
Open Access policy effectiveness: A briefing paper for UK Higher Education Institutions

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There are now almost 700 Open Access policies around the world, two thirds of them in universities and research institutes. There is considerable variation across these policies in terms of the conditions they lay down for authors and of their effectiveness. This briefing paper lays out the main issues that affect the effectiveness of a policy in providing high levels of Open Access research material.

What an Open Access policy covers

An Open Access policy covers a number of issues including when and where research articles must be deposited, the length of embargo permitted, whether waivers may be granted and under what conditions publication charges may be paid. The database of Open Access policies, ROARMAP¹, records each policy's conditions under a set of categories. This database as a whole provides a rich source of data to analyse when studying policy effectiveness, and the data included in this briefing are sourced from such an analysis.

The main areas that a policy on Open Access should address are:

- whether or not the policy is to be mandatory
- whether the policy stipulates how Open Access should be provided (through an Open Access repository or by publication in Open Access journals)
- where repository-based Open Access is concerned, in which repository (or repositories) items may be deposited
- the length of permitted embargoes
- whether there are to be sanctions in the case of non-compliance
- whether there are to be any particular requirements regarding licensing, including whether authors should retain certain rights over their work (in practice, this means retaining the right to make the work Open Access by depositing it in an Open Access repository)

Analysing the effectiveness of policies

As part of the PASTEUR4OA project, all of these things and more were recorded for every Open Access policy in existence and entered into the ROARMAP database. It was already known that only mandatory

¹ Registry of Open Access Repository Mandates and Policies: <http://roarmap.eprints.org/>

policies raise the levels of Open Access material above that of the general baseline level of voluntary provision (about 15%).

The project therefore looked at the mandatory policies in place at over 120 universities around the world and assessed the effectiveness of each policy. This was measured in terms of the percentage of Open Access material available from each institution compared to the total number of articles published from those institutions each year.

The analysis involved looking at how each element of the policy affected its success. This was done by regression analysis, which provides data on whether there is a positive correlation between effectiveness and a policy element, and if that positive correlation is statistically significant, which is a stronger level of correlation.

The important elements of a policy

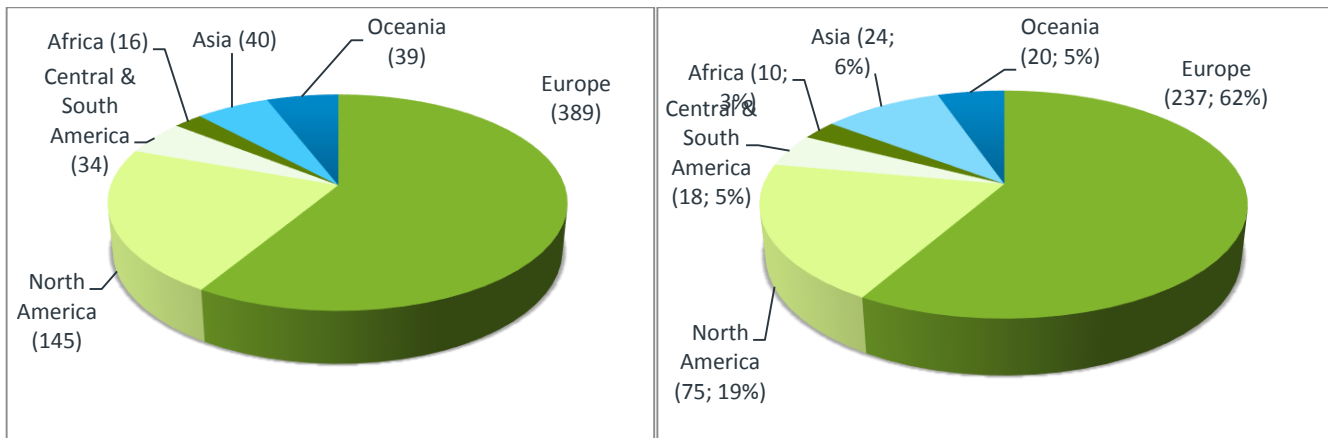
The analysis showed that the following elements of a policy are positively correlated with a successful outcome:

- The policy states that research articles must be deposited in the institutional repository (that is, the policy is mandatory)
- The policy states that this action cannot be waived: that is, whatever the conditions of embargo, the article must be deposited at the point specified by the policy
- If the policy states that an author should retain certain rights over the published work, this action is mandatory and cannot be waived
- The policy states that deposited items must be made Open Access, and if there is an embargo then they must be made Open Access immediately the embargo comes to an end
- The policy links the deposit of articles with research assessment/performance evaluation procedures within the institution: that is, the policy states that articles that are not deposited in line with policy requirements will not count towards performance reviews or research assessment exercises

Policy element	Positive correlation
Articles <u>must</u> 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	☑

The critical elements of a policy

It seems obvious, but is backed up by the statistical analysis, that the most critical elements of a policy are that it requires that research articles be deposited in an Open Access repository. In addition, the policy must state that this deposit step cannot be waived. These are the first two points in the list above and analysis showed them to be significantly correlated with resulting high levels of Open Access and, of course, they make the policy a mandatory one.



The number of Open Access policies (left) and mandatory policies (right)

The other statistically significant element of a policy is the link between deposit and research assessment (performance evaluation). All three of these policy elements are significantly associated with success.

Policy element	Positive correlation	Significant correlation
Articles <u>must</u> be deposited	<input type="checkbox"/>	<input type="checkbox"/>
Deposit cannot be waived	<input type="checkbox"/>	<input type="checkbox"/>
Deposit of articles is linked to research evaluation (performance assessment)	<input type="checkbox"/>	<input type="checkbox"/>
Articles must be made Open Access	<input type="checkbox"/>	
Where the policy stipulates that authors retain certain rights, this cannot be waived	<input type="checkbox"/>	

The model Open Access policy

Now that we understand what a policy needs to say to have a successful outcome, it is relatively simple to design an optimal Open Access policy. A policy must make its requirements of authors minimally burdensome: at the same time, it must require the actions (listed above) that are essential to provide Open Access. The policy should therefore address these issues specifically and an optimal policy will include them all as non-negotiable requirements.

It is also recommended that a policy stipulates that deposit it made at the time of acceptance for publication of an article. While the requirement for deposit immediately upon acceptance may seem to be in contravention of publisher embargo requirements, it is not. The deposit step is a separate action from making an article openly available and the publisher has no sanction over it. The aim is to get authors to deposit their articles as they are accepted for publication, which is the moment they are dealing with the paper for the last time in practical terms. So long as a paper is deposited, the author need not worry about it any longer: if it is under a publisher embargo the repository software automatically opens the article and makes it public at the end of the embargo period.

Finally, the version of an article that such a policy should specify for deposit is the author's version, once it has been peer-reviewed and all the changes required by the review process have been made. This is the final version that the author has, the last one submitted for publication once all corrections have

been made: it will vary only marginally, if at all, and certainly not in substance, from the published version in the journal.

Why this type of policy works

A policy that includes all these criteria and is implemented properly at the institution will succeed in gathering a large volume of Open Access content. The requirement to deposit, and the insistence that this step cannot be waived for any reason, ensure that authors deposit their work.

The authors themselves can be reassured that if there is any sound reason for not making the work Open Access at the time of deposit – a publisher embargo requirement, for example, or ethical or legal reasons why the work should not be made public – then the full text of item can remain closed for the duration of an embargo period, or even forever in those extremely rare cases where there is a legitimate reason.

Policies of this type

The numbers of policies that are like this model-type policy are growing. The first was from the University of Liège (Belgium) and others that have followed suit include the University of Minho (Portugal), University of Turin (Italy), University of Ghent (Belgium), Durham University (UK), as well as a number of national and international research funding agencies such as the European Commission’s Horizon 2020 programme and the UK Funding Councils.

The Open Access policy issued by the UK Funding Councils² – also known as Higher Education Funding Council for England (HEFCE) Open Access policy or the post-2014 Research Excellence Framework (REF) Open Access policy – is of this model-type. This means that UK Higher Education Institutions (HEIs) making this type of policy are aligning their own policy with that of HEFCE. This is important for UK universities as they are all required to comply with the Funding Councils REF assessment criteria and Open Access has become an inclusive part of the post-2014 REF evaluation. This is also important for researchers based in UK HEIs as, in the cases where HEIs adopt this model-type policy or align their Open Access policies with HEFCE’s policy, researchers will benefit from their funder’s and institution’s policies having matching requirements, making it simpler to comply with both policies through one set of actions.

HEFCE’s Open Access policy was announced in March 2014 (revised in July 2015) and was formulated following an extensive consultation with higher education institutions, representative bodies, learned societies, publishers and other research funders. HEFCE’s policy aims to ensure that there is a substantial increase in the amount of research outputs made available on open access in HEIs. More specifically, the policy requires that peer-reviewed articles and conference proceedings published from 1 April 2016 become available on open access. HEIs have been strongly encouraged to start promoting compliance with the policy within their institutions from the time the policy was announced.

Policy element	HEFCE’s policy content
Articles <u>must</u> be deposited	Peer-reviewed articles and conference proceeding accepted for publication after 1 April 2016 must be deposited in institutional or subject repositories

² Policy for open access in the post-2014 Research Excellence Framework: <http://www.hefce.ac.uk/pubs/year/2014/201407/>

Deposit cannot be waived	Deposit of items is required; deposit and discovery requirements must be met but access exceptions allow closed-access deposit
Deposit of articles is linked to research evaluation (performance assessment)	Making peer-reviewed articles and conference proceedings available on open access is a research evaluation criteria for the post-2014 REF
Articles must be made Open Access	Contents submitted to the post-2014 REF must be made available in an open access form
Where the policy stipulates that authors retain certain rights, this cannot be waived	Although the HEFCE policy does not stipulate retention of rights, it does have advice and recommendations on this, as follows: <ul style="list-style-type: none"> Advise that licenced contents use CC BY-NC-ND licence; Recommendation that research institutions consider the extent to which they currently retain or transfer the copyright of works published by their researchers.

The time period between the announcement of HEFCE’s policy and its effective start date, 1 April 2016, has been allowing HEIs to consider what processes, procedures and systems will need to be in place to monitor policy compliance and to report on progress³. In order to ensure that its policy is effective, HEFCE has been working closely with various stakeholders to provide input into the development of the RIOXX metadata application profile⁴. This application will ensure that the right metadata is recorded by institutional repositories, that consistent tracking of open access publications is maintained and that, ultimately, systematic information can be collected to report on policy compliance.

At the institutional level, the number of UK HEIs with Open Access policies has significantly increased in the recent years. There are currently 85 institutional Open Access policies. The number of mandatory Open Access policies that are compatible with the model-type Open Access policy is also increasing. To provide a more detailed description of the UK HEIs Open Access policies that meet the important elements of a policy, information on these elements was retrieved from ROARMAP and cross-checked against each HEI Open Access policy for accuracy. The information collected shows that the total number of UK HEIs that cover the important policy elements are:

Policy element	Number of policies
Articles <u>must</u> be deposited	71
Deposit cannot be waived	17
Deposit of articles is linked to research evaluation (performance assessment)	9
Articles must be made Open Access	38
Where the policy stipulates that authors retain certain rights, this cannot be waived	0

To give some examples of HEIs whose Open Access policies cover a minimum of two important elements, it is observed that:

- 38 research institutions Open Access policies meet two criteria: articles must be deposited, articles must be made Open Access these two criteria (e.g. University of Huddersfield, University of Leeds, University of Warwick);

3 Open Access and the REF: Issues and Potential Solutions: <http://find.jorum.ac.uk/resources/10949/19866>

Implementation of HEFCE Open Access policy for the next REF within the College of Medicine and Veterinary Medicine, University of Edinburgh: <https://www.era.lib.ed.ac.uk/handle/1842/10010>

School Open Access Implementation Plan with Risk Register: <https://www.era.lib.ed.ac.uk/handle/1842/10013>

4 RIOXX Guidelines and Application Profile: <http://rioxx.net/>

- 12 out of these 38 research institutions Open Access policies also specify that deposit cannot be waived (e.g. Royal Holloway, University of Southampton, University of St Andrews);
- 7 out of these 38 research institutions Open Access policies also link the deposit of articles to research evaluation (e.g. King’s College London, Lancaster University, Strathclyde University);
- 8 out of these 38 research institutions have considerably high deposit rates with more than 40,000 items deposited per individual institution, although some of these will be bibliographic metadata-only items amongst full-text deposits (e.g. University College London, Imperial College London, Queen’s University Belfast).

Rationale for Open Access policy alignment

As outlined in this brief, there are important policy elements which should be an inclusive part of Open Access policies. This model-type policy has demonstrated that it can provide high levels of Open Access research material and consequently demonstrated that funders and institutions adopting this model-type policy can ensure greater effectiveness of their policies. The reasons for promoting the implementation of this model-type policy as well as for aligning Open Access policies with those of the Horizon 2020 Open Access policy and HEFCE’s Open Access policy are manifold. In particular, Open Access policy alignment would make it easier for researchers to comply with funders and institutional policies through one set of actions, it would also harmonise the policy landscape for researchers across Europe, it would heighten the scope for more scientific information to be freely accessed online, and it would reduce the burden of academic support staff that need to report on and monitor policy compliance.