Briefing Paper: Open Access mandate support

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January 2016

Summary

The greatest challenge for Open Access is to change the existing customs and procedures of researchers. This involves showing ways, and providing tools and incentives, to incorporate repository deposit in particular and Open Access in general, into their workflows. If they store and process their data in the institutional cloud, if they compose their articles using the cloud resources provided by their institutions, if they use the facilities and tools provided by their parent Universities for requesting APC support, mandates could be complied with at no extra cost or effort, willingly and even enthusiastically. This paper describes these processes in more detail and highlights the benefits and challenges of implementing Open Access policies in institutions.

Introduction

This briefing paper summarises the basic supporting actions and mechanisms necessary for ensuring the success of an Open Access (OA) mandate, achieving high compliance rates.

The focus is on supporting actions and mechanisms; mandates themselves are out of the scope of this paper. However, several other papers on that topic can be found among the PASTEUR4OA advocacy resources[1], for instance the OA policy guidelines, which aim to assist in the development of efficient policies. Of particular relevance is the briefing paper on OA policy effectiveness[2], which identifies five important elements of a policy:

- Articles must be deposited;
- Deposit cannot be waived;

- Deposit of articles is linked to research evaluation (performance assessment);
- Articles must be made Open Access;
- Where the policy stipulates that authors retain certain rights, this cannot be waived.

Support for mandates should be designed with these policy elements in mind.

General principles

Involving stakeholders
It is essential that all current and potential stakeholders should be involved – Open Access and repositories are not yet widely known and used by the entire research community. An excellent example of involving stakeholders (albeit in a somewhat wider

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1 PASTEUR4OA advocacy resources:
http://www.pasteur4oa.eu/resources
2 Open Access policy effectiveness: A briefing paper for research institutions:

http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Policy effectiveness - institutions final.pdf

context) is the University of Turin's practice in developing and instituting its OA policy.[3].

This included:

- *Organising* – creating a dedicated Open Access Office; creating a network of "Open Access points of reference" within each academic department/faculty.
- *Creating awareness and expertise* - seminars on advantages of Open Access in each academic department/faculty; seminars to PhD students; full training courses for staff closely involved.
- *Involving decision-makers* – within each department/faculty; research committees and boards; senior university and support staff.

Effective continuing training of all involved is paramount. A survey of the managers of successful repositories in November 2014[4] suggests additional good practice, such as use of champions and training delivered during induction for staff and students. The most successful training offerings were interactive face-to-face presentations and individual one-to-one training. Least successful offerings were formal presentations and website based instruction.

Integration and workflow

Support for mandates requires integration of OA into the academic process, through stakeholders as just outlined; it also requires integration of internal and external systems in use. These may be for instance research management systems, institutional repositories, etc.

As noted above, Open Access and repositories are not yet widely known and used by the entire research community. In order to embed repositories into academic practices it is necessary to minimise the effort required on the part of researchers to upload their research outputs. The need for rekeying, for instance, should be eliminated and upload should, whenever possible, be part of the established workflow of the researcher.

Connecting repositories with bibliographic databases can ease the burden on researchers. The Hungarian Academy of Sciences' (MTA) mandate obliges researchers to register their publication in the Hungarian National Scholarly Bibliography (MTMT)[5]. With about the same effort, using the SWORD protocol, they can upload their publication to the Academy's own repository, REAL[6,] the default repository, and/or to other repositories. It is possible through this technology to upload the paper to multiple repositories at once.

Many universities now make use of current research information systems (CRIS)[7]. A CRIS is a database or other information system designed to store and manage comprehensive data about research conducted at an institution. A standard for current research information system is the CERIF (Common European Research Information Format)[8] standard, proposed by the EU and developed and maintained by euroCRIS. Commercial CRIS solutions including handling of contracts, projects, publications, study plans and patents are available.

Clearly integration of an institution's repository and CRIS can have beneficial effects on workflows and ease of uploading for academic staff.

3 Institutional policy implementation at University of Turin, Italy: http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Case%20Study_University%20of%20Turin_Italy_final_0.pdf.
4 Ball, D. *Open Science, Open Data, Open Access…*, UKeiG White Paper: 2015/01 (London: UK eInformation Group, 2015). Available at: http://www.cilip.org.uk/uk-einformation-group/members-area/member-resources/white-papers/ukeig-201501-open-science-open-data-open-access.
5 MTMT: https://www.mtmt.hu/
6 See: http://real.mtak.hu/.

7 For more information see:
https://en.wikipedia.org/wiki/Current_research_information_system.

8 See:
https://en.wikipedia.org/wiki/Current_research_information_system

Unburdening the researcher is important. Repositories should facilitate time-saving techniques such as import or upload from other databases (e.g. by DOI or by the SWORD protocol).

The Repository

We assume that a repository, already tested and tried, preferably already known and used by the researchers, is in place. If it is not, it may be wise to seek advice from another institution with a comparable repository, from a similar country. A key resource is the Repositories Support Programme's exhaustive guide to setting up a repository.[9]

The organisational responsibilities should be established: many institutions feel that the library is the most suitable department for implementation and support, relying on the IT department in technical operations. This is reflected in the vocabulary used in this Briefing Paper.

The repository needs to be embedded into the organisational structure, its financial, technical and human resources requirements budgeted for and provided. Setting up a repository will incur costs even if, for instance, existing servers and Open Source repository software are used. These costs will certainly increase in line with the number of deposits in the repository. Operational costs vary: Alma Swan, in a report to the Jisc on costs of four representative universities, concluded that in 2010 repository costs per item deposited varied from GBP6 TO GBP15 and costs *per annum* varied from GBP4000 to GBP75,000.[10]

Repositories need to be listed in various registries, such as ROARMAP[11] and OpenDOAR[12], and harvested by relevant aggregators such as Google and other web search engines. Increasing the visibility and updating information needs continuous attention.

Repository level policies – dealing with issues not addressed at the mandate level – are needed. We list some possible policy items below:

Acceptable article versions

Probably (and preferably) this question is regulated by the mandate; if not, it needs to be specified in the repository policies.

File formats accepted

We believe that long-term archiving cannot be sustainable if issues important from the preservation perspective are not dealt with. File format migration will undoubtedly be necessary at some point in the future, and if the repository accepts all possible file formats, costs may mount up over time. We suggest accepting only standard, widely used, and platform-independent formats.

Monitoring

When the repository, besides providing the means for making publications accessible, requires monitoring, special tools may be needed. Installing plugins, changing default parameters, maybe even installing custom software components developed locally may be necessary. The issues that might require attention include the generation of reports, specification of institutional structure and unique identification of authors. Unfortunately, at the time we write this Briefing Paper, ORCIDs[13] (Open Researcher and Contributor ID) are not yet implemented generally in software and protocols: their usage is only just beginning to spread widely.

Other supporting actions

First and foremost, good communication should be worked out between the repository personnel and the researchers. Informing the users is vital – Open Access and repositories are not yet widely known and used by

9 http://www.rsp.ac.uk/start/setting-up-a-repository/
10 Swan, A., 2010. *Modelling scholarly communication options: Costs and benefits for universities*: *Report to the JISC*, p.41. London: JISC. Available at: http://repository.jisc.ac.uk/442/.

11 ROARMAP: http://roarmap.eprints.org/
12 OpenDOAR: http://www.opendoar.org/
13 ORCID: http://orcid.org/

the entire research community. The organisation of 'roadshows' within the institution, when librarians and repository personnel can meet the authors, is one widely used technique. Developing or adopting advocacy material belongs in these initial stages of implementation too. Scholars should be fully informed about the advantages of archiving.

Though researchers might need to learn a lot to reach proficiency using repositories, there are only a few basic practices they need to adopt, a few facts they need to be aware of. It is very important that the researchers possess a suitable version of their own publication (usually this is the post-print[14]). They have to know that they might try to retain some rights: it is often possible to use an author addendum which retains the right of the author to deposit an electronic copy of the publications to a repository at the moment of the publication. Authors need to know that most publishers do allow archiving, and they can use the SHERPA RoMEO[15] service to look up the details. Developing information material to inform authors is a continuous task (print and online versions should be available).

Librarians or others responsible for the repository should work together with the authors day by day: for this it is necessary to organise a helpdesk service. It is useful if the researcher can communicate through more channels (e.g. e-mail and hotline) too. It is absolutely necessary to answer the questions and review publications submitted to the repository promptly. Submission handling should be effective, librarians should always give the reasons for a rejection clearly, and communicate the necessary corrections. The review workflow should be well established, clear to librarians and researchers alike. Policies need to be

set up regarding what the librarians could do on behalf of the researchers, and what authors can only do themselves. (There are legal aspects to be considered, and also, the more the librarians do, it is easier for the researcher – but the level of user consciousness will be inevitably lower.)

Last but not least, we can achieve the best results with showcasing good practice. We could not find better champions for Open Access than successful researchers, who themselves practise archiving and who use the repository regularly on their own initiative.

Incentives for researchers

Research evaluation

Mandates not linked to research evaluation are weaker, as shown by PASTEUR4OA studies[16]. The mandates at the universities of Minho[17] and Liège[18] are good examples. Funder involvement can also be helpful: compliance with the MTA mandate is monitored at the institutional level[19], therefore the management of the research institute or research group has an interest of ensuring the compliance of members belonging to their research unit. For scientometric usage and compliance monitoring outside lists, numerical indicators – like compliance rates – will be needed.

Showcasing research output

If researchers' profiles contain publication lists generated from repository content automatically, it could decrease the administrative burden of researchers. On the other hand, showing incomplete

14 The author's version after correcting for any issues arising from peer review
15 SHERPA RoMEO: **http://www.sherpa.ac.uk/romeo/**
16 Swan A, Gargouri Y, Hunt M and Harnad S (2015) Open Access policy: numbers, analysis, effectiveness.
http://www.pasteur4oa.eu/sites/pasteur4oa/files/deliverables/PASTEUR4OA%20Work%20Package%203%20Report%20final%2010%20March%202015.pdf
17 Clara Boavida, Ricardo Saraiva and Eloy Rodrigues: Institutional policy implementation at University of Minho, Portugal.
http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Case%20Study_UMinho.pdf
18 Alma Swan: Institutional policy implementation at the University

of Liège, Belgium.
http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Case%20study%20U%20Liege_FINAL.pdf
19 András Holl, Gábor Makara, András Micsik, László Kovács: MTMT: The Hungarian Scientific Bibliography. In: Samos Workshop. Uses of open data within government for innovation and efficiency. Paper 79.
https://www.w3.org/2013/share-psi/wiki/images/7/79/Samos-MTMT.pdf

lists could motivate authors to deposit their publications in a timely way and without exception.

Reusable, linked publication lists

Repositories might provide publication lists for researchers, to which they can link from their homepages, exportable to various reference manager formats, reusable for grant applications, as a benefit to researchers.

Researchers' profiles

Publication lists could be enhanced by photos, addresses and CVs, supplemented by impact indicators to form complete researcher profiles. An example could be the service provided by the University of Debrecen[20].

Feedback

Researchers like to get feedback on how much their deposited materials are accessed and used. It is a good idea to provide statistics, make the repository COUNTER compliant, and use widgets displaying conventional or alternative metrics.

Data and grey literature

Repositories should enable researchers to deposit datasets or grey literature (documentation, reports, white papers, theses etc.). It is becoming more widespread that journals, and more importantly funders, require supporting data to be accessible, so researchers might need venues for publishing their data.

Providing DOI identifiers[21] to deposited datasets and grey literature is a very useful service, as it could contribute to making these items citeable.

Increasing visibility

If researchers experience the improved visibility of their deposited input, the number of uploads will surely improve. Constant attention should be given to compatibility with aggregators such as Google Scholar[22].

Deposit in multiple repositories

National mandates, or mandates of complex organisations, can be colour-neutral: that is, they can accept publication in Open Access journals ('Gold' Open Access) and/or deposit in thematic or institutional repositories ('Green' Open Access) as compliance. An example is the mandate of MTA[23], where Gold OA (including publishing in hybrid journals), Green OA depositing to thematic repositories such as arXiV[24] or PubMed Central[25], and deposit to repositories of universities hosting supported research groups, are all allowed, as well as deposit to the Academy's own repository, REAL. Monitoring is possible through the mandatory use of the Hungarian National Scholarly Bibliography (MTMT). Every organisation or country operating a CRIS system could monitor compliance to colour-neutral mandates.

Connecting the bibliographic database with repositories can lower the burden on researchers. The MTA mandate obliges researchers to register their publication in the Hungarian national publications database MTMT[26]. With about the same effort, using the SWORD protocol, they can upload their publication to REAL, the default repository, and/or to other repositories. It is possible through this technology to upload the paper to multiple repositories at once.

The bibliographic database or CRIS system could, in principle, harvest relevant publication records from repositories or bibliographic databases, just as institutional repositories might harvest the full text of papers from thematic repositories. And through bilateral agreements publishers might deposit

20 Gyöngyi Karácsony, Edit Görögh: An iDEa to Utilise Repository Content in Innovative Ways. In: LIBER 2015. Poster Session I. **http://www.liber2015.org.uk/programme/**
21 DOI: **http://www.doi.org/**
22 Google Scholar: **https://scholar.google.com/**
23 Mandate of MTA: **http://real.mtak.hu/eprints/mandate.html**

24 arXiV: **http://arxiv.org/**
25 PubMed Central: **http://www.ncbi.nlm.nih.gov/pmc/**
26 MTMT: **https://www.mtmt.hu/**

bibliographic records or the full text. This would certainly be easier for the researchers. However, some organisations have the principle that recording or depositing publications could only be done by the author.

"Gold" Open Access

In the case of monitoring a gold mandate, either a local repository could be employed, where publications should be replicated, or a bibliography (CRIS) system. We have discussed the support needs of such infrastructure elements already in this paper. What follows here refers to the requirements unique to dealing with Article Processing Charges (APCs). The reader is referred to another PASTEUR4OA briefing paper on the general questions about APCs[27]. Here we discuss the supporting mechanisms necessary.

There are several external funds supporting APCs – like the Wellcome Trust[28] in the UK, or the OpenAIRE2020 Gold Open Access Pilot[29]. Institutions might collect and share information on such funding possibilities, or might even undertake the administration.

If there are local, institution-based APC funding possibilities, users should be informed beforehand and assisted throughout the process. Libraries should supply APC support information on their webpages, or a helpdesk or hotline could be set up. The most advanced possibility is setting up a web based tool – just like the one provided by OpenAIRE in the Pilot mentioned above.

On the other hand, to reach the most economic and the same time most streamlined process, institutions, or the libraries on their behalf, could negotiate agreements with publishers or enter into their membership schemes. Besides discounts, bulk payments are easier for all parties.

We recommend that the library should be the responsible organisational unit from the institutional side. Apart from several obvious reasons, the library manages the payment of journal subscriptions. To avoid double dipping (where the institution purchases a subscription and at the same time pays APCs to a journal) and to help to regain control over the costs of the scholarly communication system, subscriptions and APCs should be handled together.

Concluding remarks

There are many ways in which an Open Access mandate can be supported within a research-performing institution. While some of these do require authors to perform additional tasks, others can enhance the accessibility of the institution's outputs without troubling the authors at all – by implementing technological and institutional processes that promote and increase Open Access. This paper describes those processes as well as the author actions that are needed for compliance.

27 Marieke Guy, András Holl: Article Processing Charges. http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/PAST EUR4OA_Briefing%20Paper_APCs_final.pdf
28 Open access at Wellcome Trust:

http://www.wellcome.ac.uk/About-us/Policy/Spotlight-issues/Open-access/index.htm
29 OpenAIRE2020 Gold Open Access Pilot: https://www.openaire.eu/postgrantoapilot

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