

Monitoring the transition to Open Access

September 2015

Background

This is a summary of the first in a planned series of commissioned studies to monitor key features of the transition towards Open Access (OA) in the UK. The aim of the study is to establish an authoritative baseline from which trends can be ascertained in subsequent studies.

For a copy of the OA monitoring report, please visit: www.researchinfonet.org/OAmonitoring

The report was commissioned by the Open Access Co-ordination Group and produced by a consortium of experts. The findings were presented to the group in September 2015.

For more on the UUK OA Co-ordination group, please visit: www.universitiesuk.ac.uk/openaccess

The evidence shows that:

- There has been strong growth in both the availability of OA options for authors, and in their take-up.
- UK authors are ahead of world averages, particularly in their take-up of the OA option in hybrid journals, and in their posting of articles on websites, repositories and other online services.
- Take-up of OA publishing models means that universities' expenditure on article processing charges (APCs) has increased too, and it now represents a significant proportion of their total expenditure on journals.
- It is too early to assess the extent of any impact of OA on the finances of learned societies.

Key findings

Open access options available to authors

Open access publishing options are now widely available. Two-thirds of the world's journals – and more than three-quarters of those in which UK authors publish – offer an immediate OA option of some kind. Just under half of all journals across the world - and nearly two-thirds of those in which UK authors publish their work - have adopted the hybrid model.

Levels of Article Processing Costs (APCs) vary widely. Most journals charge between £1,000 and £2,000; only small minorities, concentrated in a few publishers, charge either less than £1,000 or more than £2,000.

Most journals allow publishing under a Creative Commons CCBY licence. This is true for humanities and social science (HSS) as well as in science, technology, engineering and medicine (STEM) subjects. However, it is often an option rather than a default.

Journals' policies for the posting of subscription-based articles can be complex and difficult to understand. In general, policies are more permissive for pre-prints and authors accepted manuscripts (AAMs) than for versions of record (VoRs), but policies are progressively more restrictive – usually with extended embargoes - for posting in institutional repositories (IRs), subject repositories or other services.

Authors' take-up of OA options

Journals with an immediate OA publishing model ('Gold' OA) accounted for just under 17% of global articles in 2014. This compared to 14% in 2012, and growth was particularly fast in the take-up of the OA option in hybrid journals. The UK has now moved ahead of the world average, with over 18% of UK-authored articles published OA in 2014.

The UK shows a particular liking for OA in hybrid journals, and for publishing in 'Delayed OA' journals (which provide free access to VoRs after an embargo period, usually 12 months). In both cases the UK rate is more than twice the world average. But UK take-up of fully-OA journals that do not charge an APC is low and falling. UK authors tend to show a preference for journals with high citation rates, which are on average higher for hybrid and Delayed OA journals than for other journals.

Postings of articles on websites, repositories and other online services ('Green' OA) also contribute significantly to OA. Around 9% of the subscription-based articles published globally in the past two years – and 10% of such articles from UK authors – have been posted and are accessible online and in conformity with journal policies. But a further 9% of global articles, and 11% of UK articles, appear to have been posted 'illicitly' (that is, not in conformity with the relevant journal's policies). If we include these illicit postings, a total of 19% of global papers published in subscription-based journals in the past two years, and 23% of such papers with UK authors, have become freely accessible – usually within 12 months – mainly via subject repositories such as PubMedCentral or sharing sites such as ResearchGate.

When we take Gold, Green and Delayed OA together, we estimate that, globally, 18% of articles published in the last two years were freely accessible immediately on publication. The proportions rise over time so that 20% (23% including illicit postings) were freely accessible within six months, 25% (30% including illicit) within 12 months and

27% (34% including illicit) within 24 months. For the UK, 20% of articles published in the last two years (22% including illicit postings) were openly accessible immediately upon publication, rising to 24% (28% including illicit) within six months, 32% (38% including illicit) within 12 months and 35% (43% including illicit) within 24 months.

Usage of OA and non-OA articles

Data from publishers indicates that downloading from their platforms is higher for OA than for non-OA articles, This meets the key OA aim of increasing the usage of published articles. But patterns across different journals vary considerably.

Downloads of articles from institutional repositories (IRs) in the UK appear to be clearly leaning towards a small number of very popular journals and articles. But downloads from IRs are dwarfed by usage of major subject repositories, especially PubMedCentral. Unfortunately, it was not possible to gather any usage data from social sharing sites such as ResearchGate.

Unless article-level download data is made more generally and openly available any overall analysis of usage data for OA and non-OA articles will be problematic and partial at best. However, there seems to be little prospect of being able to gather data to answer questions about the demographics of usage.

Financial sustainability: universities

Centrally-managed APC expenditure has risen more than six-fold since 2012.

However, there are considerable variations in the overall levels of payments across different universities, reflecting the diversity of institutional experiences, differences in levels of research activity and in institutional policies.

The complexities of the APC market, with variable pricing, discounts, and additional charges, are reflected in the actual payments made by universities.

Individual APC payments varied from £0 to £4,536 with a mean of £1,586; and hybrid journal APCs were more expensive than those for fully-OA titles. Some of this variation may be explained by variations in the citation impact of different journals: because there is a correlation between APC price and the citation rates of journals as measured by the field-weighted citation impact (FWCI). Most payments were made for articles in the health and life sciences, and to commercial publishers.

APC payments need to be set in the wider context of the continuing payment of subscriptions. For a sample of 24 universities and seven major publishers that are mainly subscription-based, APCs now constitute 12% of universities' total expenditure on journals, with 1% for the administration of APCs, and 87% for subscriptions. When data for three major fully-OA publishers is added to the calculation, APCs rise to 14% of expenditure, with subscriptions falling to 85%.

Financial sustainability: learned societies

Nearly 280 learned societies in the UK publish scholarly journals and conference proceedings, and of their total revenues of around £1.2 billion, some £318 million (26%) derives from publishing. In many cases these societies publish journals that are among the leaders in their field internationally. Most societies (63%) publish a single journal, but a sizeable minority (22%) publish three or more. Just under a quarter of societies (24%) publish on their own account, but the majority make use of the services of commercial publishers and university presses.

The proportion of their total revenues that societies derive from publishing varies widely, and there is no simple correlation between that proportion and a society's size or disciplinary focus. Levels of surplus and deficit from publishing also vary widely. Since RCUK's OA policy came into effect only in April 2013, it is not surprising that societies' published accounts provide no evidence that in the period up to the end of 2013 OA had any adverse impact on societies'

publishing revenues or overall financial health.

Moreover, since many societies generate a high proportion of their revenues overseas, and have long-term agreements with commercial publishers, the impact of the transition to OA may not be evident in their finances for a number of years. Nevertheless, further detailed work is required on the finances of a sample of societies, to provide a fuller picture than can be derived from our brief analysis of their published accounts.

Next steps

The report makes no recommendations for policy, but provides a baseline against which the advances made towards open access can be measured and assessed. More work is needed on understanding the costs of the different models, the usage of Open Access articles, and to continue to monitor developments, both within the UK and internationally.

This evidence base and its data is available via Open Access, and stakeholders of the UUK Open Access Co-ordination Group and across the research and publishing sectors are invited to consider the findings and any associated policy implications.

The Group will periodically commission research to build on these findings, in order to track the progress in areas above, and other aspects that can be considered important indicators of progress towards achieving sustainable and effective Open Access to publically-funded research.

Acknowledgments

The above research was undertaken by a team led by Michael Jubb of the Research Information Network (RIN) and comprising of multi-stakeholder collaboration.

Each organisation took lead responsibility for one or more of the key strands of work:

- Open Access options available to authors: RIN
- Accessibility: take-up of OA publishing models and posting of articles: Elsevier
- Usage of OA and non-OA articles: RIN
- Financial sustainability for universities: University of Sheffield
- Financial sustainability for learned societies: Research Consulting

- Developing and interpreting the data and evidence base on the implementation of open access in priority areas

- Coordinating related research and activity being undertaken by stakeholders

- Commissioning research to fill gaps in the evidence

- Providing advice on policy and the direction of implementation of open access

- Providing advice on the coordination and development of open access infrastructure

Universities UK Open Access Co-ordination Group

In November 2013 a follow-up report was published highlighting progress on implementation of recommendations on research communication set out in the Finch review. This report highlighted the need to co-ordinate, gather evidence on and evaluate the implementation of the Finch recommendations and the transition to OA. It was agreed that a formal co-ordinating structure should be established, convened by Universities UK, to secure dialogue and engagement across all the stakeholders in research communications; to co-ordinate their work and avoid duplication or divergence in areas including development of the infrastructure, evidence-gathering, monitoring, and communications; and to deal with issues and problems as they arise.

The Open Access Co-ordination group was therefore established, with five core objectives:



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