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Alison, McNab and Andrew, Tattersall

The digital transformation of research support

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Disruptors
Agents of change
Technology experts
Horizon scanners
Communicators
Champions
Teachers
Trainers
Academics

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Outline

• Researchers in a digital landscape
  • The digital transformation of the research lifecycle
  • The digital transformation of research support

• Meeting the challenge:
  • The research technologist manifesto
  • Key competencies

• Resources
Where do you sit in your organisation?

<table>
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<th>Academic department</th>
<th>IT</th>
<th>Library subject team</th>
<th>Library research support team</th>
<th>Library Open Access team</th>
<th>Library management team</th>
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Where does research support sit in your organisation?
THE DIGITAL TRANSFORMATION OF THE RESEARCH LIFECYCLE
Research has changed forever

Open Access
Impact Agenda/REF
Big Data
Evolving manuscripts
Altmetrics
Open pre/post publication review
ORCiD
Transparent Journals
Cloud reference management
Mobile research apps

Institutional publishing
Overlay journals
Data citation
Scholarly communications
Research data management
Public engagement/Storytelling
Working with the media
Sci-Hub
Predatory Publishing/Conferences
Open Data
The Research Life Cycle 2.0

Start
Have idea
Seek Collaboration

Carry out research
Win Funding

Publish Open Access
Take to a conference
Write a blog post
Make your data open access

Take a break and start again
Work with Media
Engage with public
Make an infographic

Engage in social media
Record a podcast

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What matters to academics

- The REF (and TEF)
- Winning funding bids
- Getting cited
- Publishing papers
- Getting promoted
- Gaining esteem
- Showing Impact
- Retaining tenure
- Getting enough sleep
THE DIGITAL TRANSFORMATION OF RESEARCH SUPPORT
Jisc digital capability framework

How well is the organisation supporting digital scholarship and innovation?

Issues to consider:

» Research environment
» Support for digital copyright and IPR
» Support for open and public scholarship
» Influence of digital scholarship on research impact
» Subject specialist requirements
» Researcher development
» Support for digital enterprise and innovation
» Centres of digital excellence

https://www.jisc.ac.uk/rd/projects/building-digital-capability
http://repository.jisc.ac.uk/6610/1/JFL0066F_DIGICAP_MOD_ORG_FRAME.PDF
### Increasing the Productivity of Scholarship

Paul Groth [Link](http://dl.acm.org/citation.cfm?id=2742031)

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*Diagram source: [Paul Groth](http://dl.acm.org/citation.cfm?id=2742031)*
Where today’s library and information professional may support the new research life cycle

- Preparation
- Discovery
- Analysis
- Writing
- Publication
- Outreach
- Assessment

Across entire workflow

Framework based on 101 Innovations in Scholarly Communication
https://figshare.com/articles/101_Innovations_in_Scholarly_Communication_the_Changing_Research_Workflow/1286826
Meeting the challenge

• What skills are needed?
• Where can these be obtained?
• Recent discussions around academic library skill sets and future roles (see Further Resources)
• Where should we be located? (Does it matter?)
The research technologist manifesto

For decades skilled LIS professionals have provided researchers with excellent services around collection management, content curation and discovery, critical appraisal and reference management. More recently they have stepped into new areas of support and applied their wealth of knowledge around social media, altmetrics, scholarly communications and research data management. All of this requires a good working knowledge of research practices and technologies. Importantly it also requires knowledge of research office culture - something which can be difficult if based at arm’s length in a centralised department.

Researchers increasingly need to understand a multitude of topics including digital copyright, impact, altmetrics, communications, social media, research data management and sharing, open access, infographics, video, animation and mobile apps. Yet all too often they have little time, support or encouragement to explore these topics within their own departments. With what limited time they do have they need to make informed judgements on the growing number of technologies and tools to employ. As we have seen with the development of learning technologists to guide teachers through the myriad of new technologies, is it not time that a new role was created - that of the research technologist or digital academic specialist?

Given that the modern research LIS professional is adept of working across platforms, good at problem solving and the use of new technologies that they are well equipped to fill such a role. Many already have the skillsets for such a role that includes superb networking, horizon scanning, teaching and training skills as well as the ability to solve a diverse set of evolving problems. Whilst embedded into faculties and departments, all of this can then be supported by the central LIS specialist roles around journal, research data, open access, scholarly communications to ensure a better connection between researcher and the 21st Century research cycle.
The research technologist manifesto
KEY COMPETENCIES
Where LIS Professionals can help

- Scholarly communications (infographics, social media, video creation)
- Research data management (RDM plan, hosting, sharing)
- Analysis (altmetrics, traditional metrics, capturing impact)
- Forming an online identity (digital literacy, information management, social media)
- Horizon scanning (working with champions and interested parties to explore new technologies and ideas)
Prescribing a Digital Technology

• You need to understand why you are taking it
• You need to understand the benefits
• You need to understand the side-effects
• You need to understand that the benefits may take time
• You may need two courses
• You may need a different intervention
• Do not feel pressured to use it - as it won’t work
Which tool is right?
Issues around supporting research technologies

- Duplication of platforms
- Issues relating to third party software - support, data security
- Hybrid platforms (Mendeley and Figshare both host data, Research Professional and Mendeley both promote funding sources)
- Limited time for personal research and development
- Technologies can come and go
- Users have different needs/levels of technical competencies
Taming the research treadmill
What competencies do you already have?

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<th>Bibliometrics</th>
<th>Copyright/CC</th>
<th>Data Analysis</th>
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Which three competencies do you feel you most need to develop?
FURTHER RESOURCES
Books

Meeting the challenge: readings


Aspects of research support

- **Research Data Management**
  - RDMRose [http://rdmrose.group.shef.ac.uk/?page_id=1061](http://rdmrose.group.shef.ac.uk/?page_id=1061)
  - MANTRA [http://mantra.edina.ac.uk/](http://mantra.edina.ac.uk/)
  - Audiovisual research data [https://www.jisc.ac.uk/guides/audiovisual-research-data](https://www.jisc.ac.uk/guides/audiovisual-research-data)

- **Scholarly Communications**
  - Unlocking Research blog [https://unlockingresearch.blog.lib.cam.ac.uk/](https://unlockingresearch.blog.lib.cam.ac.uk/)
  - Planning scholarly communication training in the UK [https://unlockingresearch.blog.lib.cam.ac.uk/?p=1517](https://unlockingresearch.blog.lib.cam.ac.uk/?p=1517)
  - Handbook for Open Access good practice [http://repository.jisc.ac.uk/6565/1/JISC_OAGP_OUTPUTS_HANDBOOK_FINAL.PDF](http://repository.jisc.ac.uk/6565/1/JISC_OAGP_OUTPUTS_HANDBOOK_FINAL.PDF)

- **Metrics**
  - The Bibliomagician blog (see Resource Hub) [https://thebibliomagician.wordpress.com/](https://thebibliomagician.wordpress.com/)

- **Impact and visibility**

- **Digital communication**
  - Social media [https://www.timeshighereducation.com/a-z-social-media](https://www.timeshighereducation.com/a-z-social-media)
  - Images and infographics:
    - 12 common types of infographics [https://infogram.com/blog/12-types-of-infographics/](https://infogram.com/blog/12-types-of-infographics/)
    - Information is Beautiful (sample visualizations) [http://www.informationisbeautiful.net/](http://www.informationisbeautiful.net/)
THANK YOU

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