see it. Readership is larger on Facebook/Twitter and I can reach a targeted research audience'. Within her work team, they tend to use email for group communication, and although she uses social bookmarking applications such as Delicious and Google Bookmarks, she uses these for personal rather that work-group related links. Author B still uses her open blogs to share references and links. However, she has moved to using Cloudworks as an important way of linking out to get input from the wider academic community. Cloudworks is a collaborative application that can in some ways act as a substitute for a blog. It is free to join and members can create clouds (that is web-pages) for ideas or issues for discussion. Others can then add to the cloud by contributing to the discussion (similar to comments on a blog), and adding links and academic references. Each cloud can belong to one or more Cloudscape (that is an overarching themed website) which groups related ideas together to make them easier to find. Author B is using Cloudworks heavily for work-related ideas and reflections that she would previously have posted in her open blog. She also uses a closed project wiki, but as this is only open to members of the project team, its potential for knowledge creation is more restricted. Like Author C, Author B uses Google Bookmarks extensively, relying on it to provide a consistent set of projectrelated links across a variety of devices (mobile, laptop, desktop). She also uses Google Wave for project-related collaborations, although these dialogues are not made public until they have been converted into a concrete form such as a conference proposal or journal paper. Author A still uses her blog for references, bookmarking them and adding them to a Tumblr microblog with related pictures and click-through links.

In this case, ten applications replaced a single blog. Subtle differences between the affordances of each determine when and how it is used. In most cases, the audience is critical – some media have large audiences, some (such as dark blogs) have no audience except the author, some are academic, some mainly social and some are collaborative, or offer fast responses, or are used by certain groups. This familiarity

with a variety of applications supports creative literacies which allow the authors to make effective use of all these media, and a willingness to combine them where appropriate. Images can be used to illustrate points, to add clarity or for visual appeal. Videos can be created and embedded to add

multimodal elements to an explanation. Blogs can be designed and tailored for different purposes and for different audiences

- and the authors demonstrate a growing awareness of where those audiences can be found, how they PAGE 115

can be contacted and how they can be engaged, using networking literacies as they collaborate, share and participate online.

5. Evaluation

The study showed evidence of changing practices as the authors moved from a PhD student to an early- career academic researcher. As early-career researchers they joined a community of practice in which the sharing of expertise, peer review and participation in the academic community were valued, but were also controlled more closely by the project for which they worked. When their online collaborations were restricted to the team with which they worked (closed or limited audience blogs, email communication, project-specific Google Waves) this limited their use of the collaborative, participative and egalitarian affordances of blogging. Employment as academics thus constrained their ability to collaborate widely and openly as they had as students. Also, the move towards digital scholarship and the need for experienced members of the community of practice to demonstrate expertise and impact to an external community by aligning themselves with the UK's Research Excellence Framework (REF) is limiting options and formalizing practices which translates into the moving away from the aspirations of edupunk. The relative importance of the themes identified by the pilot study; Community, Reflective, Environmental, Memos, Emotive and Blogging-related, has also changed during the early career stage. These themes remained relatively consistent during the doctoral process itself with the Reflective and Memo posts acting as memory repositories. These were crucial during the writing-up process, as the memory repositories were useful references when writing the methodology sections. Further, the Reflective posts also helped the researchers to gather their thoughts when writing their analysis and discussions. However, during the transition from doctoral to early-career researchers, the Community posts that showed a high degree of interactivity and collaboration moved into new technologies such as Twitter, Cloudworks and Facebook. Reflective posts discussing research ideas, progress, methods, methodology, theoretical frameworks and academic writing, together with Memos containing to-do lists and organisational aspects, continue to occur frequently in the earlycareer researcher blogs. However, the more creative Reflective posts are now placed in the dark, work-related blogs. The Reflective posts that were placed in public blogs, either the outward- facing work blog of Author A or the expertise-sharing blogs of all three authors, were either unrelated to work, or were carefully scrutinised to ensure that no confidential information was inadvertently released. Environmental and Emotive posts tended to crop up in Twitter and Facebook, and where they were blogged, they were blogged in dark blogs accessible only to the authors. Blogging-related posts occurred rarely. Shifts in technology identified by this study also support a freer, more informal voice. The emergence of collaborative technologies such as Twitter and Cloudworks provides an alternative way to reach out to a wider audience and to engage in knowledge creation with an academic community who are not members of a project team. This development of technical, creative and networked literacies among the three authors in this study was driven, in part, by the collaborative constraints imposed by the need to keep some workrelated information confidential. However, it is likely that student bloggers are also making use of these media to reach out and co-construct knowledge, and that student blogging practices have evolved to incorporate use of these new technologies. One must note that all of the three researchers were in educational technology and hence using technological tools to aid collaboration may have been easier for them than for other academic researchers.

6. Conclusion

This longitudinal study is valuable because it tracks shifts in blog usage driven by the pressures of the transition from student to early-career researcher. As educators, we are interested in how blogging can:

'contribute to a reconceptualization of students as critical, collaborative, and creative participants in the social construction of knowledge and [is] compatible with the social constructionist framework for learning, which - unlike the "transmission of knowledge" model - assumes that students must become active partners

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in the construction of knowledge with their peers, academic staff, and the wider social context of the disciplines in which they work.' Burgess (2006).

However, as our students enter the workplace, new skills and literacies are required by employers, and these may differ subtly from those we instill in our students. It appears that the values of traditional academic community with its emphasis on individual possessive intelligence, individuated authorship, stability and fixity (Walker, 2006) persist and to some extent, inhibit the collaborative, participatory and distributed aspects of blogging to which the early-career researchers had been accustomed to as student-bloggers.

Our recommendation for new postgraduate students still stands as when the first paper was written (Ferguson et al, 2007) in that blogs can support and extend learning and can continue to do so throughout their studies. However, the postgraduate blogs should not be stand-alone but should allow for integration with collaborative academic social networking tools such as Twitter or Cloudworks in order to encourage dissemination and wider feedback from academic peers. For early-career researchers, the affordances of blogs may be limited as the power over their research activities shifts during their transition from post-doctoral students, and their blogging activities come within the remit of their employer. The blog can continue to act as an early-career researcher's memory repository but the collaborative affordance of a blog may be lost unless all team members are on board.

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