Exploring the Meaning and Perception of Altmetrics

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*metrics Project
Towards a better understanding of metrics for research evaluation:
• Assess their general significance and their perception amongst stakeholders
• Promote greater openness and transparency of the different metrics’ meaning and impact
• Offer recommendations for their standardization

Survey Setup
Starting point: explorative survey on the professional social media usage of researchers.
• Setup: online survey conducted between March and May 2017.
• Questionnaire: ~20 questions on the intensity of researchers’ social media usage at work.
• Participants: 3,400 researchers from 84 countries.
• Disciplines: emphasis on Economics and Social Sciences.

Results
Frequently Mentioned Services
What are the most popular social media services in the professional lives of researchers?

<table>
<thead>
<tr>
<th>Most Popular Services</th>
<th>Most Frequently Used Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>Used by</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Google Scholar</td>
<td>75.2%</td>
</tr>
<tr>
<td>JSTOR</td>
<td>60.7%</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>60.1%</td>
</tr>
<tr>
<td>ResearchGate</td>
<td>55.6%</td>
</tr>
<tr>
<td>EBSCO</td>
<td>36.7%</td>
</tr>
</tbody>
</table>

Which social media services did recently attract particular attention among researchers? Which have been used for a long time by now?

<table>
<thead>
<tr>
<th>Long-Established Services</th>
<th>Up-and-Coming Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>Used by</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Wikipedia</td>
<td>81.9%</td>
</tr>
<tr>
<td>Amazon</td>
<td>73.6%</td>
</tr>
<tr>
<td>JSTOR</td>
<td>70.2%</td>
</tr>
<tr>
<td>Facebook</td>
<td>66.6%</td>
</tr>
<tr>
<td>ICPSR</td>
<td>65.6%</td>
</tr>
</tbody>
</table>

Audiences of Services
How does the frequency with which the services’ functionalities are used vary between different types of users?

Early-Stage Researchers
Actions that early-stage researchers perform significantly more frequently than professors:
- Downloading & Bookmarking
- Writing & Facebook Actions & Twitter Actions
- Especially popular among…
  - … younger researchers:
  - … older researchers:
  - … early-stage researchers (n = 1,010):
  - … professors (n = 1,419):
  - … economists (n = 2,072):
  - … social scientists (n = 767):
  - … other disciplines (n = 435):

Professors
Actions that professors perform significantly more frequently than early-stage researchers:
- Citavi
- Google+
- Mendeley
- Twitter
- RePEc
- Academia.edu
- GitHub

Conclusions

• Three services are specially popular among researchers regardless of age, career stage or discipline: Google Scholar, Wikipedia and ResearchGate
• Older and more established researchers have a higher interest in services that primarily serve the purposes of evaluating or showcasing research impact, e.g. Harzings Publish or Perish, Scopus, JCR and Web of Science
• Younger and less experienced researchers have a higher usage of tools for the practical stage of scientific work, e.g. Citavi, GitHub, StackExchange, StackOverflow or Mendeley, as well as of services facilitating access to scientific literature, e.g. EconBiz or sci-hub.io

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