Research Dissemination through Social Media Platforms: What are the Implications?

Prof OB Onyancha
Department of Information Science
University of South Africa
Agenda

* Introduction (publishing timelines and paradigm shift)
* Emergence and growth of social media
* Research through/in social media
  * Traditional methods of research dissemination
  * Application of social media in research
  * Social media tools for researchers
  * Research activities on SM
  * Benefits of using SM in research
* Role of libraries and librarians: examples
* Conclusion
Publishing Timeline

The Diamond Sutra
808 AD

1842
Illustrated London News uses woodcuts and engravings for the first time, prompting the growth of illustrated journals throughout the second half of the century.
Paradigm shift: Electronic publishing

* Until the late 1970s, publishing (as a whole) and scholarly publishing in particular was largely carried out in print
* Around 1983, the Academic American Encyclopedia was published in a CD-ROM
* With the introduction of the Internet, electronic publishing became more popular
* Several traditional newspapers launched online versions around 1996
* Some sources place the emergence of an e-journal around the mid 1970s while others talk of 1980s
Current trends are characterized with the emergence of Web 2.0

Social media are the most popular of the emerging ICTs and Internet applications

There are different views of what constitutes social media

- Some believe that the use of the term social media should be restricted to the ‘content’ being communicated or shared (Burke, 2013)
- Others (e.g. Cann, 2011) see social media as technologies and practices involved in the sharing of information produced in several formats
- Others (e.g. Mulero, 2012) use the words social media and social networks interchangeably
Popularity of Social Media
While the Internet penetration stands at 35%, social networking penetration has rapidly increased to the current 26% while mobile penetration was 93% of the total number of people in the world as at January 2014, i.e. 7.1 billion people (Dodaro, 2014)

http://www.dsteinwenwhite.com
* Research is perhaps the latest entrant in social media
Traditional methods of research dissemination

- The more traditional methods of research dissemination include
  - Research reports
  - Publications in peer-reviewed professional, academic and technical journals
  - Books
  - Book chapters
  - Conference papers and posters
  - Newsletters, e-bulletins, ‘in-house’ research forums

Miah (2013) observes that social media can be used to not only promote research but in its development.

Cann (2011) identifies four areas wherein social media can be applied in research, namely:

- Identification of knowledge (e.g., undertaking literature reviews using peer reviewed sources);
- Creation of knowledge by professional researchers usually behind closed doors;
- Quality assurance of knowledge (e.g., peer review, filtering the best for publication);
- Dissemination of knowledge (e.g., publication, presentation at conferences).
Nerds (nd) enumerates the following as applications of social media in research

- to share exchanges in scientific knowledge... leading to an increase both in learning and flexibility in ways that would not be possible within a self-contained hierarchical organization
- Social networking is allowing scientific groups to expand their knowledge base and share ideas, and without these new means of communicating their theories might become "isolated and irrelevant".
- Researchers use social networks frequently to maintain and develop professional relationships
- to establish collaborations on common fields of interest and knowledge sharing
- to communicate scientists research results
- a public communication tool and to connect people who share the same professional interests
Social media for researchers

**Academic tools**
- PlumX
- CiteULike
- Mendeley
- Institutional repositories
- Academia.edu
- Social Science Research Network (SSRN)

**Non-academic tools**
- Facebook
- Twitter
- Youtube
- Amazon
- Good reads
- Slide share
- GitHub

**Altmetrics harvesting tools**
- Altmetric.com
- ImpactStory
- Kudos
- ResearchGate

**Additional tools**
- YouTube
- Slideshare
- LinkedIn
- Twitter
- Pinterest
- Facebook
- Mendeley
- Google Scholar
- CiteULike
- Delicious
- Diigo
- Dropbox
- FigShare
- Flickr
- Google+
- Pinterest
- Pocket (formerly read it later)
- Reddit
- Scribd
- Reddit
- Storify
- Slideshare
- Storyful
- TwentyFeet
Another look at SM categories

<table>
<thead>
<tr>
<th></th>
<th>Social media categories and listserv groups.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Blogs (maintain your own blog)</td>
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<td>2</td>
<td>Blogs (read/comment on other people’s blogs)</td>
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<tr>
<td>3</td>
<td>Microblogging tools – e.g. Twitter</td>
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<td>4</td>
<td>Wikis – e.g. Wikipedia, Wikibooks</td>
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<tr>
<td>5</td>
<td>Academic social networking tools – e.g. Academia.edu</td>
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<tr>
<td>6</td>
<td>Non-academic social networking tools – e.g. Facebook, Linkedin</td>
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<td>7</td>
<td>Online document management tools – e.g. Google Docs, Scribd</td>
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<td>8</td>
<td>Media repositories – e.g. Youtube, Flikr</td>
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<td>9</td>
<td>Presentation sharing sites – e.g. SlideShare, Slideboom</td>
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<tr>
<td>10</td>
<td>Social bookmarking tools – e.g. Delicious</td>
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<tr>
<td>11</td>
<td>Bibliographic management sites – e.g. Citeulike, Connotea</td>
</tr>
<tr>
<td>12</td>
<td>Video/tele conferencing – e.g. Skype, other IMs</td>
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<td>13</td>
<td>Virtual worlds – e.g. Second Life</td>
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<td>Tools Provided by ASNSs</td>
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<td>---------------------------------------------</td>
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<td>Discussion Boards</td>
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<tr>
<td>File Repository</td>
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<td>Email</td>
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<tr>
<td>Instant Messaging</td>
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<tr>
<td>Citation Count</td>
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<td>Altmetrics</td>
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<td>Public/semi-public profile</td>
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<tr>
<td>Group collaboration</td>
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<tr>
<td>Reference Management</td>
<td></td>
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<tr>
<td>Collaborative document processing</td>
<td></td>
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<tr>
<td>Network visibility</td>
<td></td>
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<tr>
<td>Upload publications</td>
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<tr>
<td>Linking of information to social media sites</td>
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<tr>
<td>ASNS</td>
<td>Academia.edu</td>
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<tr>
<td>-------------------------------</td>
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</tr>
<tr>
<td>Discussion Boards</td>
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<tr>
<td>File Repository</td>
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<td>Email/Message</td>
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<tr>
<td>Citation Count</td>
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<td>Alt Metrics</td>
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<td>Public Profile</td>
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<td>Group Space</td>
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<td>Reference Management</td>
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<td>Collaborative Document Process</td>
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<td>Network Visibility</td>
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<td>Upload Publications</td>
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<tr>
<td>Link to Social Media Sites</td>
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</tbody>
</table>

Table 3. Comparison of tools across ASNSs
SM Tools preferred by researchers

A. Gruzd et al. / Computers in Human Behavior 28 (2012) 2340–2350

- Virtual Worlds: 10
- Presentation Sharing Sites: 16
- Social Bookmarking Tools: 17
- Academic Social Networking Tools: 17
- Bibliographic Management Sites: 18
- Microblogging Tools: 25
- Media Repositories: 29
- Online Document Management Tools: 32
- Video/teleconferencing Tools: 35
- Blogs (Writing and Reading): 35
- Listserv Groups: 36
- Non Academic Social Networking Tools: 37
- Wikis: 42

Fig. 1. Social media tools by the number of respondents who use them.
What do researchers do on SM?
Benefits of using SM tools

Benefits using social media in research

- **Visibility**: More people can see and get access to my work

- **Sharing**: When you share your research other people will share with you as well

- **New contacts**: You get in touch with a lot of researchers and other persons and institutions interested in your field

- **Discussion**: You can discuss and get new insights in your field

- **Feedback**: It’s motivating – ”wow, nearly 400 people have seen my paper, and over 3000 have seen my presentation. In addition several people have favourited and downloaded it”
By using social media to its full potential, you could:

- Boost the influence your research has within your chosen field
- Create greater interaction and collaboration with other experts in your field on a global scale. This may include people you would not normally have the chance to work with or that you've wanted to network with for some time
- Benefit from the expertise of other researchers that can provide a sounding board for your ideas before, during or after the research process. A bit like an informal version of peer-review, with the main aim being to help enrich your work
- Raise the profile of your research
- Extend the reach of your research to include publications you may not have originally considered
- Ultimately give your work an enhanced opportunity to have real-world, far-reaching impact (Emerald Group Publishing, 2016)
Impact of using social media in research

Social Media Release Increases Dissemination of Original Articles in the Clinical Pain Sciences

Heidi G. Allen¹,², Tasha R. Stanton¹,², Flavia Di Pietro²,³, G. Lorimer Moseley¹,²*

¹ Sansom Institute for Health Research, University of South Australia, Adelaide, Australia, ² Neuroscience Research Australia, Sydney, Australia, ³ University of New South Wales, Sydney, Australia

Abstract

A barrier to dissemination of research is that it depends on the end-user searching for or ‘pulling’ relevant knowledge from the literature base. Social media instead ‘pushes’ relevant knowledge straight to the end-user, via blogs and sites such as Facebook and Twitter. That social media is very effective at improving dissemination seems well accepted, but, remarkably, there is no evidence to support this claim. We aimed to quantify the impact of social media release on views and downloads of articles in the clinical pain sciences. Sixteen PLOS ONE articles were blogged and released via Facebook, Twitter, LinkedIn and ResearchBlogging.org on one of two randomly selected dates. The other date served as a control. The primary outcomes were the rate of HTML views and PDF downloads of the article, over a seven-day period. The critical result was an increase in both outcome variables in the week after the blog post and social media release. The mean ± SD rate of HTML views in the week after the social media release was 18 ± 18 per day, whereas the rate during the other three weeks was no more than 6 ± 3 per day. The mean ± SD rate of PDF downloads in the week after the social media release was 4 ± 4 per day, whereas the rate during the other three weeks was less than 1 ± 1 per day (p ≤ 0.05 for all comparisons). However, none of
SM offers instant & increased research impact

<table>
<thead>
<tr>
<th>Title</th>
<th>Altmetrics score</th>
<th>Total SM attention</th>
<th>GS cites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue whales Balaenoptera musculus...</td>
<td>105</td>
<td>126</td>
<td>0</td>
</tr>
<tr>
<td>Kelp gulls prey on the eyes...</td>
<td>73</td>
<td>46</td>
<td>2</td>
</tr>
<tr>
<td>Intraguild predation and partial...</td>
<td>71</td>
<td>46</td>
<td>2</td>
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<tr>
<td>&quot;Public enemy no. 1&quot;:...</td>
<td>69</td>
<td>74</td>
<td>1</td>
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<tr>
<td>Three-dimensional visualisation...</td>
<td>54</td>
<td>12</td>
<td>1</td>
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<tr>
<td>An Inventory of Documented Diseases...</td>
<td>45</td>
<td>25</td>
<td>6</td>
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<td>Human chorionic gonadotrophin...</td>
<td>42</td>
<td>27</td>
<td>59</td>
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<tr>
<td>Low-carbohydrate and high-fat intake...</td>
<td>40</td>
<td>118</td>
<td>17</td>
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<tr>
<td>The impact of a date for understanding...</td>
<td>36</td>
<td>39</td>
<td>0</td>
</tr>
</tbody>
</table>

Altmetrics can appear more rapidly than citations (Thelwall, Haustein, Lariviere, & Sugimoto, 2013; Eysenbach, 2011: abstract)
SM attention is widespread than traditional methods

<table>
<thead>
<tr>
<th>Region</th>
<th>0-14 years</th>
<th>15-44 years</th>
<th>45-64 years</th>
<th>65+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>435 599 165</td>
<td>494 601 127</td>
<td>124 903 796</td>
<td>39 632 587</td>
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<tr>
<td>Americas</td>
<td>232 457 926</td>
<td>429 009 427</td>
<td>207 564 011</td>
<td>94 275 100</td>
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<tr>
<td>Asia</td>
<td>1 071 296 285</td>
<td>2 054 495 079</td>
<td>863 219 225</td>
<td>303 805 188</td>
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<tr>
<td>Europe</td>
<td>115 609 968</td>
<td>298 291 781</td>
<td>202 580 422</td>
<td>124 395 303</td>
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<tr>
<td>Oceania</td>
<td>9 109 136</td>
<td>16 440 275</td>
<td>8 384 523</td>
<td>4 343 437</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1 864 072 480</td>
<td>3 292 837 689</td>
<td>1 406 651 977</td>
<td>566 451 615</td>
</tr>
</tbody>
</table>

Potential social media attention = 5 265 941 281

Compare this with 7 million researchers (i.e. 1,200 researchers per million inhabitants)
Creating awareness and training are key roles.

Using SM metrics – Altmetrics – to support researchers.
Conclusion

* There has been a proliferation of social media, especially social networking tools that can be used for research development, knowledge dissemination and sharing
* Social media have got a big role to play in research, right from its conception to its evaluation
* How many of these tools a given researcher can make use of depends on the motive for their use in research as each tool is meant to serve specific purposes
* Using multiple avenues to disseminate research increases its impact, both scholarly and societal impact