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Postgraduate blogs: beyond the ordinary research journal

Abstract

The study described in this paper investigated ways in which keeping a research journal as a blog rather than as a paper document influenced the postgraduate student research experience. Four blogs (three individual and one collaborative blog) initiated by three research students were used as the corpus of data. The three individual blogs acted as alternatives to the traditional research journal. The analysis indicated that blogs can promote a community where students are encouraged to reflect and share ideas, skills and research life idiosyncrasies. Blogs also acted as memory repositories and encouraged collaboration amongst the research students.

Background and theory

Learning is a participative activity, a transformative process which takes place in a social setting (Mezirow, 2000). Socio-cultural researchers built on the work of Vygotsky and demonstrated that “*communication, thinking and learning [are] related processes which are shaped by culture*” (Mercer, 2004). Learning is thus a community activity, a process of co-construction of knowledge.

Wenger (1998) demonstrated the ubiquity of communities of practice, showing that individuals learn as they engage in and contribute to the practices of their communities. Johnson (2001) highlighted three key elements of 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 communication. While groups provide opportunities for objective evaluation and cognitive stimulation (Benbunan-Fich & Hiltz, 1999); the interpersonal ties within communities increase the flow of information as well as the availability of support and co-operation (Haythornthwaite, 2006; Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000).

As use of interactive media has increased, so has research into the ways in which learning and communities may be supported within an asynchronous and largely textual environment. Asynchronous communication has the advantages for learners that it is convenient, place-independent and time-independent (Wu & Hiltz, 2004). Asynchronous environments have the potential to enhance literate forms of higher order thinking, allowing group members to incorporate many perspectives, to consider carefully crafted contributions and to construct their own learning experience by choosing what to read and in what order (Lapadat, 2002; Lapadat, Mothus, & Fisher, 2005). They afford opportunities for reflection and critique (Conole & Dyke, 2004) and they allow individuals time to make considered contributions (Hawkes, 2001).

One such asynchronous environment is the blog; “*a web-based space for writing*” (Armstrong, Berry, & Lamshed, 2004). Blogs are increasingly utilised in education by communities, academics and students (Weller, Pegler, & Mason, 2005). Brady (2005) describes some of the affordances of blogs, including the permalinks which give a blog a memory, and trackback which acts as a citation alert to authors. For Mortensen and Walker (2002), links are vital to the genre, providing researchers with tools to think about their research, its values, connections and links to other aspects of the world. In her reflexive study of research blogging, Walker (2006) found that “*the most important way my blogging helped my research was social*”.

Blogrolls (lists of weblogs that an author reads regularly) reveal sources which influence a blogger's thinking and writing. Blogs offer individuals an opportunity to share thoughts, ideas and opinions and to work together, either by using the comment facility on an individual's blog, or by setting up a collaborative blog (Du & Wagner, 2005). Blogs can help to build trust within a community (Scoble & Israel, 2006). They can also support communities of practice by creating an environment in which people can observe, articulate and refine practices (Efimova, Fiedler, Verwijs, & Boyd, 2004).

In traditional classroom environments, learning journals written to be shared with a teacher have been shown to encourage reflection and to make students more metacognitively aware of their writing process (Cooner & Dickmann, 2006; Mahn & John-Steiner, 2002).

Postgraduates are often required to keep personal research journals: as records, as memoranda and as vehicles for reflection (Blaxter, Hughes, & Tight, 2001; Cryer, 2000). Blogging has the potential to make the research journal interpersonal rather than intrapersonal, making it a catalyst which stimulates critical thinking and allows interested parties to articulate critical voices (Oravec, 2003). Burgess (2006) identifies blogs' potential to "*build the kinds of literacies that are appropriate to networked, technologised environments*". Some of the advantages of a blogged research journal over a traditional research journal are that:

From a junior scholar's point of view, blogging can be an excellent method for developing and sustaining a confident and clear voice of one's own and the ability to formulate and stand by opinions. While private journals may fill with notes, they need not be as clearly formulated as a post in a weblog (Mortensen & Walker, 2002)

Despite these advantages, students avoid blogging if they do not see its value or if they see it as a waste of time. If they do blog, they need to be sufficiently mature to utilise their blog for debate and reflection (Anastasi & Cochrane, 2006). Students may also be concerned that a blog set up by an institution such as a university may be manipulated, regulated or closed down by that institution (Downes, 2006). It is important to clarify to students how to blog and what they can expect to gain from the experience (Williams & Jacobs, 2004). To do this adequately, educators need to know how and why students blog. This study provides answers to these questions with regards to doctoral students, and addresses ways in which blogging can promote a sense of learning community and support the experience of postgraduate research.

Method

An investigation of the ways in which blogging a research journal might influence postgraduate research requires a set of authentic research blogs for analysis. Furthermore, signs of a developing learning community will only emerge through blogs that are linked in some way. Research journals are personal artifacts and although their use is encouraged by universities and individual supervisors, the manner in which they are maintained is up to the individual PhD student (Lillis & North, 2006). Even if a sample of research blogging PhD students could be located and permission obtained to use their research blogs as data, it is unlikely that the authors would be aware of the other blogs. The authors (PhD students in the same faculty) therefore decided to set up a study in which they used their own research blogs as data.

In November 2005, while in the first year of their PhDs, the authors set up a collaborative blog. This collaborative blog was intended to be a place where students could share information. Whilst it had three authors, access was not limited to that group. Additionally, two of the authors ([Author B] and [Author C]) had already begun individual research journal blogs. [Author A] began her research journal blog just before the collaborative blog was set up. Both [Author A] and [Author B's] blogs were intended to be dark blogs, with access

restricted to a few selected people, whilst the collaborative blog and [Author C's]’s blog were open blogs, intended for public viewing. Charman (2006) defines dark blogs as “*blogs not accessible to the public because they are behind a firewall or password*”. They are therefore not available for public viewing. Personal blogs may be set up as dark blogs by password-protecting them, or by creating an authentication list of people who are allowed to see them. All four blogs listed the other three blogs in their blogroll. This enabled each participating student to access the blogs of the other students from their own blog. In addition, as the study progressed, the students began to use Google Desktop, enabling RSS feeds to notify them when their colleagues had posted something new.

Initially, the collaborative blog was expected to last only a year, but the research blogs were to continue until the PhDs were complete. When the authors set up the collaborative blog, they planned to investigate how it promoted a community of research and for this reason, blog entries were sometimes related to blogging literature. Thus, the purpose of the collaborative blog was to provide a forum outside the personal research blogs in which the students could discuss issues that were less closely related to their personal areas of research.

At the end of the academic year, when the collaborative blog had existed for 11 months, the authors began to research how the individual research and collaborative blogs affected the student research experience. All four blogs (see Figure 1) were therefore analysed for the same 11-month period.

Blog	Type	Purpose	Time (yrs)	Main Topic	Host
Collaborative	Open	Collaborative blog	1	Student-related issues	Wordpress
[Author A]	Dark	Research blog	3	Learning in online communities	Initially AOL and then Wordpress
[Author B]	Dark	Research blog	3	Mobile technologies and informal learning	Initially Blogger then WordPress
[Author C]	Open	Research blog	3	Mathematics education and software	Tripod

Figure 1: Summary of the initial conception of the blogs and their purposes

Analysis of the collaborative blog began with a detailed consideration of the entries by all three researchers working together. This resulted in the creation of 20 categories. When the individual blogs were taken into account, several categories were combined or eliminated and others were added, creating 31 categories in all.

In order to analyse the collaborative blog, a duplicate collaborative blog was made and the 31 categories were applied using the blog-post categorisation function provided by Wordpress. The three researchers worked together to code the collaborative blog. However, for the individual blogs, entries from November to January were categorised collectively. Subsequent months were coded by the blog owner. If categorisation appeared ambiguous it was cross-checked with the other two researchers to improve coding reliability.

The categorisation of the individual research blogs was recorded using an Excel spreadsheet. The week (beginning on Saturday) was selected as the unit of analysis, and the codings for all postings in a week were recorded together and totalled. This method was selected because [Author C's] individual blog was hosted on Tripod and could not therefore be copied and re-categorised in the same way as the Wordpress blogs. The collaborative blog categories were later added to the Excel spreadsheet for compatibility in analysis.

Contribution

The authors used many distinctive blog features that would not have been available with a handwritten research journal. Hyperlinks allowed them to link their research blogs to useful information sources, creating a knowledge network with the student blog at its centre. Emoticons and images were used to personalise blog entries, incorporating the essence of how the author was feeling at that time. Categories and a comprehensive search facility provided efficient information retrieval of postings throughout the lifetime of the blog. For example, posts relating to a single topic could be sorted and displayed in a coherent list by selecting a particular category, while entering a search keyword would display all posts containing that term. The blogroll, RSS feeds, trackbacks and permalinks connected blogs to each other creating a collaborative web in which each author was quickly aware of new posts written by other blog authors.

The 31 posting categories identified during coding were grouped into six overall themes:

1. *Community Posts* which demonstrated a high degree of interactivity and collaboration either between the bloggers in the study or between them and other members of their academic community.
2. *Reflective Posts* discussing research ideas, progress, methods, methodology, theoretical frameworks and academic writing.
3. *Environmental Posts* in which the group shared experiences of their research environment, or in which they introduced an element of physical context to the post by describing their immediate situation (noise, temperature, mood).
4. *Memos* which included both organisational posts listing things to do and remember, and links and references to external material and websites.
5. *Emotive Posts* which indicated how the author was feeling at the time, expressing such feelings as doubt, uncertainty or humour.
6. *Blogging-related Posts* which discussed blogging as an activity and as a tool for data analysis. These often highlighted the influence of the university's blog administrator through references to ways in which he could change or influence the blogs.

Most posts fell into more than one category or theme, for example, reflective posts would often also include emoticons to indicate the state of mind of the author at the time. The six themes are elaborated below.

Community posts

These blog posts demonstrated a strong interactive element. Interactions included requests for feedback, usually directed at the other two blog authors and responses to posts in the form of comments and feedback. Also included in this group were posts aimed at sharing skills, methods, methodology and other useful techniques. For example, in the collaborative blog, [Author C] described how useful she found Google Desktop, and outlined its features. [Author B] responded that she had heard about Google Desktop in the past, continuing "...but I hadn't paid attention until I read this posting. I'm now hooked".

The presence of a reader is implicit in most blog entries. Research journals are intended to be read by their author and by supervisors, but their readership generally ends there (Lillis & North, 2006). Research blogs may be read by their authors, supervisors, other students and, if open, by anyone who chances upon them. This potential readership turns the blog from a simple notebook into a more constructivist learning medium. For example a post by [Author C]'s reflected upon the presentations given at a seminar which triggered a comment from somebody who was not a member of the student blogging group. The commentator had also attended the seminar and used the commenting facility to add his thoughts to those in the original post, thereby elaborating the original discussion and offering an additional perspective. [Author C] continued the asynchronous discussion by responding with another comment.

Some posts were explicitly intended to be collaborative. These posts demonstrated a two-way communication, and support for a constructive approach to writing, that would not be possible with a traditional research journal. The blog authors posted drafts or outlines requesting and receiving comments and suggestions from their peers. For example, [Author B] posted ideas for research questions in her personal research blog, requesting feedback. [Author C] responded through the commenting facility. [Author B] then re-wrote the research questions as another comment in the thread, incorporating some of [Author A]'s suggestions. The comment function was used in some cases to develop a conversation by responding to a blog post and asking questions about it. When [Author B] posted a summary of her week, explaining that she was still struggling to decide on a research question, [Author A] followed up, asking: *"Are you looking for an upbeat research question or for one that addresses a problem eg What are the barriers to collaborative mobile learning?"* This encouraged [Author B] to consider the subject further: *"I'd rather go with a positive stance and see if I can field the critiques rather than focusing on the difficulties"*.

Other interactions that were woven into many of the blog postings were references to contacts with individuals or communities by other means (face-to-face, email, forums). Reference to face-to-face interactions included posts reflecting on the supervisory relationship, both that of the three bloggers themselves and that of other students, and posts describing meetings with other academics and students. Email and forum interactions were sometimes mentioned and excerpts from these interactions included in the blogs.

The blogs acted both as repositories for information, tools for developing research skills and a medium for reflecting upon the interactions that constitute the student experience. They also tied the students into an academic community of practice over a long term in which they, as novices, could learn from experts both in person and through online contact. When [Author A] found something interesting in the blog of an academic from another faculty, she wrote it up in her own blog without being clear how it related to her research: *"Can't actually think what I'd do with it"*. Another blogger commented that she had followed up the link and reported on her experience. Two months later [Author A] returned to the subject, *"I think this links to the HeatMaps that I blogged a month or so ago"*, and went on to make theoretical links between the subject and her research. She noted that she had discussed the subject with fellow academics and, the following year, incorporated it within a presentation to her faculty.

Reflective posts

Reflective posts are those that would traditionally be included in a research journal (Lillis & North, 2006). It included posts exploring the wording and implications of potential research questions, those noting the emergence of new research ideas and further posts developing those ideas. Posts also included those in which the authors organised their thinking and reflected upon their research progress. Methodology, epistemology and theoretical

frameworks were also discussed. Sometimes such posts triggered a response, sometimes they stood alone. However, the interconnectedness of all the blogs meant that all participants were aware of new posts.

Academic events were also mentioned; a student who attended an event would post her impressions and experiences together with relevant links or references. Students unable to attend the event could add to their knowledge by reading these descriptions. Sometimes these posts were explicitly written with the reader in mind, as when [Author A] posted a description of a conference event, saying “*This seemed to tie in very well with [Author B]’s mobile learning*” and going on to explain the connections.

Environmental posts

Some blog posts incorporated references to and descriptions of the research environment. This could be a direct reference to the physical environment, for example: “*I don’t feel I’m very productive when it’s as warm as this (27C)*”. Environmental posts could also take the form of comment on some element of the research environment. For example, some posts included evaluations of workshops and support provided by the university whilst others initiated discussions about elements of the university bureaucracy. Together, these posts built up a picture of life as a postgraduate research student which could be relevant not only to the students involved in the blogging group, but also to other postgraduate students.

These environmental postings also had the function of reinforcing memory. Recall of an event or of a train of thought could later be triggered by reference to an image, to music or to another aspect of the setting with which it had been explicitly linked within the blog.

Memos

Blogs provided useful locations for notes and memos that the students wanted to be able to access from any location. All the blogs were hosted on a central server and were therefore accessible from any computer with an internet connection. The blog served as a physical memory which could easily be searched either by category or by key word. These search facilities benefited not only the author but all a blog’s readers.

One of the commonest types of post in both the individual blogs and the collaborative blog was the filter post, that is, posts containing links to external websites, references or recommendations of good blogs to monitor through RSS feeds. In this sense, the research blogs were used as a repository for useful links as well as a place in which to share knowledge.

Emotive posts

This group included blog posts which referred to or implied some form of emotion. Such postings involved the use of emoticons, images or graphics for emphasis. Included in this grouping were the categories ‘Rants’, ‘Emoticons’, ‘Humour’ and ‘Self-doubt and uncertainty’. Key to the use of emoticons was the intention, on the part of the author, to provide some sort of context to the post, to explain it further. Implicit in this intent is the acknowledgement of the existence of a reader who may or may not be familiar with the author. The potential for emotive elements in blog postings is characteristic of blogging software and does not exist in handwritten research journals. Such posts serve to provide presence and make it clear that the authors are not just writing for themselves but also for readers who require both facts and the context which frames those facts.

Blogging-related posts

This theme included the reflexive references to blogging that occurred in both the individual and the collaborative blogs and included reports of interactions with the blog administrator.

When the university blogs were set up, blog hosting was a new activity at the university and the blog participants negotiated and modified both the appearance and the functionality of their blogs through interactions with the system administrator. In some cases, the posts were designed to elicit expert help, while others considered the advantages and disadvantages of using a blog hosted by the university. [Author A] wrote

...this is an Open University research blog, so it won't close down if I leave AOL (though presumably it will close down if I leave the OU. However, as it's now in a more transferable format, I should be able to move it over to another site with fewer problems than making the move from AOL). Also, it should be easier to sign up new readers, including my supervisors.

Evaluation

The role of the blog as a medium to support the development of a community of practice was evident in many of the postings. The students were aware that they had a readership, and this influenced not only what they posted, but the ways in which they posted. Through the use of emoticons, images and posts containing elements of humour and the sharing of experiences, the students were able to define and maintain a supportive learning community. Posts expressing negative emotions, or 'rants' often triggered some form of comment or response. Posts expressing uncertainty or doubt received supportive feedback. In this sense, the blogs reinforced the support and co-operation whilst reducing feelings of isolation which are so important when building a community.

Communities of practice are characterised by members possessing different levels of expertise (Johnson, 2001) which they share with each other in order to progress from novice to expert. The students in the blogging group were all mature students at roughly the same stage in their studies. However, as each was researching a different area and brought different skills and aptitudes to the community, some degree of skill transfer occurred as they shared links, references or experiences. In addition, the interpersonal links made possible by the blogroll made it possible for them to observe the practice of more experienced members of the academic community at many different institutions across the world.

The openness of the research blogs gave them a more collaborative character than traditional research journals, described as "*normally private documents*" (Lillis & North, 2006). It encouraged students to consider their posts carefully, supplementing them with hyperlinks and images where appropriate to direct and assist their potential reader. They thus supported the verbalisation and clarification of ideas to a greater extent than a written journal, while also providing immediate access to relevant sources. The asynchronous nature of blogging, and its support for communication and feedback, enhanced the potential for higher-order thinking and reflection. Authors could be confident that other people were reading and reflecting on their posts and that their learning would be supported by the comments of their readers either through the comments feature, via email or through trackbacks from other blogs.

The research blogs were used as tools to develop research ideas, share and locate information, access a worldwide academic community and obtain feedback and support from peers. They also served as a collective resource. By sharing information, each student could benefit from the experiences and knowledge of others. The blogs thus made visible elements of the process of the co-construction of knowledge.

Conclusion

This longitudinal study was successful in identifying ways in which postgraduate research students use blogs in order to build a community of practice, to enhance reflection and to improve their academic writing. The study revealed the distinctive features of blogs that

enabled the students to use individual blogs as a form of physical memory, and collaborative blogs as a group memory. Research into blogs has often drawn on blogs set up specifically for the research project or blogs which have some role in student assessment (e.g. Weller, Pegler, & Mason, 2005). The current study is based on 11 months of four active blogs' postings and comments and therefore draws on a substantial and authentic data source.

Data was drawn from the blogs of three students from the same faculty, all interested in blogging and educational technology and all enthusiastic to post their research ideas and reflections in public. However, their faculty membership meant that they also had regular face-to-face contact. This gave them an alternative means of communication which may have affected the data collected from the blogs. Sometimes a blog post could generate a response in the form of verbal discussion which would eliminate the need for a comment or posting in the blog. Occasionally the results of these discussions were posted to the blogs, but some evidence of collaboration and social networking was necessarily lost. The research could be extended in future to include the use of research blogs by students who have no face-to-face contact, by students in other disciplines, or by students who have not previously used blogs.

The study demonstrates that blogging can support and extend the learning of postgraduate students. It is more than an electronic form of the traditional, written research journal in that it offers a range of new affordances which can improve the experience of the postgraduate research student. Universities should, therefore, offer a blogging facility to research students, supervisors should draw attention to the potential benefits of this method of keeping a journal, and authors of books on research methods should cover this area in some detail.

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