Open Access, Open Monographs, Open Data, Open Peer Review:

Overview of a Disruptive Technology

Ruth Wells, New Product Development Manager, CABI

r.wells@cabi.org

UKeiG's continuing professional development programme is designed to meet the challenges facing information professionals in the digital workplace. The 2019 programme is updated regularly. Themes covered include:

- Information retrieval/search
- Scholarly communication/open access
- Digital literacy
- Social media
- Research support

I signed up for last year's UKeiG's Open Access event, led by the Group's Chair David Ball, curious about the extensive programme of topics for exploration and discussion.

- **Disruptive technologies** – examples, definition (following Christensen) and discussion
- **Open Science** – what it encompasses; the rationales given for instance by the OECD for its development
- **Open Data** – what it is; how it is managed; policy development
- **Open Access** – definitions (Green, Gold, Gratis and Libre, toll access), brief history, policy development; costs; obstacles and practicalities
- **Open Access scholarly monographs** – the new frontier? Open Access in STM subjects is well established, but the Humanities and Social Sciences now stand to benefit greatly too
- **Open Access as a disruptive technology?** Implications for the future - our world turned upside down

David Ball's approach to the day was to ask the question *"Is Open Access a disruptive technology?"* This was based on the definition that a disruptive technology:

- Underperforms existing products (good enough is good enough)
- Has different features that are attractive to fringe customers
- Is cheaper, simpler, smaller, easier to use
- Transforms the market

A great example mentioned is the new [Kodak Ektra Smartphone](#). It's built specifically for photographers and so steps around the phone/text/apps role of existing smartphones. It's a pretty cool idea, especially given Kodak have been way behind the market to date!

Photo by Erik Odiin on Unsplash

From David's perspective, Open Access is not just about publishing. He encouraged us to think about Open Notebooks, Open Data, Open Research Software, Open Peer Review and Open Bids for Funding as all being part of the research landscape. To help facilitate the fundamental transition to [Open Science](#), the [FOSTER](#) project was initiated and funded by the EU for a limited period. More details about the project objectives can be found [here.](#)

> *"FOSTER established, conducted and supported a European-wide training programme, with more than 100 training events, in 28 countries, with more than 6000 participants, on open access, open data and open science, consolidating training activities at downstream level and reaching different stakeholders, diverse disciplinary communities and countries in the European Research Area (ERA.)"*

Open Science will hopefully benefit the world by increasing the transfer of knowledge, as a result assisting the economy and addressing global challenges more effectively, as well as increasing the involvement of citizens in the development of scientific research. To support these aspirations Open Research Data is an important tool in the ecosphere, but there are barriers to delivering this.

To help solve these barriers, [Force 11](#) has a series of data principles called [FAIRsharing](#) developed by its working group. These have now been adopted by a number of publishers and broadly include aspects such as making data Findable, Accessible, Interoperable and Reusable. These aims have challenges, not least the cost of hosting data in perpetuity and ensuring long-term that the data remains in a readable format with the technology of the future. Think about how on earth you could open a floppy disk these days!

In 2018 there was a Jisc project looking at UK Research Data Discovery that aspired to break down data silos and ensure data is linked to research outputs. The development of a beta discovery service is currently on hold but will eventually form part of the Open Research Hub, although no date has been set yet for this to come to fruition.

In addition to the challenges of physically hosting data, for institutions there are the underlying decisions regarding how and where to implement open access.

- Should it be mandatory?
- What type of open access should the institution support? For example, Green, Gold?
- Should they offer hosting in a repository (possibly of interest is that the average cost per article hosted in a repository is £6-15)?

Institutions also need to consider:

- Permitted embargoes by the publisher
- Sanctions for non-compliance
- Licensing requirements, such as copyright retention by the author

Probably the most open open access is Libre Open Access which is free and has no licence restrictions.

Research England (formally HEFCE – the Higher Education Funding Council for England), is working hard to support open access policies by developing recommendations and policies for institutions to follow. These include the proposed introduction of 2021 guidance on producing open access scholarly monographs. The biggest discussion around this in the academic environment is how they will be funded, given an average monograph costs around $10,000 - $35,000 to publish.

Options include Pure Gold open access, a freemium model and crowdfunding (for example, Knowledge Unlatched). The great thing about open access monographs is the level of usage they attract, upwards of two thousand downloads from what I have seen, as compared to the traditional print run of one hundred to two hundred. As a result, the publication of monographs is substantially increasing their reach and therefore dissemination of knowledge. There were two projects mentioned during the event that are aiming to support the open monograph ambition, HIRMEOS is under development and OAPEN-CH was established in 2014.

Finally, there is a trend related to open access publication - publishing peer review alongside the content - known as Open Peer Review. It involves open identity throughout the process, open peer review reports, wider community participation (recently completed in a wiki style on The Disrupted Journal of Media Practice), interaction, pre-review manuscripts, final version comments and open platforms.

eLife is an excellent example of a major publishing initiative to "improve research communication through open science and open technology evolution." In March 2019, an open-source submission and peer-review platform, Libero Reviewer was announced. The software enables the rapid submission of manuscripts for initial assessment.

Editor's postscript

Ruth Wells was business manager at the academic journals and publishing service Veruscript when she published this article as a blog last year. Please contact her if you have any comments or require further information and advice on open access publishing models.

UKeiG Chair David Ball is a consultant specialising in scholarly communication, e-books, virtual learning environments, design and management of academic libraries. As University Librarian and Head of Academic Development Services at Bournemouth University from 1994 to 2012, he created a vibrant library service, winning two major national awards. Since he became a consultant in 2012, Open Access clients include: Public Library of Science (PLoS), the Berlin-Brandenburgische Akademie der Wissenschaften, Public Health England, OAPEN, Enabling Open Scholarship (EOS).

He was the SPARC Europe Project Officer on two major European Open Science projects: PASTEUR4OA (which aimed to support the development and implementation of policies to ensure Open Access to all outputs from publicly-funded research) and FOSTER (which aimed to support researchers to incorporate Open Science in their daily workflow). He has also worked on a number of SPARC Europe projects, including Open Data Champions.

His one-day workshop on "Open Access, Open Monographs, Open Data, Open Peer Review: Overview of a Disruptive Technology" will be held at CILIP's headquarters on Thursday 16th May 2019. It will be of interest to research support, information and library professionals across all subjects, sectors and disciplines keen to understand the impact of Open Access and Open Science on their organisations and on current and future service provision. David will also present on recent developments and initiatives including Open Access university presses and Plan S.

For more information, and to book online, click here.

Upcoming UKeiG courses for 2019, click here.