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# Using Social Media to Enhance Your Research Activities

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#### ABSTRACT

In this invited paper the author summarises the benefits which can be gained from use of social media to support research activities. The paper is based on personal experiences in using social media to engage with fellow researchers, meet new collaborators and co-authors and enhance awareness and impact of research papers.

#### 1. INTRODUCTION

"Social media services, such as Twitter and Facebook, are only for those with nothing better to do with their time. They have no relevance to support scholarly activities."

This is a view which echoes sentiments expressed in some circles in the early to mid-1990s, when early adopters of the World Wide Web (or WWW as it was then referred to) found it difficult, at first, to convince their colleagues of the benefits which the Web could provide to legitimate scholarly activities.

Is history repeating itself, or is the social web irrelevant to the research sector? This paper aims to provide evidence of the value which the social web can provide for those engaged in research activities (or who support researchers).

The paper illustrates how a variety of social web services can be used and provides examples of how the author has made use of services such as blogs, Twitter, Facebook and Slideshare to engage with his peers, encounter new collaborators and enhance the dissemination of his work.

It needs to be acknowledged, however, that not all researchers will be comfortable in using the social web to support their research activities –or, indeed, use social media at all. In addition the social web may not be relevant across all disciplines. The paper concludes by describing a framework to assist researchers in making use of the social web.

# 2. WHAT CAN THE SOCIAL WEB PROVIDE?

This paper focusses on three key areas in which the social web can provide benefits for researchers:

- 1. Engaging with one's peers
- 2. Enhancing awareness
- 3. Developing professional connections

The paper provides anecdotal evidence to illustrate these benefits and highlights the social web services which have been used to achieve the desired goals.

#### 3. ENGAGING WITH ONE'S PEERS USING TWITTER

How do researchers meet new collaborators which might include potential partners and co-authors? One answer to this question is the academic conference, in which researchers are likely to find themselves in the proximity of fellow researchers who will have shared interests. Indeed the social aspects to be found at many academic conferences, such as the conference dinner and the welcome reception, provide an informal setting which can help researchers make new contacts and extend their professional networks.

The seemingly all-pervasive networking environment now available provides opportunities to develop one's professional networks. Services such as ResearchGate have been described as "*Facebook for scientists*" [1]. However as well as social networking services which are designed specifically for the research community, researchers can also make use of general purpose social media services such as Twitter. Two examples of how Twitter can be used by researchers to engage with their peers are given below.

#### 3.1 Twitter Case Study

In April 2010 the author won the John M Slatin award for Best Communications Paper presented at the W4A 2010 conference, the 7th International Cross-Disciplinary Conference on Web Accessibility<sup>1</sup>. This

<sup>&</sup>lt;sup>1</sup> See http://ukwebfocus.wordpress.com/2010/04/29/ winner-of-john-m-slatin-award-at-w4a-2010/

was the latest in a series of papers which had been presented at the W4A conferences in 2005, 2006, 2007 and 2008. This paper was interesting as it included new insights based on disability research theories which had been written by Sarah Lewthwaite, one of the co-authors with whom connection had first been made on Twitter.

As described in a blog post<sup>2</sup> Sarah responded to a tweet posted by the author:

Case study published for JISC Web 2.0 study: http://bit.ly/NyHIg Case studies wanted esp. from Arts/Humanities sector & research students

Sarah's Twitter ID is @slewth. When I looked at Sarah's Twitter biographical details (see Figure 1) I saw she had similar interests in Web accessibility.

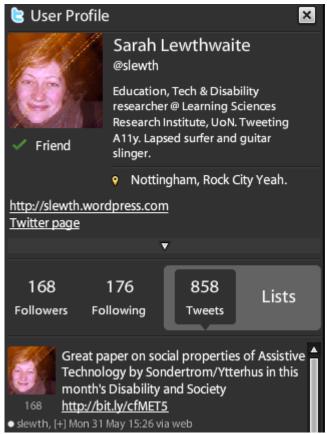


Figure 1: A Twitter biography can make an impression

As the biography also included a link to Sarah's blog I was able to read about the research activities in more details and realised that her work in disability studies could provide a new insight into my research work. This led to joint work on a paper which was accepted

at the W4A 2010 conference and was subsequently awarded a prize for the best Communications paper.

#### 3.2 Amplified Conferences

The term 'amplified conference' term was coined to describe use of networked technologies at events to maximise ('amplify') ideas mentioned at a conference and subsequent discussions, including both discussions between conference attendees and remote participants.

In January 2009 I gave an invited talk entitled "*From Web Accessibility 2.0 to Web Adaptability (1.0)*" at the OzWAI 2009 conference held in Melbourne on 21-23 January 2009.

After giving the talk I checked Twitter and noticed two tweets from people in the audience. Ruth Ellison commented that:

(a)briankelly enjoyed your presentation this morning about a holistic approach to accessibility #ozewai

with Lisa Herrod tweeting:

*@briankelly Fantastic talk this morning, I will come up and say hi at lunch ;)* 

This provided an opportunity for discussions at the conference about our shared interests which enabled me to learn more about the approaches to Web accessibility which are being taken in Australia.

The discussion let me to realise that the approaches O learnt about would provide valuable case studies for a paper I was working on. Six months later the paper on *"From Web Accessibility to Web Adaptability"* was published in the Disability and Rehability: Assistive Technology journal, with Ruth and Lisa being co-authors of the paper.

It should be noted that, as illustrated in Figure 1, the title slide included the speaker's Twitter ID as well as the speaker's name, address and email address.

At the start of the talk conference attendees were encouraged to tweet their thoughts about the talk, together with questions and comments using the conference's event hashtag, which enables relevant tweets to be aggregated for subsequent analysis and responses.

<sup>&</sup>lt;sup>2</sup> See http://ukwebfocus.wordpress.com/2010/03/26/it-started-with-a-tweet/



Figure 2: Use of a Twitter ID in a title slide to encourage conversations

#### 4. ENHANCING IMPACT AND MAXIMISING DISSEMINATION

The two case studies given above provide evidence of ways in which use of Twitter enables a researcher to extend their peer network resulting in two papers which would not have included the co-authors if Twitter had not been used.

But in addition to use of social media to engage with potential collaborators, such tools are perhaps better understood in their role in maximising awareness of research outputs.

The following case study describes development and implementation of a plan to enhance awareness of a peer-reviewed paper presented at an international conference and metrics which were gathered in order to assess the effectiveness of the plan.

# 4.1 Research Dissemination: Plans and Implementation

A paper on "*A Challenge to Web Accessibility Metrics and Guidelines: Putting People and Processes First*" for which I was a co-author was accepted for the W4A 2012 conference in Lyon on 16-17 April 2012.

For the conference the co-authors agreed to be proactive in their use of social media in order to maximise awareness of the paper, especially across the Web accessibility community. The decision was taken to help enhance the 'impact' of the paper in the run-up to REF 2014 for other Web accessibility researchers (who may cite the paper in their research) and for Web accessibility practitioners (who may wish to implement the ideas outlined in the paper). A summary of the plans is given below: **Paper hosted in institutional repository**: The paper was uploaded to the University of Bath's institutional repository.

**Short URL created for paper**: A short and meaningful URL was created using the bit.ly service to link to the paper. This was used in tweets about the paper, with bit.ly analytics subsequently used to monitor engagement

**Slides designed to support amplification**: The slides designed to facilitate the amplification of the ideas and links by including event hashtag, speaker's twitter id, short links to paper, etc.

**Slides uploaded to Slideshare**: Slides were uploaded to Slideshare and a short meaningful bit.ly URL created for use in the Twitter discussion while the paper was being presented.

**Blog posts written and published in a timely fashion**: Blog posts about the paper were written and published in advance of the presentation the paper in order to encourage others to read the paper and participate in the discussion.

**Co-authors engaged in discussion using event hashtag**: The co-authors agreed to monitor Twitter during the conference in order to be able to respond to questions and engage in discussions.

#### 4.2 Research Dissemination: Analysis

Shortly after the conference had taken place analysis was carried out on the numbers of views on Slideshare, blog posts and views of the paper on the institutional repository together with details of links followed on Twitter.

The conference took place on 16-17 April 2012. By 18 April 2012 there had been 1,291 views of the slides on Slideshare, compared with 3 and 311 views for slides for two other papers presented at the conference which had been uploaded to Slideshare.

The Topsy service<sup>3</sup> was used to analyse Tweets which contained the event hashtag or included links to the paper. As shown in Figure 3 to date (May 2013) there have been 21 tweets which contain links to the slides<sup>4</sup>. In addition there have been 10 tweets which contain links to the paper<sup>5</sup>.

<sup>&</sup>lt;sup>3</sup> http://www.topsy.com/

<sup>&</sup>lt;sup>4</sup> http://topsy.com/www.slideshare.net/sloandr/w4a12coopersloankellylewthwaite

<sup>&</sup>lt;sup>5</sup> http://topsy.com/opus.bath.ac.uk/29190/

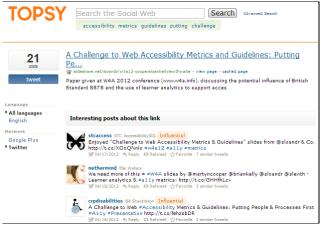


Figure 3: Topsy analysis of tweet links

Note that although these numbers aren't huge, analysis of Twitter accounts suggest that the people who felt sufficiently engaged to use Twitter to make comments and share links to resources across their networks showed that the majority seemed to be accessibility researchers or practitioners – the main target audience for the outreach work. Social media used in this way can therefore be seen to provide carefully targeted dissemination and engagement.

Note that these figures are based on tweets which contain links; they do not include subsequent discussions about the ideas presented in the paper.

#### 5. ENHANCING AWARENESS OF ONE'S RESEARCH ACTIVITIES

The case studies illustrated above are based on use of social media services to engage in discussions with potential collaborators or audiences. However it is also possible to use research profiling services, such as LinkedIn, Academia.edu and ResearchGate which have social aspects as well as providing links to research papers or, indeed, hosting research papers.

#### 5.1 Research Profiling Services

A survey of use of research profiling services across the 24 Russell Group universities was carried out in July 2012 [2]. The survey used a variety of techniques to give indications of the numbers of users of these services which is summarised in Table 1.

Service	Nos. of users
Academia.edu	33,829
LinkedIn	134,669
ResearchGate	18,166

Table 1: Usage figures for research profilingservices

A paper entitled "*Can LinkedIn and Academia.edu Enhance Access to Open Repositories?*" [3] suggested that use of popular services such as LinkedIn and Academia.edu which have a global outreach may enhance the discoverability of papers if they contain links to papers hosted elsewhere.

#### 5.2 Personal Approaches for Using Research Profiling Services

The authors approach to use of research profiling services has evolved over time. Initially LinkedIn, Academia.edu and ResearchGate were used to contain a brief profile together with links to papers which were hosted in the University of Bath's institutional repository. It was felt that this provided a compromise between hosting content in a trusted environment within the institution and providing links from popular external services which would enhance Google ranking for the institutional repository together with providing a means of finding papers for users of the services.

However it was subsequently felt that uploading copies of the papers themselves to these other services could provide benefits by ensuring that technical developments to the services could be applied to content hosted on the services.

This decision also reflected personal beliefs in the benefits of open approaches. Since the majority of the content is provided under a Creative Commons licence, there should be no legal barriers to reuse of the papers in this way.

### 6. DEVELOPING ONE'S PROFESSIONAL NETWORK

How should a researcher go about developing their professional network using online tools?

The similar answer to this is to register relevant services and use them as appropriate. Although this appears simple, in reality it may be difficult to begin making use of social media tools: posting one's first tweet, for example, can be a surprisingly stressful experience.

The following advice is provided for new users of Twitter who understand the potential benefits which can be gained and need to develop approaches for using the service that they feel comfortable with:

**Have a Twitter account**: The first step is imple: create a twitter account.

Provide biographical details and a link to a relevant Web site: Provide a brief summary of what

you do, what your interests are and a link to a Web site which provides further information about you. Note that a link to an institution's home page will fail to provide relevant personal information, so link to a page about your professional interests or to your blog or LinkedIn profile.

**Tweet**: Publish a Twitter post (known as a 'tweet'). And then seek to tweet on a regular basis. If you are attending a conference this can provide a useful opportunity for tweeting.

**Understand how to avoid 'tweet blocks'**: If you are uncertain about what to tweet follow the adage "*Tweet about things that are of interest to you*". You do not have to limit your tweets to you professional interests. If you tweet about your hobbies you may find that this provides a hook for potential collaborators to follow you or engage you in discussions.

**Understand Twitter usage patterns for successful users**: Twitter analytics tools can help you develop a better understanding of how you use Twitter and how others use Twitter. Using the Social Bro tool shown in Figure 3, for example, I have learnt that the majority of the people I follow on Twitter follow 100 and 500 others, have tweeted in the past 24 hours and normally tweet between 1 and 4 times per day.

Your account. @briankelly		Users by Number of F	ollowers	
All community	0 - 50	450		100
Synchronize	50 - 100	280		
	100 - 500			1244
FRees Adv. Search Tags	500 - 1K	506		
me Zones: Language Al Time Zones \$ Al Languages \$	1K - 5K	515		
erified users: Public / Private:	5K - 10K 🗰 60			
ustom Avatars: Custom URLs:	10K - 50K 🔳 48			
Alusers 2	50K - 100K 8			
nfluence: 0 - 100	>100K   10			
olowers: 0 - 10%-				
riends: 0 - 10/-				
	17 <u>1</u>			
at: 0-104-		Users by Number of I	Friends	
at: 0 - 108+		Users by Number of I	Friends	
at 0 - 1054- otowers/Friends Ratio: 0 - 100- ccount Age: 0 days - 10 years	0 - 50	Users by Number of	Friends	1
at: 0 - 1044 abovers/Friends Ratio: 0 - 1054 ccount Age: 0 days - 10 years weets per Day: 0 - 1004	0 - 50 50 - 100		Friends	1
at: 0 - 100- olsowers/Friends Rato: 0 - 100- ccount Age: 0 sizys - 10 years- weets per Day: 0 - 1000-		287	Friends	1192
at: 0 - 100- olsowers/Friends Rato: 0 - 100- ccount Age: 0 sizys - 10 years- weets per Day: 0 - 1000-	50 - 100	287		1192
at 0-100 alowers/Frends Rate: 0-100 Account Age: 0 days - 10 years weets per Day: 0-1000	50 - 100 100 - 500	287		1192



#### 7. UNDERSTANDING BARRIERS

Whilst the author has made effective use of social media to support his research and other professional activities, it is recognised that there can be barriers to use of social media which need to be acknowledged and appropriate responses identified.

Such barriers will include:

- **Copyright barriers**: Research publications may not be able to be reused due to copyright barriers.
- Legal barriers: Concerns that use of social media may result in legal disputes if inappropriate content is published.
- **Discipline-specific issues**: Certain research disciplines may have different traditions from those of the IT environment which have been described in the case studies given in paper.
- **Institutional issues**: Some institutions may impose technical or procedural barriers which inhibit or block use of social media.
- **Personal barriers**: Individuals may feel uncomfortable in making use of social media.

#### 8. ADDRESSING THE BARRIERS

Whilst the barriers summarised above are legitimate, the existence of barriers should not be regarded as providing insurmountable obstacles in use of social media to enhance one's research activities.

In a paper on "*Empowering users and their institutions: A risks and opportunities framework for exploiting the potential of the social web*" [4] Kelly and Oppenheim proposed a framework which could be used by both individuals and groups who had concerns regarding use of social media to support their professional activities.

Use of the framework involves documenting the following aspects of proposed use of the social web:

**Intended use**: Rather than talking about Social Web services in an abstract context ("shall we have a Facebook page" for example) specific details of the intended use should be provided.

**Perceived benefits**: A summary of the perceived benefits which use of the social web service are expected to provide should be documented.

**Perceived risks**: A summary of the perceived risks which use of the social web service may entail should be documented.

**Missed opportunities**: A summary of the missed opportunities and benefits which a failure to make use of the social web service should be documented.

**Costs**: A summary of the costs and other resource implications of use of the service should be documented.

Risk minimisation: Once the risks have been identified and discussed approaches risk to minimisation should be documented.

Evidence base: Evidence which back up the assertions made in use of the framework.

When using this framework it should be recognised that there are likely to be biases, prejudices, vested interests and other subjective factors which will affect how the framework is used. Ideally such subjective factors will be openly acknowledged and taken into account, although it is recognised that this may be difficult to Figure 4: The Risks achieve.

_	Biases			
	Intended Purpose			
	Benefits			
	Risks			
	Missed Opportunities			
	Costs			
	Risk Minimisation			
	Evidence Base			
S	Subjective factors			

D:----

and **Opportunities** Framework

#### 9. CONCLUSIONS

In this paper the author has reviewed personal experiences in use of the social web to enhance his research activities. Examples of particular services have been given together with details of analysis of use of the services to help gauge their effectiveness. The paper concludes with a summary of potential barriers and a risks and opportunities framework which can help to articulate such risks, but also the risks of failing to exploit the social web.

#### ABOUT THE AUTHOR

Brian Kelly worked at UKOLN at the University of Bath form October 1996 until July 2013. In his role as UK Web Focus he had responsibilities for identifying ways of using innovative Web developments to

support institutional activities across the UK's higher and further education sector. His particular areas of interest include Web standards, Web accessibility, Web preservation, Web metrics and the Social Web.

Brian has been an invited speaker at international conferences in Norway, Sweden, Singapore, Taiwan and Australia.

Brian blogs regularly on the UK Web Focus blog, with over 1,200 posts having been published since the blog was launch in 2006. Brian makes use of a variety of other social media tools to support his professional networking activities. including Twitter. Academia.edu and ResearchGate.

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