Proceedings of the 15th Annual Conference

4-11 October 2013, Cape Town International Conference Centre, Cape Town

 Libraries in Dialogue for Transformation and Innovation

NOT PEER REVIEWED

Disclaimer:
This conference paper, presented at the above conference, is hosted by LIASA using the open source software (Open Conference Systems). LIASA takes no responsibility for the content published in this paper, and disclaim all liability arising out of the use of or inability to use the information contained herein. We assume no responsibility, and shall not be liable for any breaches of agreement with other publishers/hosts.
Can Twitter be used as a mode of knowledge transfer for scholarly communication?

Constance Bitso
Lecturer: Library and Information Studies Centre
University of Cape Town
Connie.bitso@uct.ac.za

INTRODUCTION

Scholarly communication is regarded as a process of publication of peer-reviewed research (Thorin, 2006). A broader interpretation is that scholarly communication includes the researchers’ everyday activities and thus encompasses several processes such as ‘conducting research, developing research ideas and informal research communications; preparing, modeling and communicating what will become formal research outputs; disseminating formal research products; managing personal careers, research teams and research programmes; as well as communicating scholarly ideas to broader communities’ (Procter et al, 2010: 4040).

Technological advancements brought Web 2.0 tools that allow users not only to interactively create and share content in a social manner, but also communicate freely via social media. As a form of communication, social media including blogs and wikis as well as social networking sites (SNS) such as Facebook and Twitter have become entrenched in modern society (Chaudhry et al, 2012). Consequently, social media has become a cultural entity amongst its user groups. However, Procter et al (2010) found that many researchers are not willing to embrace social media, particularly SNS. It is not surprising to find that many researchers are still not using social media. This could be attributed to the view that social media is a dais with latent communication challenges. These challenges comprise, among others, an absence of authority from the communicators (Metzgar & Maruggi, 2009) because people often use pseudonyms; the possible loss of message control (Johnson & Perlmutter, 2010) because anyone is at liberty to communicate anything, anyhow, anywhere; thus resulting into confusion on conceptualizations (Marwick & Boyd, 2011). Scholars, experts and researchers alike might question whether the overall use of social media, particularly SNS actually has any impact when it comes to their desired end result. For instance, a scholar would ask if using the SNS has an impact on citation of publications? Despite these challenges and questions, social media because of their increasing proliferation offer researchers a mode to disseminate their research, increase their professional profile, and present their findings to the public (Bik & Goldstein, 2013).

Twitter is one of the micro-blogging public SNS viewed as a system that helps create and maintain short messages called tweets. Tweets are 140 characters in length (Ross et al, 2011) that can be discovered through Twitter search tools (Procter et al, 2013a) by using the popular hashtag (#) such as #scholar to find tweets with the topic or theme ‘scholar’. Although the tweets are extremely short, Twitter offers new possibilities for information updates and exchange, fulfilling a demand for a faster and more immediate mode of communication than regular blogging (Ross et al, 2011). However, the limited characters of Twitter add uncertainty to scholars that are already reluctant to embrace social media because one may wonder if such as short message can be of any value. Chaudhry et al (2012) observe that time and technical limitations, coupled with skepticism regarding the general value of Twitter, are limitations to its
broader adoption. However, there are situations that have proved Twitter to be of value such as the discovery of pandemic outbreaks through Twitter – e.g. HINI (Chew & Eysenbach, 2010) symbolizes the value of Twitter in public health. The revolution and uprising of Libya is another example showing the potential of Twitter and other social media in mobilizing people in a short space of time. Perhaps situating Twitter as a form of everyday writing within a historical framework of diaries, will help the skeptics better understand Twitter as a communication system of value (Humphreys et al, 2013). Libraries, universities and multitudes of organisations embrace Twitter as part of their overall free proactive marketing strategy; because Twitter is tantamount to ‘an electronic word of mouth (Mostafa, 2013) that scholars could take advantage of to promote their scholarly communication.

Considering Twitter as a versatile tool that can be employed for marketing, communication, teaching and learning as well as research; and bearing in mind the skeptics of social media, the Library and Information Studies Centre (LISC), University of Cape Town created a Twitter handle @UCTLisc in May 2013. As a professional Library and Information Studies school that values excellence in scholarship, it is imperative for LISC to maintain such integrity even on the SNS. Twitter like other SNS is a flexible and ever-increasing network of users and its volatility requires constant research and exploration to better understand its potential for scholarship and engagement in communities of practice (Procter et al, 2013a). The task required not only literature review, but also monitoring of LISC on Twitter as well as observations of other individuals and institutions on social media to build knowledge capacity on the best practices. Being in academia one has a major question: Can Twitter be used as a mode of knowledge transfer in scholarly communication?

As an initial attempt to address the above question, literature review was conducted based on information retrieved from Google Scholar. This paper presents a glimpse of insights gained from the literature as well as the experiences of using the Twitter handle @UCTLisc. The literature review was conducted during the process of formulating LISC social media policy which was led by the main question with the following sub-questions:

- What are the benefits of Twitter in scholarly communication?
- Which tools can be used to monitor and analyze Twitter?
- Which techniques and tools can be used for harvesting tweets?
- How can tweets as digital data be curated?
- What is Twitter’s copyright policy?

POSSIBLE BENEFITS OF TWITTER IN SCHOLARLY COMMUNICATION

Publishers consider social media such as Twitter as part of general engagement with media in promoting the work of scholars and journal brands (Stewart et al, 2012). According to Darling et al (2013), Twitter is a platform that can have a long-term impact on how scientists create and publish ideas. Darling and colleagues add that at the start of the 'life cycle' of a scientific publication, Twitter provides a large virtual department of colleagues (i.e. Lave and Wenger (1991)’s communities of practice) that can help to generate, share and refine new ideas. In addition, as ideas become manuscripts, twitter can be used as an informal arena for the pre-review of works in progress. Furthermore, tweeting published findings can communicate
research to a broad audience of other researchers, decision makers, journalists and the general public that can amplify the scientific and social impact of publications (Darling et al, 2013).

Tenopir, Volentine and King (2013) illustrate that academics who are engaged with traditional materials for their scholarly work are also embracing various forms of social media to a higher degree than their colleagues. They suggest that social media tools could be a good addition to traditional forms of scholarly content as a way to promote academic growth provided social media is not replacing traditional scholarly material, but rather enhancing their use. As one continues using Twitter, one observes that there is a significant research being done through analysis of tweets as data sets, also noted is the distribution of scholarly research on Twitter as well as data collection, that is, circulating of research questionnaires on Twitter.

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 present at the conference and those absent from the conference. Twitter has also become of value as a back stream channel for questions and comments in Webinars.

By preceding a hash sign in front of a word (e.g. #openaccess) to represent a specific topic, Twitter can help users search and aggregate messages related to that topic. Hashtags also aid Twitter research by making communicative exchanges comparatively easy to track. There are discipline specific communities, such as #twitterstorians for History scholars, and position specific network, such as #phdpostdoc (Regis, 2012) which are some indications that Twitter is capable to transfer knowledge for scholarly communication. In addition, Twitter has been adopted by many academics across the globe to spread scientific information (Laniado &Mika 2010). According to a survey study, some 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. 2010). The convenience of using twitter has been enhanced by the popularisation of smart phones, tablets and androids, which can download a Twitter application without any fees.

TWITTER ANALYSIS MANAGEMENT TOOL

In this paper analysis is slackly considered as the process of monitoring the Twitter on its own and in conjunction with other social media accounts. There is no doubt that creating an organization’s Twitter handle comes with a responsibility of monitoring its timelines, mentions, interactions as well as followership and of course continually checking if Twitter is still a tool that is worthwhile for LISC agenda. This is a time consuming, ideally non-erroneous process that needs to be done regularly. Consequently, there was an immediate need to find tools that could help with easy analysis of LISC’s Twitter handle. Twitter can be analyzed in a couple of ways depending on the objective of the analysis. Content analysis of Tweets is becoming popular among researchers, a few examples studies by Chaudhry, et al (2012), Humphreys et al (2013) and Mostafa (2013). Regular monitoring requires tools that help to safe time on analysis of
tweets and active participation on Twitter together with other social media platforms. Considering that time and technical limitation are hindrances to the wider adoption of Twitter among scholars, this paper shares a few ‘handy’ open source tools for not analyzing Twitter but also managing it together with other SNS accounts. Although it is possible that there are more tools, this paper discusses only three, namely, Hootsuite, ‘If This Then That’ (IFTTT), and TweetDeck as some of the tools that the author has discovered and explored.

HootSuite is a robust and versatile social network management tool for updates not only for Twitter but other media such as Facebook, LinkedIn, FourSquare, Google+, and Wordpress as well. It helps users to securely engage audiences and measure results. With HootSuite’s Twitter integration, one can easily grow, nurture, and engage one’s audience. It can be used to send and schedule Tweets, listen using search list and track keyword streams, as well as monitor Mentions, Direct Messages, Sent Tweets, Favorited Tweets, and more in dedicated streams. Through HootSuite one can synchronise Twitter, Facebook, Google+ and other sites with ease. It adds a sphere of increased participation in social media. Another important aspect of HootSuite is its ability to archive tweets.

Similar to HootSuite is IFTTT that works with ‘recipes’ which are actions that are set up to help manage and monitor events that one follows not only on Twitter, but also on other SNS and channels such as Facebook, LinkedIn, Email (Gmail), Instagram, and Evernote. For instance, IFTTT can be set up such that tweets are automatically posted onto Facebook. Another example could be to set up an IFTTT action such that new photos added on Instagram get saved onto Dropbox. It is quite versatile and can accommodate various actions depending on one’s needs. These can help streamline and automate different parts of your social media strategy and these ‘recipes’ can be turned on and off as needed. Scholars may use it to set up automatic tweets every time there is an update on scholarly events that they follow.

TweetDeck is referred to as a Twitter dashboard, similar to a car dashboard that shows information about the car’s temperature, fuel level, time and many other accessories. TweetDeck shows information about the timelines, mentions, interactions, messages and hashtags all in a dashboard display. It is an interface that allows an easy view of profile that has a series of columns, which can be set up to display Twitter timeline, mentions, direct messages, lists, trends, favorites, search results by hashtags or all tweets by or to a single user. It also has URL shortening which is quite handy for embedding long URLs into tweets. The other important feature is that tweets can be sent immediately or scheduled for later delivery which is convenient for time planning.

TOOLS AND TECHNIQUES FOR HARVESTING TWEETS

Twitter is a database of huge quantity of qualitative data (tweets) generated by users thus making it a focus point for harvesting data on any matter. Twitter is not only a database, but also a tool for sharing, discovering, and commenting on current events; thus often news breaks on Twitter before appearing in orthodox news channels. As a result Twitter has become a current affairs feeder and an up-to-date database that can be exploited in scholarly communication. This is because Twitter is an open platform; tweets are public and can be retrieved with Twitter search
strategy of hashtags (Proter et al, 2013b). The only exception is the direct message, which is private, and can be seen only by the follower to whom it is sent. Not only can data collection from Twitter be done with ease, but it comes in a consistent format which makes the application even more inviting for data mining (Schnitzer & William, 2012). Instead of researchers going to the field to find information about people’s feelings, opinions and needs, they may simply get onto Twitter; query a database that will instantly retrieve relevant data (Schnitzer & William, 2012). However, tweets have to be ‘taken with a grain of salt’ because often out of excitement and the pressure to release the first tweet about an event, inaccurate information is tweeted. With Twitter it is feasible to harvest tweets with content analysis, data-mining and crowdsourcing.

With the open source movement it is possible that there are many tools and applications that can be used to harvest tweets. This paper does not attempt to give an exhaustive list, but rather shares a few tools that were discovered from the literature and one’s professional learning network upon setting up of @UCTLisc. Reips and Garaizer (2011) allude to iScience Maps for mining tweets for scientific research. The Web service is available from http://maps.iscience.deusto.es/ and http://tweetminer.eu/. This is an open source tool that allows one to assess the effects of specific events (e.g. a natural catastrophe, pandemic breaks, revolutions, political uprisings or even a political election) as they are voiced on Twitter. For example, making comparisons between places such as cities, regions or countries for terms or combinations of terms and monitor their progression in the course of an event (Reips and Garaizer, 2011).

CURATION OF TWEETS AND COPYRIGHT

Twitter maintains that it does not delete tweets however it is a mammoth challenge to find older tweets. In addition, Twitter only provides search results for the past seven days, beyond that it requires deeper searching. Curating and aggregating tweets outside of Twitter, not only enables finding them with ease, but also repurposing that content into narrative threads to use as a trigger for more engagement (Dragon, 2012). There was a time when Twitter and Google had an agreement in which Google indexed tweets, but that ended in 2011. Therefore curation of tweets possibly outside of Twitter might be a viable option for one to lay rest assured that tweets are secured. Over and above using archiving tools such as HootSuite, according to Dragon (2012) other options to consider for curating tweets are:

- Manual curation versus machine curation (using hash tags or key words).
- Ability to publish tweets to one’s own website or to a third-party site.
- Sharability, that is, the aspects of the tool that encourage sharing of tweets

Five tools suggested by Dragon (2012) for curation are Storify (http://storify.com/), Twylah (http://www.twylah.com/), ScoopIt (http://www.scoop.it/), Paper.Li (http://paper.li/) and List.Ly (http://www.twylah.com/). Storify allows creation of themed “stories,” or aggregations of content, not only from Twitter, but from other social platforms as well. Similar to Storify, is ScoopIt, a curation tool intended for all types of content on the web including Twitter as well. In order to add a tweet, one must click on the tweet details link to arrive at the page dedicated to that tweet, and then click the “scoop.it” button. The bonus to Scoop.it is that it suggests content for inclusion in one’s curated topic. While Paper.Li is more appropriate for creation of newsletters and newspapers, List.Ly is useful for maintaining lists and Twylah is ideal for branding.
COPYRIGHT ISSUES WITHIN TWITTER

From the copyright policy under Twitter’s terms of Service (https://twitter.com/tos) one picks the following about Twitter:

- It respects the intellectual property rights of others and expects users to do so.
- It responds to notices of alleged copyright infringement that comply with applicable law that are provided to them.
- It reserves the right to remove content alleged to be infringing without prior notice, at their sole discretion, and without liability to users.
- It terminates a user’s account if the user is determined to be a repeat infringer.

CONCLUSION

Twitter is a useful social media tool that can provide a valuable contribution to scientific publishing in the 21st century (Darling et al, 2013). It can be used as a mode of knowledge transfer for data collection, for dissemination of research findings and as a tool of instant communication for researchers. Real time data generation and collection capabilities of social media and Twitter in particular open a plethora of possibilities for scholarly communication to anyone interested in and conversant with data from the Twitter sphere. Nonetheless, it is important to have a clear understanding of how other participants use Twitter and other social media and how information propagates within such systems. One of the challenges is that little is known about the structure of the social space within which communication in social media unfolds, particularly how content, social networks and groups are linked (Procter et al, 2013b). Perhaps as research progress in the advent of Web 3.0 more knowledge and understanding will be gained and there will be less skepticism with Twitter.

REFERENCES


