Use of blogs, Twitter and Facebook by PhD Students for Scholarly Communication: A UK study

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Abstract

This study explores scholarly use of social media by PhD researchers through mix-methods of qualitative interviews, participant observation and content analysis of a case study #phdchat. We found that blogs, Twitter and Facebook are among the most popular social media tools being used by researchers. They can be used by PhD students and early career researchers to benefit their scholarly communication practice, promote their professional profiles, disseminate their work to a wider audience quickly, and gain feedbacks and support from peers across the globe. There are also difficulties and potential problems such as the lack of standards and incentives, the risks of idea being pinched and plagiarism, lack of knowledge of how to start and maintain using social media tool and the potential huge amount of time and effort needed to invest. We found that respondents link different social media tools together to maximise the impact of the content disseminated, as well as to create a personal learning network (PLN) connected with people across the globe. For privacy issue, the participants use different identities on Facebook and Twitter. Facebook is usually set as private with access for friends only and Twitter is public and used for professional purposes. However, Facebook page and groups can be public which are used to build a community and disseminate information without revealing much content from individual member's personal profile.

Key words: social media, scholarly communication, blogging, Twitter, Facebook, PhD students

Introduction

Globalisation reduced the constraints of geography on economic, political, social and cultural arrangements which have enabled people all over the world become increasingly aware of this social process and act accordingly (Water 2001) . This intensification of worldwide social connections in the absence of time and space (Giddens 1990) has been reinforced by the rapid development of World Wide Web in the last two decades. The globalisation of internet development has enabled open communication between people from all over the world, including academics and scientists. Whilst scholars used to rely on browsing published papers in the library or meeting in conferences to keep up-to-date within their research field, the emergence of new media tools, such as wikis, academic blogs and micro-blogs, have enabled communication and dissemination of research-related content without the constraints of time and space (Maron and Smith 2008;Neylon and Wu 2009;Procter et al. 2010b;Gu and Widén-Wulff 2011). Social media seem to have gained certain popularity in the research life cycle among the UK academic communities, from identifying research opportunities to disseminating findings (Nicholas and Rowlands 2011). Micro-blogging tools, such as Twitter, has often been adopted at academic conferences, using a hashtag # with a specific theme name (Letierce et al. 2010b). However, the academic reward system still relies on the priority of discovery based on the quality and quantity of formal publications (Merton 1957). The Research Excellence Framework (REF), which are guidelines released by the Higher Education Funding Council for England (HEFCE), have not yet given credit to contents on the social media (HEFCE 2012). In academia, the norm of how to evaluate researchers' performance is always based on formal publication in reputable scientific journal and its citation impact (Ziman 1987). For early career researchers, getting published is extremely important, as they have not secured professional status or reputation. Would the use of social media waste their time of doing 'real' research? Can they use the new media tools to benefit their work and future career? What strategies can they implement to maximise the impact of their scholarly communication practice?

To explore these issues, a mixed-methods approach of interviews, participant observation and content analysis were conducted between May and September 2012. We found that blogs, Twitter and Facebook are among the most popular social media tools being used by researchers. The goal of this paper is to explore the scholarly use of these social media tools by UK PhD researchers. We begin with a review of the literature on scholarly communication, social media and relevant empirical studies. We then outline the design of our study and discuss the findings, including the benefits and

difficulties using new media for research related purposes, and finally, the strategies implemented by early adopters to maximise the impact.

Background and Literature Review

Scholarly communication, has been used as a broad term to cover all the activities and norms of academic research related to producing, exchanging and disseminating knowledge (Rieger 2010;Hahn et al. 2011). It is often used to refer primarily to the process of peer-reviewed publication (Procter et al. 2010b), which used to depend on scholarly publication in print, and now has largely been transformed to relate to electronic formats on the World Wide Web and access to those online contents (Nicholas et al. 2009). Moreover, many scientific records, including published articles, data, presentation slides, methods and tools have been made freely available to all internet users, via various forms of online publishing, along with the emergence of subject-based and institutional repositories, data centres, open source software and public copyright licenses, such as Creative Commons (Björk 2004;Wilbanks 2006;De Roure et al. 2010;RIN 2011).

In the recent years, social media sites, such as Facebook and Twitter, have gained increasing popularity across the globe. Social media refers to a group of online applications 'that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content' (Kaplan and Haenlein 2010: 60). Social media sites and tools provide a technical platform to enable users to interact with each other and generate content together in a virtual community, in contrast to Web 1.0 platform where users are passive viewers of the content which have already been created for them on the web. Increasing numbers of scholars are using blogs, micro-blogs and social networking sites for research purposes. Such social media tools has started to facilitate new forms of scholarly communication, enabling real-time communication and dissemination of scientific content.

A survey study by Nicholas and Rowlands (2011) with academic researchers all over the world found that the most popular social media tools for research purposes are those for collaborative authoring, conferencing, and scheduling meetings, whilst the least popular ones are for blogging, microblogging and social tagging and bookmarking which may be due to their new and innovative characteristics. Their study also found that there are two broad types of academic social media users—the ones who make joint use of blogging, microblogging and social networking; and those who focus on scheduling meeting and sharing documents. The interest of this study lies with the former type of social media users—those who use blogs, Twitter and Facebook for research purposes.

Blogs

Blogs are web pages whose content can be filled in by dated entries, usually displayed in a reverse chronological order; and often combining text and images. The pages also usually display links to other blogs or web pages relevant to the topics contained in them, and a comments function allows interaction between the authors and readers. This function is usually monitored and can be altered by the blog host (Bukvova 2011). The configurations of blogs can range from individual blogs with a sole author to a variety of network structures, such as those hosted by a faculty or a research community over a broad topic, or a set of carefully selected blogs aggregated and present in a single web space (Tatum and Jankowski 2010). The use of blogs for research purposes, can be found in popular academic journals, such as Nature and Science; from specialised web-portals such as scienceblogs.com or researchblooging.org (Kjellberg 2010); or from search engines, such as Google Blog Search and Technorati. A famous example of research blogs is the Open Notebook Science in Chemistry and Chemical Biology, whose participants use a web blog to record day-to-day laboratory work within which data can be linked and open to the public (RIN 2010). This involves real-time scholarly communication at all stages of the scientists' work.

Twitter

Twitter is the most popular public micro-blog system, which has been adopted by the researchers to spread academic materials to reach different communities, including their peers, students and general public (Ebner et al. 2010). It allows registered users to share short messages of up to 140 characters, which are posted in reverse chronological order, to any other registered members. Such messages are called "tweets" (Ebner et al. 2010). Users "follow" another member in order to subscribe to that user's posted message feeds. Twitter was first launched by a San Francisco-based team of ten members in October 2006 and soon became an international phenomenon, which was popular in many parts of the world, including North America, Europe and Japan (Honeycutt and Herring 2009). It has been adopted by many academics across the globe to spread scientific information (Laniado and Mika 2010). According to a survey study, academics found Twitter to be one of the most popular digital tools to disseminate information, such as their publications, their research projects or conference promotion (Letierce et al. 2010a). The convenience of using twitter has been enhanced by the popularisation of smart phones, which can download a Twitter application without charge. Many basic mobile phones also have an internet function which can access Twitter easily. This convenience enables users, including those from impoverished countries, to search for and disseminate information

rapidly and at all times (Murthy 2011). Users are able to disseminate publications by including a hyperlink (URL) in their tweets.

The use of Twitter to promote conferences has become increasingly common for academics. It was first used as a conference communication tool as an experiment by early adopters and later became a common feature (Ebner et al. 2010). In micro-blogs, hashtags were introduced to be used by a community of users interested in, and discussing, a specific topic (Laniado and Mika 2010). By using hashtags, conference organisers are able to disseminate information about the conference and facilitate communication between participants and peers. By preceding a hash sign in front of a word (e.g., #openaccess) to represent a specific topic, it can help users search and aggregate messages related to that topic. There are discipline-specific communities, such as #twitterstorians for History scholars, and position-specific network, such as #phdpostdoc (Regis 2012).

Facebook

Facebook was first created by two Harvard students in 2004 for other university students in the United States, but rapidly expanded to massive population of users across the world. Users of Facebook can create online profiles with information about themselves, link with other people's profiles as their 'friends', comments on friends' profiles and send private messages to other users. Additionally, users are allowed to create groups and events that they can invite others to join (Hodge 2006). Facebook profiles have different degree of privacy settings so that the users have control over who can see them. For example, a user may choose her profile to be accessible only to 'friends' and not searchable to 'strangers'. Facebook also started the feature of the Facebook Page in 2010, which enabled the creation of pages for companies, brands, persons and so on. Fans of these pages can click 'like' and make use of this online space to share photos, videos and discussions, without revealing any private information of their own profiles if their privacy setting is only open to 'friends'.

Empirical research of scholarly use of social media

Nicholas and Rowlands' study found that younger researchers in the study favour the use of blogging, microblogging, social tagging or bookmarking over older researchers (Nicholas and Rowlands 2011). Crotty (2011) suggests that this is because the 'increasing time pressure as one's career advances–a first year graduate student has a lot more time to waste on Twitter than a professor actively seeking tenure'. This statement seems to be unfair on the performance of PhD students. Priem *et al* (2011) studied scholarly use of Twitter and found no evidence that rank (varied as full-time faculty, post docs, or PhD students) disproportionally affected Twitter use or presence. Procter *et al* (2010b) surveyed

UK academics in their adoption of Web 2.0 and found that PhD students and professors both have the highest percentage of frequent users (20%) comparing to research fellows (18%), senior lecturers (15%), lecturers (13%) and reader (6%). These findings suggest that professional status does not necessarily influence scholarly use of social media—professors may be 'wasting' same amount of time on Twitter just like PhD students. But are they really being distracted from producing real work? For early career researchers who have not secured tenure, can the adoption of new media tools benefit their work and future career? Regis (2012) suggests that PhD students and early career researchers may mark their posts with #phdchat, #phdadvice and #phdpostdoc in Twitter to form a community that offer support, advice and sharing of good resources. By 6 June 2012, over 85% of the higher education institutions in the UK have both official Facebook page and Twitter account (Kelly 2012). In the last two years, many universities in the UK have started training courses for PhD students and academic staff of how to use blogs and other social media tools to promote their online presence and benefit their work. Difficulties have arisen with the new practice, such as lack of standards and incentives. For example, Coverdale (2011) organised a training session for PhD students and his participants were concerned about the significant amount of time and commitment required to build up a network on Twitter and maintain a blog, as well as the lack of incentive for the time and effort being invested.

Most empirical research on the subject of new media use in an academic context focuses on the colleague students and Faculties' use of social networks sites and social media for teaching and learning in higher education (e.g. Selwyn 2009;Roblye et al. 2010;Moran et al. 2011). To date, the literature on how PhD researchers use social media for scholarly communication has been extremely limited. My study will fill in this gap and contribute to the literature of communication study in academia.

Methodology

The methodology chosen for this study incorporates the use of qualitative interviews, participant observation and content analysis of a case study. Data collection of the qualitative interviews was conducted over a five-month period (May 2012 – September 2012) by interviewing seven PhD researchers who were based in two UK institutions. Various interview methods were used—three by face-to-face, one by Skype instant messaging and three by emails. The questionnaires were also emailed to interviewees before the face-to-face interviews and Skype messaging interviews. Their replies were analysed briefly to gain an initial impression in order to probe further in the face-to-face and online messaging interviews. Meanwhile, participant observation was conducted both

online and offline. In various workshops and conferences that the lead author attended over the period of five months in 2012, several early career researchers were asked of their opinions and experiences of using social media in a research setting. The lead author started an academic blog in May 2012, as well as a group of new media tools, including Twitter, Facebook Page, RSS, Delicious, Pinterest and Sina Weibo.

Case study

During fieldwork, we came across a popular Twitter online thread forum and chat group #phdchat. #phdchat was first set up in 2010 by a UK based PhD student Nasima Riazat and has become a regular live chat event on Twitter every Wednesday 7.30-8.30pm at British Standard Time. The organisers usually posts a poll of topics before hands and participants vote to make a decision for a topic for that week. Twitter users may include #phdchat in their public messages any other time during the week in order for their messages to be seen by other users who search for this term. Over the two years, a rapid growing #phdchat community has had regular participants from the UK, United States, Australia and central Europe, including postgraduate students, lectures, professors and other academics who have long finished their doctoral study but want to offer advice and share experiences, as well as other followers who have an interest in higher education, such as Guardian Higher Education (Riazat, 2011). Liz Thackray, an early participant in #phdchat group created a wiki in which stores some of the highlights from archives of previous live chats. Two cohorts of topic called 'blogging about your research' were analysed for this case study. [1] The first one was at 4 April 2012 and the second one was at 20 June 2012. After coding the name of the participants, it shows that around fifty people participated in the first live chat of 'blogging about your research' and around sixty people participated in the second one. According to the user names of these participants and the content of the tweets, the impression is that most of them are individuals who are genuine PhD students and a very small proportion may be educators, publishers and promoters for educational software. Those non-PhD students seemed not actively participating in the discussions.

Results and discussion

1. Current practice and purposes of using social media

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[1] http://phdchat.pbworks.com/w/page/55047451/Blogging%20about%20your%20research

The respondents in this study have used a range of social media tools and the most popular ones for scholarly purposes are blogs, Twitter, Facebook groups and pages. A few of them had accounts on Academia.edu and LinkedIn, but rarely visited these sites. Other social media tools mentioned by one or two interviewees were YouTube, Mendeley, Tumblr, Scoop.it and Pearltree. The focus here will be the scholarly use of blogs, Twitter and Facebook. We will discuss how these social media tools are being used and the purposes and benefits of using them.

A. Blogs

For scholarly blogs, some participants have a blog linked with their real names, others prefer anonymity.   Most bloggers in this study created their blogs on WordPress or have their own WebPages. Some interviewees only read other research blogs and the popular sites are WordPress, Blogger, Tumblr or blogs hosted by their institutions:

'I read a number of blogs, mostly on Wordpress or Tumblr as the free sites appear to be the most popular amongst the research community.' (Female, PhD student in Sociology)

'I read University Faculty of Life science blog on the WordPress. I also read blogs about sciences, history and mythology.' (Male, PhD student in Life Science)

The participants of #phdchat in the case study also gave similar answers in terms of popular academic blogs:

'WordPress indeed is the most user friendly.'

'The research blogs that I like to read are either on blogger or tumblr.'

As for the content of blogging, most interviewees confirmed that they would post published papers and abstracts that have been accepted by conferences on blogs. According to the participants in the two live stream of #phdchat, blogs can be used as a notebook which records thoughts and progress of the PhD. Other types of contents may be book reviews, summary of chapters, teaching, conferences, ongoing issues in the society and personal stories to 'give audience a sense of who I am'. Many participants agreed that they would blog about their research progress rather than about the research content:

'I don't blog results but I share stories about my field work and my general progress.'

'I think people blog about their journey and experience rather then the actual Phd topic.'

The reason behind this is related with academic rewards and will be discussed in the 'Difficulties and potential problems' section.

In the #phdchat case study, participants discussed about the purposes and benefits in writing and reading research blogs. The most common purposes are practising writing, disseminating and gathering information, networking and sharing thoughts, reflecting and getting feedbacks, keeping a record of ideas and conversation, as well as raising profiles and reaching out to more people globally. It is common in many disciplines that getting published in an academic journal can take over one year time. For PhD students, who may not have many or any publications under their names, blogging can effectively promote ones' profiles and disseminate information without the long process of gaining research results or waiting for formal publications. Blogging may be seen as a quick approach to help early career researchers to get their work out into the public domain and publish in an informal way. Some participants believed that research blog can act as a 'publishing platform' which would have open record of their research. Other believes that writing a blogging is good for practising and improving writing about their research which may progress further to formal publishing opportunities.

Blogging is extremely helpful in getting feedback and some early adopters have had positive experience in gaining valuable comments of their work after posting pre-publication chapters on their blogs (Powell et al. 2011;Weller 2011). Many participants in the #phdchat case study acknowledged this benefit and they thought that getting comments on blogging post was similar as peer-reviewing:

'Opens up your research to peer review from an early stage, get input and ideas.'

'My blog readers have actively contributed to all stages of my research, including helping me develop proposal & methodology.'

'It's a great way to get ideas and thoughts down and then can look at them with a fresh pair of eyes/get feedback.'

B. Twitter

Twitter was popular among the interviewees in this study as used to link to other users, look for useful information, and participate in discussion.

It is most often used to disseminate information. Most of the interviewees confirmed that they would post links to papers they have published on Twitter. Some of them also post links to articles that they

find interesting or post information about news of their workplace. One example of Twitter's function of disseminating information was raised as below:

'I use Twitter to disseminate information, present things from other network. Twitter is like a platform, connected to many other social media and websites. Twitter presents short summary.' (Male, PhD student in Life Science)

Several interviewees have participated in the #phdchat live chat on Twitter and regularly add themed hashtags in their tweets in order for the information to be disseminated to wider audience.

Twitter also facilitates effective means in finding information quickly:

'I use Twitter as it offers me timely and up-to-date information which is relevant to my research. I feel I can subscribe to people who I feel will yield useful and relevant data, and it is also great to feel that are able to engage in dialogue with others. You can get an answer straight away rather than waiting for a detailed email response or nothing at all.' (Female, PhD student in Sociology)

'To get more information on science as well as jobs across the globe… to search for scientific events taking place through out the world and people's positive and negative feedback about the events.' (Female, PhD student in Biology)

While asked whether they use Twitter during a conference, two interviewees answered 'no' as one said that he would like to concentrate during conferences, the other explained similar reason:

'No, I find it too distracting. However, funnily enough, I do like reading such tweets myself if I have not been able to attend a conference. So I really appreciate those who tweet from conferences!' (Female, PhD student in Sociology)

This respondent also admitted that she would announce conferences or workshops she was going to attend on Twitter:

'Yes, because others may not know about them, and it's useful also to know who is going to be at a conference. It also encourages others to do the same.' (Female, PhD student in Sociology)

A few others admitted that they have used Twitter during a conference, but the adoption would depend on types of conferences and whether they have access to the internet. In some discipline areas, Twitter is less widely adopted than the others in conferences:

'The last two conferences I went to, they said we don't have official twitter account, but we'll look into it. But my partner is in Education and technology, their conference has twitter account, hashtag, twitter wall. It's still getting there.' (Female, PhD student in Education)

C. Facebook Groups and Pages

Facebook was found to be the most common social media tool for general use among the interviewees, although their Facebook profiles were usually set up as private. However, Facebook groups and pages can be used to facilitate an informal support network for researchers and they may use this space to promote their professional images as well as organise events and meetings. Although most respondents from this study tend to use Facebook for personal use rather than research related purpose, the popularity of Facebook among younger generation in the western countries and its potential as a new communication platform for academics is worth noting. One participant created a public Facebook page for herself as an individual as well as being members of a few Facebook groups:

'Yes, I'm a member to two Facebook groups. People from my school, most PGR students, MSc, leading to PhD […] Posting events or people asking questions, for example, can someone show me how to use SPSS? Or does someone know how to get help for xx […] I set up a Facebook page linked to my blog. The Facebook page is public. So when people search me, they can see the Facebook page and see the information of the blog.' (Female, PhD student in Education)

PhD students from the authors' department have actively participated in a Facebook group, created a year ago in September 2011 by their representative student. Group members often post information about conferences, workshops and work opportunities, seek advices and organise events. There are currently 25 members and the group is set as private and only accessible to members.

2. Difficulties and potential problems

The participants in the #phdchat case study who discussed about blogging shared various difficulties they have faced in starting and using academic blogs. The most serious concern is related to academic rewards and the fear of not being able to secure those rewards. Since the nineteenth century, the publication of articles in journals and the relative prestige of the journals in which they are published have become predominant indicator of professional performance for researchers and the institutions that employed them (Merton 1957;Schauder 1993;Correia and Teixeira 2005). Under the academic reward system, individual researcher's career advancement and promotion are often based on their professional performance in terms of the quality and quantity of formal publications (Kim

2011). Most recent empirical studies found that academic researchers' top concern for scholarly communication is to disseminate their work in academic journals and conferences (Procter et al. 2010a). Contents on social media were not recognised as a mean to evaluate researchers' performance and have not yet been given credit to by the Research Excellence Framework (REF). Participants were aware of this:

'That depends. No promotion for writing blogs, you need journal papers in the UK. The REF will have to change.'

'I doubt that REF will ever take account blogging, but at least it can be additional evidence.'

As PhD students have not secured professional status or reputation, they can be very protective of their projects and data and they would not reveal much about their research in case someone else steals their ideas and gets published first:

'My data is quick and easy to collect and analyse, easy for someone to replicate and publish first.'

'I have a real problem with keeping my research private. So what if someone else has a similiar idea.'

'That's my worry about blogging my thesis. And having the content stolen!'

The worry of ideas being pinched or plagiarism of someone's online content can apply to the use of other social media tools. One interviewee expressed her concern of plagiarism using Twitter:

'Twitter makes it very easy for people to see someone else's insights and then pass them off as their own, either on Twitter or in their own academic research. How does one prove plagiarism of ideas without making reference to a publication?' (Female, PhD student in Sociology)

Apart from plagiarism, content on social media can also be misused for commercial purposes. One interviewee shared story of his online content being used inappropriately by a third party:

'Once, some company use my project picture in their website and saying it's theirs. I reported them to the Twitter provider.' (Male, PhD student in Life Science)

Regarding to the content on the social web, there are ethical issues of what can be discussed in a public medium:

'I can understand that it is important to know the boundaries of what can be discussed in public.'

'I think sometimes there are ethical issues to consider, depending on your area.'

Another common problem of blogging which can also apply to using Twitter and Facebook, is the lack of knowledge of how to start and what to write about on the social media. One participant in the #phdchat case study specifically explained the reason of not knowing: 'I don't feel authoritative enough to write on my subject'. As PhD students, many may have not built up enough confidence of their expertise and feel vulnerable or 'nerve-racking' to post something in a public medium in fear of exposing ignorance. Another participant emphasized that she was aware that once she wrote something online, 'it's out there forever'. Would these public records of online contents make the writers look stupid? A study of digital scholarly communication in North America found a case of rumours about young researchers being denied interviews or jobs when employers mistakenly assumed that informal, unpolished ideas that they had published on a blog entirely represent their formal scholarly output (Maron and Smith 2008).

Other common difficulties are the time and effort needed to invest in learning how to use social media effectively and maintain these social media profiles. Several participants in #phdchat mentioned that it takes time to build blog audience and it takes time to interact with the audience in order to get comments. There is also a risk of information overload on top of busy PhD schedule.

3. Strategies

A. Link different new media tools together for cross-platform promotion:

Respondents from the qualitative interviews all had various approaches of strategies in terms of maximising the impact of the content disseminated. The most commonly used strategy to maximise the impact of having various social media accounts is to link them together for cross-platform promotion:

'Linking each site to one another so that they're updated automatically […] I set up WordPress link to my Twitter which is linked to my Facebook page. Friends and family on Facebook can see when I have a new blog post. But also people from Facebook Page or Twitter can see that I have a blog post. So I cover both bases separately. I used to post on Facebook and Twitter about my blog post. Once I set up the link on WordPress, it would just do it at once.' (Female, PhD student in Education)

'Embed conference presentations on blog via Slideshare.' (Male, PhD student in Education)

'I put my Twitter name on my email signature, and also encourage students and fellow researchers to follow me. There is also a link from my blog.' (Female, PhD student in Sociology)

This finding is in line with a study of blog aggregator ResearchBlogging.org (RB), in which Shema *et al* (2012) found that 72% of the active blogs in their sample (126) had at least one active public twitter account. To link accounts on different sites together, it effectively maximises the effect of scholarly use of social media.

B. Create a personal learning network (PLN)

'A personal learning network (pln), can be defined as a collection of people and resources that guide your learning, point you to learning opportunities, answer your questions, and give you the benefit of their own knowledge and experience. In the 21ˢᵗ Century there are many tools to help these networks along including websites, social networks, rss feeds, and podcasts that allow you to have advice and guidance from your personal learning network mentors delivered right to you.' (Nielsen 2008)

In the recent years, the development of internet enables lone PhD students to find peers by searching on the social web and interact with others in different countries. It is possible to find peers who are doing research in a similar area and thus collaborate and support each other using new media technology. One interviewee specifically mentioned PLN and the benefit from engaging with audience across the globe:

'Blogging first and then learning about Twitter. Once I actually I started to use Twitter, I understand how it really work and then in cooperate the two together, then create a network for myself. They call it a personal learning network (PLN). By creating that, some people I met on Twitter, It makes it easy for me to have an audience who are interested in what I have to say. It motivates me to keep my blog up [...] By reading someone's blog and being part of the community, beginning to really understand the community side of it, which has been very useful [...] my audience are mostly PhD students, other researchers, not necessarily from UK, they are from everywhere.' (Female, PhD student in Education)

Lone PhD students usually receive regular support from their supervisors and colleagues in their institutions. By creating a personal learning network through interacting with other users on the social web, PhD students are able to gain support from peers all over the world. For example, reading and commenting regularly on others' academic blogs may invite them to visit and comment back, and thus create a friendly personal learning network for oneself. The use of themed hashtag on Twitter can provide a platform for informal support networks and communities without the constraints of time and space. The participants of #phdchat are from many different countries and according to our

observation of the live chats, many of them actively interact with each other and answer questions to one another.

C. Build a professional online profile

It is interesting that the strategy used by most interviewees for tackling privacy issues was to have two different identities on Facebook and Twitter—Facebook for private identity and Twitter for professional identity. Kietzmann *et al* (2012) criticised the lack of research that investigates how a person manages different identities on different social media sites. In this study, a number of respondents separate their personal social media profiles from their professional accounts:

> *'My Facebook profile is private and I set up a Facebook page linked to my blog. The Facebook page is public. So when people search me, they can see the Facebook page and see the information of the blog... I prefer to have this personal space. I have many friends that I work with that are on both sites but I find the distinction helpful'. (Female, PhD student in Education)*

> *'Yes, I'm very selective of people who can follow me on Twitter. I don't post anything personal on Twitter or social media. I don't post any pictures of family or friends on public social media sites. You can do that on Facebook […] Facebook for private use and LinkedIn, academia.edu for professional use.' (Male, PhD student in Life Science)*

Having a Facebook page that fans can 'like' is a strategy of having a Facebook presence but using it for a professional purpose. Having a Facebook page does not reveal any private information of the owner's profile. One interviewee also set the setting on Facebook profile of the content certain friends could see, which limited the access of certain acquaintances, such as students she was teaching at the time. Interviewees seem to be quite aware of how to build a professional online profile—having a public professional profile on sites such as Twitter, Facebook Page, academic blogs, LinkedIn and Academia.edu, but keeping Facebook profile private to connect with friends and family. Most respondents prefer to keep private and professional social media use separate. Some others mix them together, but are careful about it and are aware of the complication. Interviewees all agreed that they would not leak research findings on social media before going through traditional publication channel first. This seems to be extremely important for early career-researchers as publications are keys to their academic careers. They are also cautious about what they post on their social media profiles:

> *'My rule of thumb is that I'd only put online what I'm not ashamed of and willing to publicly defend.' (Female, PhD student in Education)*

Conclusion

This study explores the use of social media by PhD researchers for academic purposes. New media tools, such as academic blogs, Twitter and Facebook, can be used by PhD students and early career researchers to benefit their scholarly communication practice, promote their professional profiles, disseminate their work to a wider audience quickly, and gain feedbacks and support from peers across the globe. There are difficulties and potential problems such as the lack of standards and incentives, the risks of idea being pinched and plagiarism, lack of knowledge of how to start and maintain using social media tool and the potential huge amount of time and effort needed to invest. PhD researchers in this study deployed different strategies to maximise their use of social media and these strategies can also be adopted by any academic users. The exploratory nature of this study aims to capture initial insights of current scholarly communication practice to assist further research of a larger project. A survey questionnaire will be developed based on the findings from this study to gain a bigger picture of the whole UK academic population. Further study will aim to capture the attitudes and practice of the UK academics and investigate any causal relations that influence those attitudes and practice.

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