



Twitter as a Professional Learning Tool: Implications for Practice and Further Research

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Abstract

This paper presents the results of research into how Twitter is being employed by educators to support their professional learning. This question was addressed through an exploratory case study, which comprised three phases of data collection and analysis. A content analysis of a sample of blog posts ($n=600$) was undertaken (Phase 1) in order to discover the types of interactions that occur in microblogging. Findings from the content analysis were further explored in Phase 2 with an online survey ($n=121$), which addressed why educators participate in Twitter and the value they place on that participation. Finally, in Phase 3, one-on-one interviews were held with a purposively selected group of educators ($n=9$) in order to further investigate the findings from the online survey and to address the question of how Twitter can support professional learning.

This research uncovered various uses of Twitter to support professional learning and established the value of Twitter within professional learning networks (PLNs). Additionally, it was revealed that the time-efficacy of writing and reading posts of 140 characters makes Twitter an ideal medium for professional learning. Based on the research results, this paper outlines the advantages of Twitter as a professional learning tool and the implications this has for practice and for further research. Best practice methods of introducing Twitter to other educators as a tool to support their professional learning are presented. The paper also addresses a number of questions emerging from the study which warrant further research. The full study can be accessed at eprints.qut.edu.au/65854/

Key Words: microblogging, PLN, professional learning, Twitter

Introduction

For much of the industrialised world, information and communication technology (ICT) is now a ubiquitous tool in the workplace and at home, impacting on personal communication, organisation of activities, information management and learning (Go & van Weert, 2004). Sorensen and Murchú (2006) noted that learning through digital technology is a global reality and that technology in the 21st century is without boundaries, that is, it is not limited by location or time. Reinforcing this notion, the OECD (2005) stated that:

Information and communication technology has the potential to transform the way people work together (by reducing the importance of location), access information (by making vast amounts of information sources instantly available) and interact with others (by facilitating relationships and networks of people from around the world on a regular basis). (p. 11)

The formation of such relationships and networks has been particularly enabled by the emergence of online social networking. Online social networking sites such as Six Degrees, Friendster and MySpace began to appear in 2002 and were initially designed to foster the development of explicit ties between individuals as “friends”. There are a variety of online social networking sites that link individuals virtually and enable rapid exchange of knowledge, high levels of dialogue and collaborative communication through text, audio and video (Siemens, 2006). Microblogging is a form of online social networking that allows users to post short messages of 140 characters or less on the Web and viewing of these messages may be restricted to chosen individuals or made public to anyone with access to the Web. Microblogging is used to communicate actions and projects, to put questions, to ask for directions, support, advice, and to validate open-ended interpretations or ideas (Grosbeck & Holotescu, 2008). Some common contemporary microblogging services are Twitter [www.twitter.com] on which this study was based, Plurk [www.plurk.com] and Yammer [www.yammer.com].

Background

The focus of this study was the use of Twitter for self-directed professional learning by educators who wrote their posts in the English language. While individuals with a wide variety of ages and backgrounds participate in Twitter, this study focused on the activities of educators who currently use Twitter. Participants in the study included teachers, teacher educators, school principals, university lecturers and technology support officers. Although each of these types of “educators” work in different educational institutions with different aims, and have different concerns and practices, they have in common that they are involved in the education of others and they have individual professional learning needs. In studying this particular group of individuals and their involvement with Twitter, questions regarding how these individuals related and collaborated were explored.

Professional Learning Networks (PLNs)

Educators, like other professionals, can no longer rely on their original professional training and are required to maintain dynamically changing network connections (Hakkarainen, Palonen, Paavola, & Lehtinen, 2004). Networking is not new to educators, who have networked for many years in order to share practice; valuing contact with colleagues in similar and different settings. What is new, is the fact that the Web can facilitate networking across the world and individuals are personalising their own social networks with the help of the Web (Wellman, Boase, & Chen, 2002). Not only are these online social networks being used for social connections, they also provide tools for personalising learning (Ala-Mutka, 2009) and have the ability to facilitate personal learning networks (PLNs) (Grosseck & Holotescu, 2008).

The concept of learning networks was presented by Illich (1971) when he posed the question, "What kinds of things and people might learners want to be in contact with in order to learn?" (p. 78). Illich noted that information could be stored in things and in people, and that in order to learn, one needs both information and critical response to its use from somebody else. The origin of the term professional (or personal) learning network (PLN) is difficult to ascertain and it is challenging to find a definition for the concept of PLN. The term appears to have been first used by Tobin (1998) who described a PLN as "a group of people who can guide your learning, point you to learning opportunities, answer your questions, and give you the benefit of their own knowledge and experience" (para. 1). More recently, professional learning networks have been variously described in the literature as: a collection of people and resources that guide learning, point one to learning opportunities, answer questions, and give one the benefit of their knowledge and experience (Nielsen, 2008); a place where one creates their own classrooms, curricula and textbooks for study of whatever one is passionate about (Richardson, 2008); a system of interpersonal connections and resources that support informal learning (Trust, 2012); and a technology-supported community of people who help each other better understand certain events and concepts in work or life (Koper, 2009).

It is to be noted that the borders between personal and professional learning networks are blurred (Ivanova, 2009) and PLN is variously used to mean personal or professional learning network in the literature. For the purposes of this study, PLN was taken to mean one's professional learning network.

Twitter

Twitter is a form of online social networking which enables people to share limited information about themselves via their profile and share their activities in short posts of up to 140 characters. Posts are made in response to the general question "What are you doing?" and the answers include messages of context, invitation, social statements, inquiries and answers, news broadcasts and announcements. Many posts are responses to other postings, pointers to online resources that the user found interesting, musings or questions (Educause, 2007). Twitter was launched on July 13, 2006 and allows users to post entries through a website or a mobile device.

The Study

This study examined the use of Twitter for self-directed professional learning amongst educators and investigated the value that educators place on Twitter as a professional learning tool. The study examined how distributed groups support each other and learn together using Twitter.

Significance

The significance of this study lay in its investigation of the use of an online collaborative tool (Twitter) for professional learning purposes. While there is a vast amount of literature relating to the use of computer-mediated conferencing in instructional learning environments, much is still unclear about the use and role of online social networking in general, and Twitter in particular, for professional learning. Millen and Patterson (2002) identified that there was a growing body of research investigating various aspects of online communities but that much of this research has been descriptive and focused on the nature of the social interaction and reported about the various activities of the members and visitors. Several studies have investigated the use of online social networking for the purpose of strengthening a community (Prell, 2003) but there have been few studies into the formation of professional learning networks through online social networking; notable examples of which are Alderton, Brunsell, and Bariexca (2011), Grosseck and Holotescu (2011), Lalonde (2011) and Veletsianos and Kimmons (2013).

Furthermore, in examining online social networks, researchers have been particularly concerned with how people make friends, how many friends they have and the reliance on social networks for social support (Golder, Wilkinson, & Huberman, 2007). Ala-Mutka (2009) noted that there was a lack of awareness of the potential for learning in online networks and advised that educational institutions should acknowledge the important role of these informal online networks and prepare people to take part in them. In relation to research into the use of social networking as a tool to support learning, Alderton, et al. (2011) advised that:

Additional studies looking at how other online learning communities may be used as professional development venues would be beneficial and add to the knowledge base of online learning, professional development, and learning networks. (p. 1)

Methodology

The study employed a qualitative research design in the form of an exploratory case study, which comprised three phases of data collection and analysis. A content analysis of a sample of Twitter posts ($n=600$) was undertaken (Phase 1) in order to discover the types of interactions that occur. Findings from the content analysis were further explored in Phase 2 with an online survey ($n=121$), which addressed why educators participate in Twitter and the value they place on that participation. Finally, in Phase 3, one-on-one interviews were held with a purposively selected group of educators ($n=9$) in order to further investigate the findings from the online survey and to address the question of how Twitter can support professional learning. An overview of data

gathering through three instruments in three sequential phases is illustrated in Figure 1 and further described below.

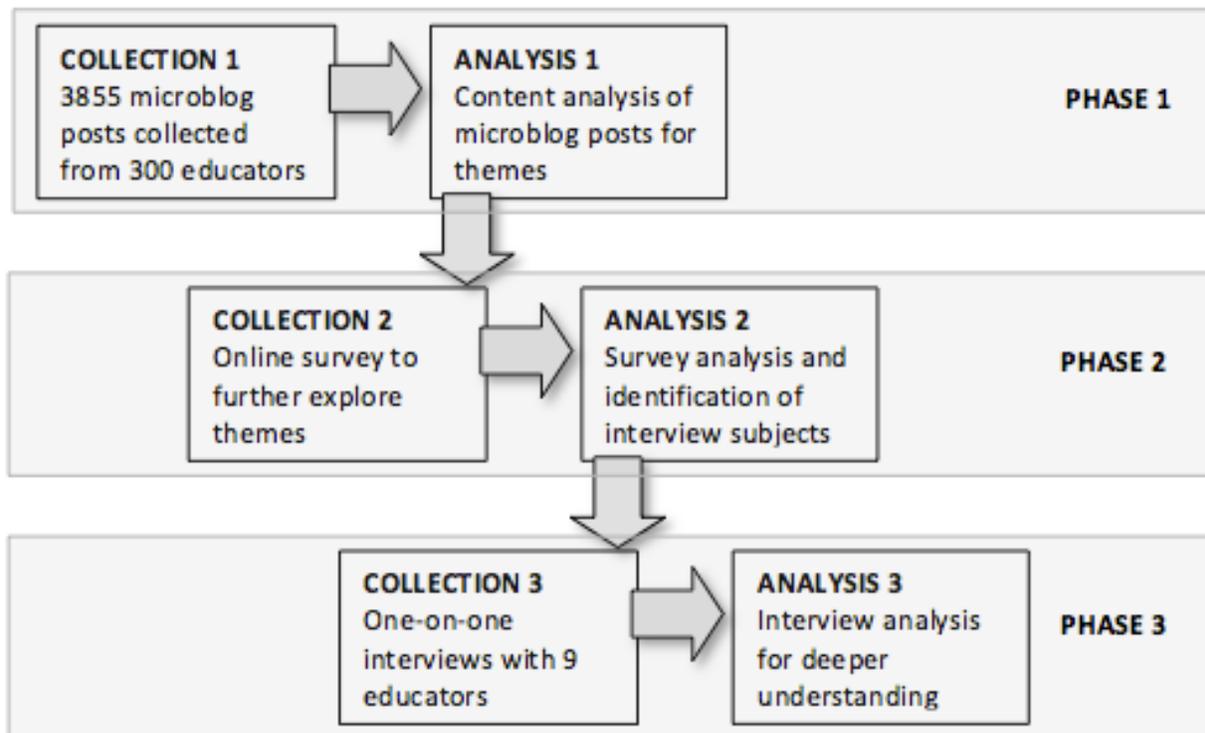


Figure 1: Sequence of data collection and analysis

Phase 1: Content Analysis: designed to discover the types of interactions that occur in Twitter. Twitter posts ($n=3855$) from a 24-hour period were collected and a sample ($n=600$) were analysed to determine the types of messages that were being posted. The *Community of Inquiry* (CoI) framework (Garrison, Anderson, & Archer, 2000) was used to analyse the posts. The CoI framework assumes that learning occurs within the community through the interaction of three core elements, that is, cognitive presence, social presence, teaching presence, which interact to influence and shape educational experiences. Analysis using the CoI framework allowed the researcher to categorise the types of interactions and identify themes, which would be further explored in Phase 2 of the study.

Phase 2: Online survey: designed to discover why educators participate in microblogging and the perceived value of their participation in Twitter. In this study the survey was used as a qualitative research tool for gathering data with the intention of describing the nature of existing conditions (Cohen, Manion, & Morrison, 2007). The survey comprised fourteen questions, which were organised around four themes: demographics, microblog usage, microblog behaviour, and PLN use. From the survey respondents ($n=121$), nine participants were purposively chosen to participate in the third phase of the data gathering, namely, one-on-one interviews.

Phase 3: One-on-one interviews: designed to further investigate how Twitter can support professional learning. The interview subjects ($n=9$) were selected from the pool of survey respondents who had indicated that their PLN was “extremely” important in their overall professional learning ($n=66$); that microblogging was “extremely” important in their PLN ($n=49$); that they considered participation in microblogging to be a meaningful form of professional learning ($n=104$) and they were willing to participate in the interview process ($n=63$). During one-on-one interviews these educators were asked a series of six semi-structured and open-ended questions that were designed to capture their subjective experiences and attitudes towards microblogging. The interview recordings and researcher notes were analysed to determine common themes which had emerged from the content analysis of Twitter posts (Phase 1) and the online survey (Phase 2), and to provide a deeper understanding of why individuals participate in Twitter and the value they perceive in that participation.

Findings

The online survey of educators who use microblogging ($n=121$) revealed that the majority use Twitter ($n=112$, 94.1%), have been using microblogging for 1-3 years ($n=60$, 50.4%) and spend 4-6 hours per week using microblogging ($n=38$, 31.9%). The largest category of respondents ($n=54$, 45.4%) belong to 4-6 social networking communities (including microblogging), while a small number ($n=8$, 6.7%) belong to more than 10 social networking communities.

Twitter Behaviours and Activities

The study revealed that most educators engage in a variety of Twitter behaviours at some time with the most frequent being:

- sharing a resource, for example, a website, book, or video;
- on-sharing a resource posted by someone in their network;
- sharing information from a conference/workshop using a hashtag;
- saving a resource posted by someone in their network;
- going back to a saved resource posted by someone in their network;
- following a link posted by someone in their network;
- using hashtags;
- engaging in a conversation with someone in their network;
- searching for content;
- asking for a resource on a specific topic;
- reading activity updates of others in their network; and
- acting on something they had read in a Twitter post.

Value of Twitter as a Professional Learning Tool

Participants in the study identified several advantages of using Twitter as a professional learning tool. The themes that emerged were:

- access to timely information;
- making diverse and global connections;
- access to valuable resources;
- access to advice and support;
- ability to attend a conference “virtually” by following the hashtags posted by others;
- engaging in conversations and discussions;
- access to experts;
- keeping up with current trends;
- extending their networks beyond their local area;
- reciprocity; and
- learning.

Although the participants in this study were enthusiastic about Twitter and believed that it contributed to their professional learning and positively impacted on their teaching practice, they described some disadvantages. The problem common to all educators in this study was the large amount of information they received from others in their Twitter network. It was found that some educators had effective strategies for dealing with this, while others did not. Another disadvantage noted was the amount of time spent posting. Two educators who had been using Twitter for less than three years, used the word “addictive” and said that they felt they had to constantly check their Twitter streams in case they missed valuable information.

Implications for Practice

This study showed that Twitter could be a valuable tool for professional learning; therefore, it is desirable that effective ways are employed for introducing it to educators in general. The first hurdle to be overcome is the common perception of Twitter as a stream of unremitting triviality about what you are making or eating for dinner (McFedries, 2007). Once an educator overcomes this perception and decides to join Twitter, they need to know how to open an account and start building their network. Effective professional learning through Twitter involves participating in the network by sharing resources and information, and engaging in dialogue with other educators. If new members do not know how to go about finding relevant educators with whom to link, their dialogue will fall short of expectations and they will not find Twitter an effective professional learning tool.

Brown, Collins and Duguid, (1989) cautioned against adopting tools without adopting their culture and advised that a new user must enter a community and its culture with care. Additionally, although Twitter provides opportunities for learning, not all individuals are equipped with the skills or knowledge to benefit from these learning opportunities (Ala-Mutka, Punie, & Ferrari, 2009). In order to participate in Twitter there is certain knowledge and understanding of conventions required that, while obvious to experienced users, may not be known to new or intending users. I advise that educators are introduced to Twitter by an

experienced user, who constructs a learning scenario in which they can participate. New users need to be immersed in the sharing of ideas and discussion from the outset. A common practice of experienced Twitter users is to expose new users to the network, in general, or to specific educators that they think the new user would find valuable. This is done either by retweeting a post made by the new user, thus exposing them to the network of the experienced Twitter user, or by introducing educators to one another directly.

Once an educator begins using Twitter to support their professional learning, there are still pitfalls to be considered. Drexler (2010) warned that the learning potential exists in a PLN in what the learner does with the compilation of content and how it is synthesized. The educators in this study reported that the amount of information exchanged within their network could be problematic, and they did not all have effective techniques for dealing with it. It appears, from the descriptions of interview subjects, that the most effective way of dealing with these large amounts of information is to save it to another application and tag it so that it can easily be searched at a later date. This technique should be introduced to educators when they begin using Twitter to ensure that they are effectively managing the information they receive from their expanding network.

Another implication for practice comes from the issue of recognition of microblogging as a legitimate form of professional learning. Several educators related that using Twitter was a significant part of their informal professional learning, and despite evidencing this by documenting that learning reflectively, for example in a blog, this was not accepted by employers as legitimate professional learning. Twitter represents a significant shift in pedagogic approach, and should be seen as a completely new form of communication that can support informal learning beyond classrooms (Ebner, Lienhardt, Rohs, & Meyer, 2010). It is important that institutions understand that knowledge is distributed through different communities (and networks) and, central to such an understanding is placing control of learning in the hands of learners themselves and providing learners with the skills and competences to manage their own learning (Attwell, 2006). However, it may be some time before Twitter is accepted universally as a legitimate professional learning tool.

Implications for Further Research

While caution needs to be exercised in generalising the findings of this study, the outcomes may be used to guide further research in this area. The study uncovered various uses of Twitter to support professional learning and established the value of Twitter within PLNs. However, it also raises a number of questions which researchers may wish to explore in future studies.

1. The data revealed that the more experienced Twitter users behaved differently from educators who were new to Twitter. The question arises as to whether this is a sequential path along which all Twitter users move and if there is any benefit in accelerating new users along this path.
2. It was found that participants believed they were learning through Twitter and that this learning was evident in their practice. This is an area that warrants further investigation in order to ascertain a stronger link between Twitter, learning and evolving practice. Alderton et, al. (2011) also suggested this type of study in order to understand how learning in professional networks is transferred into practice.

3. As noted, the phenomenon explored by this study involved a specific technology (Twitter) being used by a specific group of people (educators) for a specific purpose (professional learning). It would be beneficial to conduct comparative research in other professions to investigate if the use of Twitter for professional learning was widespread in professions beyond education and, if so, how and why it was used.
4. Finally, it is recognised that a precondition for successful adoption of a technology tool is a positive attitude towards its potential (Honeycutt & Herring, 2009). The participants in this study had a positive attitude towards Twitter and could be considered early adopters. Further research into the attitudes of non-users and why they are not using Twitter for professional learning would be useful.

Conclusion

The study showed that educators who participate in Twitter consider it to be a meaningful form of professional learning and that access to information, resources, advice and support from a diverse global network was highly valued and enriched their learning experiences. The inclusion of Twitter in a PLN gives educators access to resources and information exchanges with other educators that they would not otherwise have. The ability to engage in dialogue with peers and experts outside their geographic area allowed these educators to seek advice and support from others with a wide range of experience and knowledge, and thus extend their thinking. Given the findings of this study, more research is needed to expand the understanding and use of Twitter as a professional learning tool.

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