Abstract: This paper reviews academic blogging as a practice that facilitates teaching and learning and as research that challenges traditional notions of evidence-based scholarly output. In education, some assert that evidence can never be divorced from practice. Traditional means of disseminating evidence-based research involve the scholarly journal article to inform teaching/learning practice. Yet, scholars write little, comparatively, on practice-based evidence where practice and research inform each other. Although viewed as a less traditional academic process/product, academic blogging is in use increasingly as both a collaborative teaching/learning practice and research activity. In this paper, we ask how academic blogging contributes to a relationship between research/evidence and teaching/learning practice. We conduct a qualitative review of academic blogging literature, including reflective, practice-based studies, using a thematic, textual analysis. Four themes emerged, related to teaching/learning and research: connections and identity, collaboration, scholarship, and immediacy and engagement. We conclude that academic blogging can facilitate engagement between teaching/learning practice and research.

Introduction

Academic blogging is becoming increasingly popular in tertiary education (Hendricks, 2009; Luzón, 2009). A blog (or weblog) is a type of format that involves a series of postings that are usually in reverse chronological order on a website and it often enables readers to add comments to each posting (Ewins, 2005). Each blog posting is usually dated and frequently updated (Walker, 2006). The prose of a blog is also less formal, is brief, and more conversational in style than an academic article. For the purposes of this paper, we conceptualise academic blogging broadly as blogging by academics and students where the audience can range from those who are only within a course or the tertiary institution to the public. In an era where the production and delivery of scholarly outputs is increasingly valued by tertiary funding authorities and academic institutions, academic blogging has become a haven to articulate ideas as well as being a potential burden in terms of maintaining academic reputation (Berman, 2006; Kirkup, 2010; Walker, 2006). Although traditional forms of scholarly productions discount blogs as an academic output, practices of teaching and research are changing: “it has been accepted scholarly practice to cite online materials of all sorts, and some scholars have even developed a professional reputation for their blogging” (Kirkup, 2010, p. 76). There has also been an interest in the potentials and pitfalls of using
What also is becoming more popular within education and the social sciences is ‘evidence-based practice’. Emerging from medicine and the health sciences, evidence-based practice is a discourse based on the assumption that empirical research should inform practice (Tanenbaum, 2003). Evidence-based practice has become a global movement, extending its influence into the social sciences and education (Torrance, 2008) with the birth of terms such as ‘evidence-based teaching’ (Davies, 2000; Petty, 2006; Stuart, Tondora, & Hoge, 2004), ‘evidence-based education’ (Davies, 1999; Slavin, 2002) and ‘evidence-based learning’ (Eitel & Steiner, 1999). Even the Performance Based Research Fund in New Zealand and its equivalents in Australia and the United Kingdom are based on evidence-based principles where such exercises calculate the quality of research through peer review and esteem (Denzin & Giardina, 2008; Stronach, 2008). Following the lead of the clinical sciences, the social scientists and educationalists created the Campbell Collaboration to disseminate evidence-based research through peer-reviewed publications (Denzin & Giardina, 2008).

There are various conceptualisations of what is ‘evidence’ in terms of ‘best practice’ and ‘good research’ and this has implications for the valuing the use of different kinds of formats/media to communicate research, practice, and evidence. Not only are the processes of determining research and evidence (and best teaching/learning practice) valued in academia but also the format as a product of research enables the dissemination of research and evidence. There are some in education who purport that the strongest forms of evidence to inform teaching, learning, and research are determined through experimental studies, published in peer reviewed journals and databases (e.g., Davies, 2000; Gillies, 2009). Yet, there is also the acknowledgement in education, including those who value experimental methods, that teaching and learning is not context-free. For instance, Davies (2000, p. 117) argued: “a teacher's experience and judgement can be much more sensitive to the important nuances of contextual and cultural factors than the findings of research alone, however, thorough and valid that research may be.” Teachers reflect on these contextual nuances, which makes blogs a suitable medium, potentially for sharing reflections on practice. However, it seems that “for most academics, blogs are irrelevant because they don’t count as publications” (Lovink, 2008, p. 4). The research output that is most valued in Performance Based Research Funding (including the United Kingdom and Australian equivalents) is the peer-reviewed journal article, arguably. Some academics advocate for practice-based research and evidence where practices in real-world settings can inform research, supplementary to evidence-based practice, and where research is reflexive of and relevant to practice (e.g., Duncan, Miller, & Sparks, 2007; Fox, 2003; Miller, Duncan, & Hubble, 2004). Both proponents of evidence-based practice and practice-based research/evidence argue that there is a gap between teaching/learning practice and research/evidence (e.g., Davies, 2000; Fox, 2003). Could academic blogging bridge that gap? Where does academic blogging fit with the practice of learning and teaching and in the research process of producing ‘evidence’? To answer these questions, we analysed some of the relevant literature on academic blogging. Addressing these questions through a textual analysis enabled us to obtain a better understanding of how blogging can contribute to tertiary teaching, learning, and research.
Methodology

Data Collection

We pooled together academic blogging articles, including conference papers and reflective, practice-based research, as a corpus of text for analysis. This was done by searching through Google Scholar and Web of Science databases using the keywords “academic blogging”, “academic blog*”, “academic weblog*”, and “academic weblogging.” Selection/relevance criteria included articles that focused on learning, teaching, and/or research, as well as coverage on both public and virtual classroom blogging. We chose the most recent articles for analysis once we selected the most relevant articles. Our data set also included some articles on microblogging. We limited our data set to 15 papers so that our analysis provided a thick description (Geertz, 1973) of our understandings of the literature on academic blogging in contrast to if we decided to collect more articles for a count- or frequency-based analysis of content. We used box.net as an online repository and a collaborative tool so that all of the articles could be accessed in one location and that they could be read, shared, and reviewed by us (the authors). Following our readings we (effectively) blogged within box.net our comments and thoughts on each reading beside the article. We also provided a link to a Google Docs document within box.net so that we could collaborate on writing our paper throughout our analysis.

Analysis

We conducted a textual analysis in reviewing some of the literature on academic blogging. We read each article as a text, a representation of meanings (McKee, 2003). There are various methodologies of textual analysis ranging from basic analyses of content to examining meaning, discourse, and/or ideology. Our analysis draws from textual analytic approaches that focus on meaning (Kavka, 2010; Lutz, 1988) and, in particular, uses Barthes’ (1957) notions of denotation and connotation. These approaches to textual analysis examine both what was denoted as in what was “definitional, ‘literal’, ‘obvious’ or ‘commonsense’” (Chandler, 1994, ¶2) and what was connoted (implied or suggested). Our analysis involved writing down salient points of what was said (denoted) and our thoughts in interpreting what was implied or suggested (connoted) about academic blogging in relation to learning and teaching practice and research/evidence. We did this by examining each article and taking notes on what they directly referred to and what was implied or suggested.

This analytic approach assumes a social constructionist stance - that the interactive medium of language between people, contingent on history, social interaction, and culture knowledge multiply constructs meaning (Burr, 2003). We assume that there can be multiple connotative meanings produced through readings of the same texts but that we also make sense of them from our shared (and different) professional locations, backgrounds, and interests. Textual analysis takes up such a stance in that a text can produce multiple meanings that form through the cultural background of the reader who engages with the text (Kavka, 2010; McKee, 2003). Both of us help university academics enhance the delivery and design of courses to facilitate learning, teaching, and research. Our own background, interests and interactions therefore shaped our coding when we examined the texts and the meanings produced from them. We examined blogging articles in relation to “learning/teaching” and “research” as our coding categories. We then came to an agreement on what were salient points to include in our analysis.
Our coding of salient points then produced a number of themes. We then looked for similarity and overlap of data between each theme and, where necessary, subordinated some themes into sub-themes. This analytic approach then enabled us to address how academic blogging meaningfully contributes to an evidence-practice relationship: how it is suited to learning, teaching, and research and where it fits between teaching/learning practice and research/evidence.

**Connections and Identity**

One major theme centred on blogs as tools that cultivate connectivity in that they enable dialogue and the construction of an identity. Lawrence and Dion (2010) argued that political blogs in a course environment "foster dialogue between bloggers and their audience, provide for the summarization and dissemination of political news and events, and help readers to conceptualize the political world" (p. 152). This suggests that the format of blog postings enable a conciseness of writing so that readers can easily interact with the text to make sense of information and events. Efimova and Fiedler (2004) talked about how blogs are low threshold tools for learning. This meant that blogs were easy to establish and use as a device to learn about one's self and to learn to develop connections with others. Efimova (2008) wrote that, during her doctoral research, "being a blogger gave me an identity between other bloggers and helped to develop trusted relations with others" (p. 4).

**Social Presence**

Davies and Merchant (2007) viewed academic blogging as a new kind of research literacy that facilitates social presence. They found that the nature and structure of a blog text "facilitates particular kinds of textual practice and supports the development of online relationships" (Davies and Merchant, 2007 p. 193). They argued that the format and practice of the blog text, with its categorisations through the tagging of posts, hyperlinks to other pages and sites, and cumulative nature of postings, enables the reader the freedom to follow content in as much depth as they wish while being able to comment back. The format of blog text then enables an online presence where there can be interaction and dialogue between readers and blog authors. Determining this social presence is an online literacy of blogging that is a required social convention and learnt skill (Davies & Merchant, 2007).

Davies and Merchant (2007) also argued that blogging can produce a blurring between the academic and the social. In examining an academic blog, Davies and Merchant (2007 found that it "reflected aspects of the academic world as well as making reference to personal lives" (p. 190). They saw that the blog entry became multi-authored when readers added comments and this enabled a range of meanings to develop but they were particular meanings that were exclusive to the 'group authorship' of that posting. This enabled a "sense of intimacy in this exchange" (Davies & Merchant, 2007, p. 190) even though the readership was potentially broader. This implies that academic blogging is not just purely an academic exercise but it also involves the creation of a social presence whereby "social and academic networking are blurred and the academic and playful are both evident" (Davies & Merchant, 2007, p. 190). The 'risk taking' element and lack of perceived formality of a blog could be useful as a form of a less formal, open peer review and reflection where readers and bloggers produce a social yet scholarly dialogue.

However, the scholarly perception of a blog could take a long time to gain traction and credibility among 'traditional academics'. Blogging is a relatively recent phenomenon in contrast to the long history of traditional academic book and journal publishing. However,
blogs are more accessible as they are a “radically open conversational medium with low entry barriers” (Aïmeu, Brassard, & Paquet, 2005, p. 52).

**Glocality and Audience**

In viewing blogging as "characteristic of a kind of social networking," Davies and Merchant (2007) found that a potential blurring of private/public spheres and local/global links seems to be a strong characteristic of blogs. When reflecting on their own blogging practices, they realised that blogging helped expand on pre-existing networks with other academics. Davies and Merchant found that each other's blogs enabled them to be more enriched in each other's familiarity both academically and generally: "meeting up' and 'interacting' through blog posts and comments has changed and enriched this professional relationship" (p. 190). Their blogs were also located within a wider network of academics, in different parts of the United Kingdom, where they would usually meet once or twice and year. Beyond that, their blogs linked to academics in other countries. They theorised that blogging produces what Wellman (2002) called a 'glocalisation' of social networking in that blogs "blend local and global communication and interaction" (Davies & Merchant, 2007, p. 190).

Merchant (2006) also argued that blogging supports the creation of glocalised networks for people who have common interests or are part of community practice in that they enable "a degree of interactivity between local and dispersed individuals" (p. 241). This phenomenon of glocalised networking means that although a blogger may write for a local audience (e.g., classmates who belong to a course, or researchers who reside within the same country), there is also the potential for establishing global connections.

As a glocalised networking tool, microblogging can also enable a cross pollination of material through the informal sharing of posts. The exponential and glocal potential of this cross-pollination is limited to the number of people in the audience who follow the microblogger: "the message will only be picked up by the people in your network" (Grosseck & Holotescu, 2008, p. 8).

**Building an Identity**

Tied in with social networking, blogging also enables the construction of an identity, shaped constantly through the text of the blog. Davies and Merchant (2007) argued that, as a tool for self-publishing, blogging "provides us with an opportunity to 'author the self'... and even explore a number of different stories of the self, but these identities are always forged through our connection with others " (p. 192). They also point out that self-presentation and impression formation are involved in the construction of one's blog identity that makes the blogger "potentially vulnerable, open to misinterpretation or even ridicule. Yet at the same time ... by making us visible, can also develop respect and reputation" (Davies & Merchant, 2007, p. 192). This has led some academics (including our colleagues at Massey University) to develop communication plans for their blogs so they have a clear idea and strategy of their identity and communicative purpose. Some academics have created pseudonyms to reduce the risk of exposing their identities or the unintentional leakage of institutional information (Drezner, 2008). Others have embraced an open identity based on blogging their own scholarly arguments and evidence (Boynton, 2005).

The process of blogging also enables a construction of a social identity that is multiple. Kirkup (2010) argued that blogging as a performative writing process, blogging enables the creation of a multiphrenic identity: "an identity not only created out of a variety of narratives, but performed and presented through a variety of media" (p. 76). Merchant (2006) also took
up the notion of a multiphrenic identity: "the blog provides a space for authoring social identities. To be precise, the blog format allows for identity to be produced in a variety of different ways" (p. 241). Blogging can also project an identity that can be misconstrued and possibly (whether intentionally or unintentionally) perceived as false or fake. It can be used to project an 'alter ego' or used as a platform where individuals feel more at ease to discuss matters through an additional blogging identity than they would in their face-to-face identity. Ewins (2005, p. 371) also argued that the postmodern phenomenon of blogging that enables multiple identities to exist:

This idea of a single true identity is an illusion, and that our selves are constructed; that, in fact, we can construct own self or, like the rock star David Bowie or the actor Peter Sellers, our selves. By taking on multiple identities, anyone can become a 'multiphrenic' self.

**Collaboration**

Most articles placed a positive spin on the collaborative potentials blogs in both teaching/learning practice and research. Berman (2006) argued that were various possibilities of collaborative scholarship with law academic blogging. Interdisciplinary collaborative scholarship was one possibility where "blogs present a unique and promising medium for facilitating interdisciplinary conversations, which in turn should catalyze more traditional interdisciplinary scholarship" (Berman, 2006, p. 1052). He also argued that because blogging is "more immediate and diverse," it enables "a professor-student collaborative scholarship." He encouraged one of his students to develop his own blog as a research project: "though we are not formally coauthoring a blog or piece of traditional legal scholarship, I believe we are constantly enhancing each other's insights and production through our work together." Berman (2006) also argued that collaborative relationships between research and practice are possible with blogging: "through my blog work, I have had wonderful new opportunities to work with practitioners drafting briefs ... brainstorming about new ideas that might be tried in courtrooms" (p. 1053). Berman (2006) noted that it "enhanced my own scholarly insights," (p. 1053) suggesting that such collaborations enhance one's learning in addition to cultivating valuable research relationships.

Namwar and Rastgoo (2008) also noted the potentials of academic blogging for learning. They found that blogging enables possibilities for collaborative learning between teachers and students. Blogs can be in the form of a learning journal where the teacher can follow the work of the student but they also enable collaboration and cooperation outside of the confines of the conventional classroom and allow idea sharing with less trepidation (Namwar and Rastgoo, 2008). According to Campbell (2003), producing a blog creates a sense of student ownership and authenticity that "taps into a learner's intrinsic motivation and encourages deep, reflective, autonomous learning strategies" (p. ii). Namwar and Rastgoo (2008) also point out the gradual integration between life and learning through blogging: "Blogs and other social software are enabling us to integrate learning as a natural part of everyday life. The boundary between formal and informal learning is slowly becoming blurred as a result" (p. 182). A statement on the onus of the user qualifies this impression of an inevitability of blurred learning. The power of blogging rests upon the active or passive participation of the blogger: "at the end the power of this new communication technology is not the tool itself but those of us that choose to use it and participate in the wider community of users" (Namwar & Rastgoo, 2008, p. 182). In addition to learning, Namwar and Rastgoo (2008), argued that blogs can be a useful tool for enhancing the learner's research process in that they enable
annotations of hyperlinks, recording of material, fostering reflection, as well as countering plagiarism and promoting an original, authorial voice.

Microblogging also involves a collaborative process, according to Grosseck and Holotescu (2008), especially for "collaboration with students" (p. 10) for student-centred learning. They argue that Twitter can be used as an educational tool for "exploring collaborative writing" (Grosseck & Holotescu, 2008, p. 6), and be used as "a tool for assessing opinion, examining consensus, looking for outlying ideas" (p. 7). People can develop a Personal Learning Network in Twitter so that they can "ask questions of those [who] they only know online" (Grosseck & Holotescu, 2008, p. 3). Although Grosseck and Holotescu focused their argument on the benefits of learning through Twitter, we argue that such processes can involve the potential for research as well. As Twitter is about "communicating and building a relationship with people" (Reed & Evely, n.d., p. 8), this applies to establishing relationships and collaborating in teaching and research as well. For example, academics could use Twitter for crowd sourcing in research where they could consult with other researchers in their network to gather information (Priem & Costello, 2010).

Others argued that blogs were less effective collaborative tools for learning in the classroom than other media. Lawrence and Dion (2010) argued that "...though blogs can allow students to comment on each other's writing, they are not particularly well-suited for collaborative writing and editing. Wikis are usually a better tool..." (p. 151). Their article gave the impression that blogs have a particular purpose for individualistic learning. They found that blogs cultivated reflection, engagement, critical thinking and writing, but were less useful for collaborative writing and shared discussion purposes.

Scholarship: Evidence, Peer Esteem and Promotion

Evidence and Peer esteem of Research Scholarship
The status of blogs in relation to research scholarship was also an issue raised in the academic blogging literature. Hendricks (2009) surveyed 67 library staff on their opinions of academic blogging. The study found that academic blogging was less rated than peer reviewed academic papers, but suggested that blogging may become more scholarly in due time. Hendricks also found that younger bloggers (40% of those 22-30 years of age) counted their blog as scholarship in contrast to those older who were more inclined not to view their blog as scholarship. Although some institutions now regard blogs as a contribution to professional service, there is question over peer review: "the question remains whether blogs can be peer reviewed and by whose standard" (Hendricks, 2009, p. 477). One blog commentator, Wheeler (2011a), argued that academic blogs are peer reviewed informally through readers making comments, can be corrected within minutes of being posted, and "are beginning to appear in the reference lists of peer reviewed journal articles" (¶7).

Walker (2006) provided a personal "look-in" at the purpose of blogging in relation to the traditional hierarchy of scholarly writing. He argued that as a PhD student, he had freedom to blog about his work. However, now that he was within an academic institution, he found blogging more discomforting as he wanted acceptance within the traditional academic system. Walker (2006) viewed blogging as not just a product but also more importantly as a research process of making ideas and thoughts explicit for discussion and dissemination. He concluded that research blogging could understood as a "popularisation of research" (Walker, 2006, p. 10) and can seed an academic paper through revisits to postings and links, but going against the blog is the longevity of the traditional publication, stored in well designed library archives.
Academics can also use microblogs such as Twitter to popularise research. Twitter citations can act as a tool of evidence for measuring peer esteem. Priem and Costello (2010) examined the practice of scholarly communication in how scholars cite on Twitter: "We defined Twitter citations as direct or indirect links from a tweet to a peer-reviewed scholarly article" (p. 2). They examined 2,322 tweets from a sample of 28 scholars and found that they cite on Twitter, though often indirectly. Priem and Costello (2010) found that participants valued tweeted research citations as an indication of peer-esteem: "while Twitter citations are different from traditional citations, our participants suggest that they still represent and transmit scholarly impact" (p. 4). They found that academics viewed Twitter as a "legitimate conduit of scholarly impact" and that Twitter citations were much faster than traditional citations: "with 40% occurring within one week of the cited resource's publication." The article suggested that Twitter could revolutionise how we cite each other's research in that it could be an additional measurement of peer esteem evidence to traditional citation analyses: "Twitter citation metrics could augment traditional citation analysis, supporting a 'scientometrics 2.0'" (Priem & Costello, 2010, p. 4). This bears the question if or how scholars will use tweet-based citations as valid forms of peer esteem evidence in position applications, promotion and formal research assessment exercises.

Promotion
The microblogging of a blog also enables the promotion of one's work. Letierce, Passant, Decker, and Breslin (2010) surveyed 61 academics and the Twitter feeds of three conferences. Their analysis revealed that "the way users tag content leads mainly to messages targeted to peer researchers, while other communities could be interested in what they are talking about" (Letierce, Passant, Decker, & Breslin, 2010, p. 8). Although Priem and Costello (2010) focus on research, some of their participant's responses on promoting other's works implicitly refer to learning: "Occasionally there will be something that people will link to, and it will change what I think, or what I'm doing, or what I'm interested in" (p. 3).

However, Berman (2006) argued that academic blogging could also create a popularity contest through impression management. Drawing from his experience of blogging uninteresting content to increase traffic to his site, he argued that obtaining feedback through comments, links, and hit counts could determine and distort how one blogs.

Immediacy and Engagement

Blogs can foster immediate engagement in ideas and issues. Price (2010) asserted, "Anthropological blogs occupy an increasingly important space for fostering cutting-edge anthropological debates" (p. 140). This comment resonates with Wheeler's (2011b) argument that blogs have the advantage of displaying immediate research thoughts from scholars. Berman (2006) also argued that linking in blogs enable the immediate expression of scholarly ideas, facilitating a "more direct and immediate engagement with other bloggers and other persons setting forth ideas online" (p. 1049). He also argued that this immediacy enables an engagement in a more robust and diverse scholarly community:

In part as a result of my diverse, engaged, and interactive readership, I am informed about legal developments that I never would have discovered... I regularly receive from readers not only news of recent rulings and reports, but also many first-hand accounts of personal experiences with the criminal justice system. In this way, blogging has become for me an extraordinary and unique research tool for all my other professional work. (Berman, 2006, p. 1050)
Berman's (2006) article gave the impression that blogs, like another medium, are simply another means to develop and communicate scholarly ideas and therefore have a purpose in academic communication. The author drew on the notion that engaging in research and writing enhances one’s ability to teach and practice, and, like other media, blogs are another form of engagement: “Blogs — like articles and books — are just a medium of communication. Like other media, blogs surely can be used to advance a scholarly mission or a range of other missions” (Berman, 2006, p. 1043). The engagement potential of blogs, Berman (2006, p. 1051) argued, enables one to reconnect research scholarship to teaching:

My teaching often stimulates new blogging ideas and perspectives, and vice versa...

Blogging is the only activity that enables me to engage simultaneously in the troika of scholarship, teaching, and service.

There were also costs associated with engagement in blogging. Berman (2006) argued that blogging could be addictive and take time away from other professional commitments. Grosseck and Holotescu (2008) stated, "Twitter is a time-consuming task" (p. 8), and there is a potential hazard associated with the immediacy of blogging: "the disadvantages for teaching ... is [sic] that they are being 'on-call' virtually 24-7" (p. 8). They also drew attention to ethical issues of privacy, encouragement of anonymity, sensitivity of postings/netiquette, and recommended warning students of the potentially public nature of Twitter: "in classroom situations [it] is better to have a private account" (Grosseck & Holotescu, 2008, p. 8).

Conclusion

Our analysis of texts identified four key themes that academic blogging contributes to in learning/teaching and research: connections and identity, collaboration, scholarship, and immediacy and engagement. Some articles suggested that blogging enables the cultivation of connectivity and identity. Social connection and dialogue has the potential to build and redefine multiple online identities as part of a glocality of social networking. Studies also found that diverse collaborative relationships could form through blogging and microblogging in both teaching/learning practice and research. We found that blogging enables the promotion and refining of research and makes possible new ways for measuring the peer esteem of research scholarship. Blogging also enables an immediate engagement across teaching, learning, and research scholarship. The social connectivity of blogging enables a blurring between the social and academic. This blurring fosters a new style of peer review that is accessible, open, informal, dialogical, collaborative, reflective, fluid and immediate. However, blogging also produces challenges in constructing and exposing another academic identity and style to one’s peers and a wider audience.

So where does academic blogging fit with teaching/learning practice and research/evidence? In most of the themes, we could not easily separate teaching/learning and research from each other in relation to blogging. In the collaboration theme, for example, we found arguments that blogging enabled research relationships that enhanced learning processes and that collaborative learning could produce an enhancement of research. It is also interesting to note that many of the authors were reflective of their own blogging practices in that they provided practice-based scholarship/evidence' of blogging. This complexity of coverage leads us to conclude tentatively that academic blogging does not exclusively belong to either learning/teaching or research but it enables an interaction between teaching/learning and research. In this sense, we hypothesise that academic blogging facilitates a relationship
between teaching/learning practices and research/evidence in that it enables a reflective engagement between practice and research.

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