

PART 4: Innovative scholarly communication tools



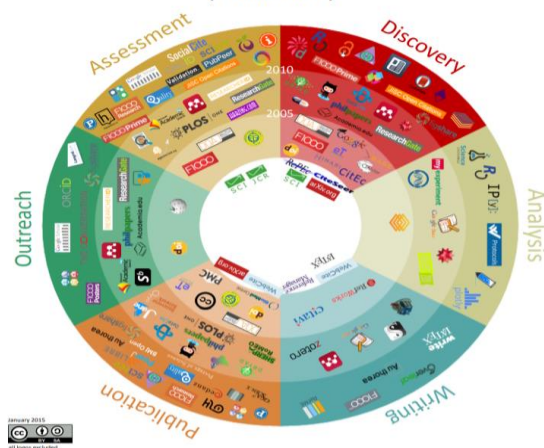
- Online tools to support scholarly communication in different phases of research
- These tools improve efficiency and openness
- Innovation in scholarly communication 2015-2016 global survey listed over 600 tools and sites according to 6 phases of the research workflow:
 1. Discovery
 2. Analysis
 3. Writing
 4. Publication
 5. Outreach
 6. Assessment



Many new websites and online tools have come into existence to support scholarly communication in all phases of the research workflow

Innovative tools and sites

101 Innovative tools and sites in 6 research workflow phases
(< 2000 - 2015)



Discovery – Google scholar, mendeley, PubMed, WoS, RG, Deepdyve

Analysis – R, Matlab, Excel, SPSS

Writing – Google docs, Latex, Overleaf, MS Word

- Publishing – Arxiv.org, PubMed, IR, RG, Topical journals by publishers such as Elsevier, PLOS, BioMed Central, Wiley OR F1000 research OR Data Journals

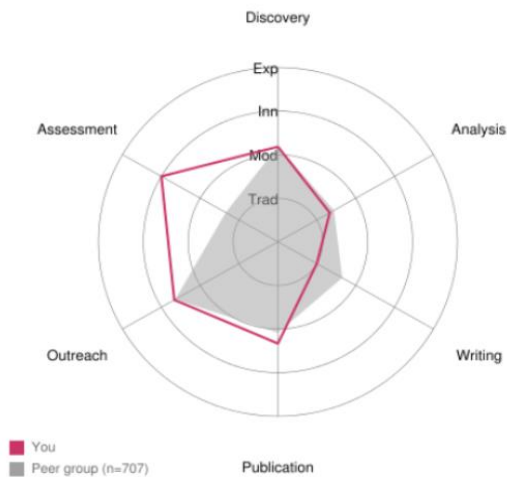
Outreach – Speakerdeck, Slideshare, F1000 Poster, Figshare, Famelab, Twitter,

Assessment / Peer review – Publons, PaperCritic, PubPeer, to measure impact (JCR, Altmetrics, Scopus, Impactstory, PLOS article, WoS



This is a more clearer representation of the previous slide. I wish to show you

Innovative and more traditional tools in your workflow and that of your peer group (Postdoc)



Classification

Traditional tools (Trad)

Add no functionality compared to print era, except online accessibility

Modern tools (Mod)

Use scale and linking possibilities of the internet to increase speed and efficiency

Innovative tools (Inn)

Actually change 'the way it's always been done' – e.g. user-driven, different business models, changes in the sequence of research activities, shifting stakeholder roles

Experimental tools (Exp)

Represent radical change, with sometimes uncertain technologies and outcomes; still under development



This was my favorite part of the interesting elements of the survey, measuring one's use of tools and sites compared to peers.

On the screen is an example of a Postdoc and the peer group

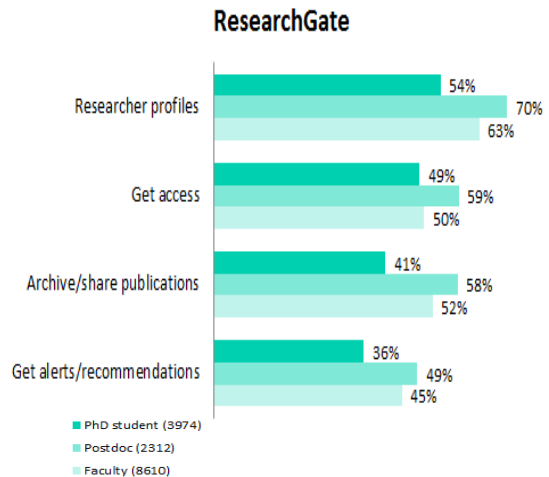
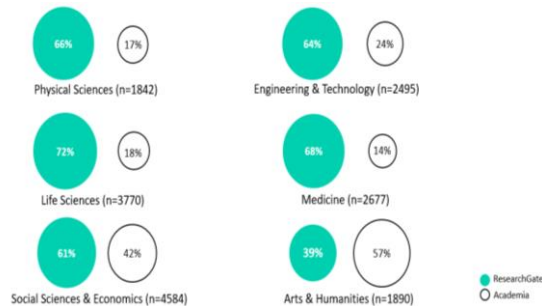
1. You can see the 6 points of the research workflow (Discovery, Analysis, writing, Publishing, Outreach and Assessment).

2. The inner circles show the classification of tools (tools classified as traditional tools (have limited functionality); Modern (Use scale and linking to the internet to increase speed and efficiency); Innovative tools (These change the way its always been done) and Experimental tools (These represent radical change)

3. Its is the postdoc student (pink line) and the peers (dark grey area)

Let me expand / explain one finding, let us look at the publishing phase, the postdoc has slightly surpassed the use of modern tools , moving towards Innovative tools, while the peers are still comfortable with the use of moden tools.

ResearchGate vs. Academia % use by researchers in various disciplines



This is also interesting. If you are in one of these disciplines, are these figures true for you.

Physical sciences 66% of people who completed the survey prefer ResearchGate over Academia.edu

In the Arts and Humanities, it is the other way round, 57% of people who completed the survey in the Arts&Hum prefer Academia.edu over RG. If you are in these disciplines find out why this is so. It might be worthwhile so that you are active in a site where there are peers.

RG picture

The survey also reported that Postdoc prefer having a researcher profile on RG (70%), if you look at other components surveys (getting access, sharing of publications and getting alerts) these results show that Postdocs use RG more PhD students and the faculty.

Activity: Tick the boxes where RG supports that activity

assessment	outreach	publication	writing	analysis	discovery	preparation
assess researcher(s)						
measure impact						
peer review (post-pub)						
comment						
profiling & network						
outreach / valorization						
publish						
select journal						
peer review (pre-pub)						
present						
share presentations						
share posters						
share publications						
share data / video						
share code						
translate						
cite						
write (+ code)						
visualize						
analyze						
notebooks / protocols						
experiment / collect data						
annotate/tag						
read / view						
reference management						
alerts						
get access						
search						
fund / get contract						
set research priorities						X
project management						

tinyurl.com/STMinnovations101
<http://dx.doi.org/10.6084/m9.figshare.4290428>

I believe after this global survey some tools have dissapperared while some tools have come up, there are a lot of tools, you have to know which ones are relevant for your research, your discipline and which ones bring efficiency

Activity: If you do not have a RG account, create one, If you do have an account, use this slide and tick activities that RG supports