

## **From zero to 83% compliance in one year: an open access case study**

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David Young  
Research Funding and Policy Manager  
Northumbria University  
Email: [david.g.young@northumbria.ac.uk](mailto:david.g.young@northumbria.ac.uk)

Ellen Cole  
Scholarly Publications Librarian  
Northumbria University  
Email: [ellen.s.cole@northumbria.ac.uk](mailto:ellen.s.cole@northumbria.ac.uk)

### **Abstract**

Research funder Open Access (OA) policies present challenges for institutions with aspirations to grow research activity but which have been allocated relatively small amounts of funding on the basis of historical funding success rates (e.g. the Research Councils UK OA block grant). Challenges include divergent funder and publisher policies on open access, lack of knowledge among the academic staff base, a lack of internal or external funding for article processing charges, and managing those payments where they do occur to ensure value for money and compliance with policy. This case study examines Northumbria University's approach to these issues, focusing on the importance of collaboration across services – especially Student and Library Services and Research and Business Services. This has enabled Northumbria to move from low levels of staff engagement with OA in 2014/15 to high engagement and impressive levels of compliance in 2015/16, evidenced by the University's achievement of 83% compliance with Research Councils UK (RCUK) OA policies. The case study is an analysis of strategies and practical interventions across three thematic areas relevant to an OA service: institutional policy, workflows, and advocacy. We demonstrate that an integrated approach to all of these areas is important to ensure effective engagement with OA policy in the context of low external funding for OA. The case study is situated in the context of existing literature on approaches to OA policy in higher education, and we provide a critical analysis of distribution and usage of RCUK block grants in UK higher education. Finally, we critically reflect on the extent to which our views and professional practice have changed as a result of engaging in the activities described in this case study.

### **Context**

Open access to research articles (OA) has in the past 5 years become one of the fastest moving and most complex areas of policy in the UK higher education (HE) research landscape. The principle underpinning OA is a simple one, articulated succinctly in the

Budapest OA Initiative declaration (2002) that peer-reviewed research outputs should be made available to all, completely free and with unrestricted access. Benefits of OA include enhanced transparency, accountability, and potentially increased return on investment for research (Tickell, 2016). Broadly speaking, there are two routes to make peer-reviewed research OA, commonly known as “Green” and “Gold”. Green OA is achieved by depositing the metadata and final peer-reviewed text (also known as an “author accepted manuscript”) of an article in an institutional or subject repository, and is often subject to an “embargo” by the publisher (a varying period of time which must elapse before the full text can be made available). Gold OA is achieved by the publisher making the “version of record” (the final typeset copy) available on the journal website immediately upon publication, with an appropriate license to allow re-use. Publishers often charge what is known as an article processing charge (APC) for this, which can vary from less than £100 to over £3,000 (\$139-4158 USD) per article (Burgess, 2015, p11). (\$139-4158 USD)

The UK is widely seen as a leader in the open access movement (e.g. Harnad, 2013; Tickell, 2016), in part because of the policy drivers from government and funding councils in support of OA. However, the practical realities of implementing these policies for academics, research managers and librarians in the context of a scholarly publication landscape in transition are not as straightforward as the principles might suggest. For example, a number of studies (e.g. Jisc et al., 2016; Waaijers, 2015) have suggested the academic journal market is currently dysfunctional and this leads to significant financial challenges for universities which are in many cases struggling to balance payments of article processing charges (APCs), incurred on a per-article basis, with “big deal” subscriptions to publishers.

Prior to about 2011/12, OA was considered an issue primarily if not exclusively associated with university libraries, however major recent policy announcements from Research Councils UK (RCUK, 2012)<sup>1</sup> and the Higher Education Funding Council for England (HEFCE, 2014) alongside developments in research management and information systems have made OA increasingly relevant and important to a wider range of stakeholders across the university. These include the research office (because of its implications for research funder compliance and integration with research information systems), finance and planning (because of its cost and reputational implications), and senior management (because of its importance in future Research Excellence Framework exercises). Arguably, the research management community’s consideration of and engagement with the complex issues surrounding open scholarship is still at a relatively early stage (Rogers, 2014) and has been

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<sup>1</sup> The first RCUK OA mandates were actually published in 2006 (Picarra 2014) and these required deposit in an OA repository. However, following the Finch report (2012), there was a shift in direction away from Green and towards Gold OA.

driven primarily by the need to ensure compliance with funder policy. It is clear though that research managers and administrators have a key role to play in the transition to OA and it is instructive to consider how they might effectively work with other institutional stakeholders, particularly libraries, to facilitate this.<sup>2</sup>

## Challenges and responses

The move to OA in UK HE has presented a number of challenges for professionals in research management and related areas (e.g. Picarra, 2014; Bayley et al., 2015; Dobson, 2015). These challenges include:

- *Divergence in funder policies:* RCUK's policy (2012), taking the lead from Finch (2012), strongly favours Gold OA, though allows for compliance through the Green route if funds are not available. Other research funders have varying positions on OA, from leaving it to the author to decide (e.g. Leverhulme Trust) to strongly Gold (e.g. Wellcome Trust). For most institutions which have a mixed funding portfolio this presents challenges for library and research management professionals who are often called upon to advise academic staff on whether their chosen publisher is compliant with funder and institutional policies. Jisc have adopted the SHERPA-Juliet and SHERPA/FACT services (<http://www.sherpa.ac.uk/juliet/> and <http://www.sherpa.ac.uk/fact/>) to assist with this.
- *Compliance with future research assessment exercises:* HEFCE has developed a strongly Green policy for future research assessment exercises, from April 2018 they have required deposit of the "author's accepted manuscript" (the final peer reviewed text) in an institutional or subject repository on acceptance to ensure eligibility for the next REF (HEFCE, 2014). This has been described as a "game changing" policy (Aucock, 2014) because of its deliberate emphasis on authors taking responsibility for making their outputs OA. Indeed, in an article in Insights which elaborates on the context to the HEFCE policy, Sweeney & Johnson (2014) explain that they want OA "to become a matter of routine for authors to ensure their eligibility for future research assessments".

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<sup>2</sup> Between 2014-2016, Northumbria University led a Jisc-funded Open Access Pathfinder project (see below) which dedicated a large part of its work to producing detailed case studies seeking to understand the approaches of a range of institutions to OA. The case studies explored issues of staff resource, external and internal funding for OA and researcher attitudes at a range of UK higher education institutions (Northumbria-Sunderland OA Pathfinder, 2015). The present case study gives an overview of Northumbria's approach to OA and is independent of this Pathfinder work, but complements some of the findings. Specifically, here we emphasising explore the benefits and tensions of a collaborative approach taken across service departments (see also: Aucock, 2014). The Jisc OA Pathfinder programme encompassed nine projects hosted at a range of UK universities which developed shareable models of good practice with regard to implementation of research funders' OA requirements: <http://openaccess.jiscinvolve.org/wp/pathfinder-projects/>

- *Advocacy and knowledge of OA policy:* OA advocacy efforts by library and research management staff have been given new urgency and impetus following the publication of RCUK and HEFCE policies (Aucock, 2014). However, engagement is still challenging and knowledge of OA is often patchy or incomplete, and varies between disciplines. For example, Bayley et al. (2015) identify three domains of knowledge about OA - fact, unsure and confused - and cite numerous examples of the latter two domains, including uncertainty about the different routes to achieving OA and what is required by different funders. Our own Pathfinder case studies (e.g. Hall & Young, 2015) highlight differences in understanding that in some cases appear to relate to career stage: early career researchers in one department were more receptive to the OA message than more experienced researchers.
- *Lack of external funding to support OA:* Since 2013 open access publication costs have been an ineligible cost on RCUK grant applications. Instead, RCUK has allocated a “block grant” to institutions on the basis of an algorithm based on historical success rates (RCUK, 2012; Burgess 2015). 107 research organisations received an RCUK block grant in 2015/16. Approximately half of the £22.6m (\$31.32m USD) allocation goes to 10 universities. For those receiving a relatively low amount of RCUK block grant there are challenges in deciding how to manage this, and managing expectations of researchers who want to access funds.
- *Managing APC payments:* Even where funding exists to pay APCs there are issues in managing these and creating robust workflows to deal with them. For example, at Northumbria there are issues in processing payments where authors have already raised an invoice before a purchase order has been raised. This contradicts the University’s financial regulations, and Library staff need to spend sometimes significant amounts of time resolving these issues. Use of a credit card can overcome this, but only where APCs fall below the maximum limit permitted by the institution. Durham University exclusively pays APCs via credit card, but this card has one of the highest individual purchase spending limits in the University (Cole & Young, 2015).
- *Linking outputs with funding and reporting:* Related to this, there are further challenges in terms of identifying outputs which are linked to RCUK funding and affiliated with the institution (Pontika & Rozenberga, 2015). As the process of administering APCs can require a great deal of manual effort (Sikora & Geschuhn, 2015) it can be difficult for institutions to clearly identify costs associated with making articles Gold OA, and therefore to report or recover them: “Many therefore find themselves carrying forward significant balances of unspent RCUK funding, even though the overall cost they have incurred is likely to exceed the value of grant received” (Research Consulting, 2014, p9).

UK universities have taken a variety of approaches to dealing with the challenges presented by OA. Typically UK HE OA policies can be summarised as “Green first, Gold where required” because of the higher costs of Gold OA. According to the Registry of Open Access Repository Mandates and Policies (ROARMAP), 87 UK universities have some form of OA policy. Of these, almost all (86) *require* or *request* Green OA deposit in an institutional or subject repository. In contrast, according to ROARMAP only 16 universities provide their own institutional funding for Gold OA, and only 2 of these formally *recommend* Gold as an alternative to Green in their policy. There is a substantial group (42) which *permits Gold as an alternative to Green*. The data indicate that universities have considered the balance between Green and Gold when formulating and adopting OA policy, and most have come out strongly on the side of Green, with the option of Gold in some cases. Even where funding for APCs is available this is not the limit of the costs associated with Gold OA, as the “Counting the costs of open access” report demonstrated: “[i]n the case of less research-intensive institutions, the cost of implementation vastly outweighs spending on articles, and is substantially greater than the block grant funding these institutions receive from RCUK” (Research Consulting, 2014, p2).

### **Research Council block grant analysis**

In April 2013 RCUK transferred the mechanism for payment for APCs from individual grants to annual block grants awarded at an institutional level. The size of the block grant is determined by previous RCUK-funded research activity, using direct labour costs of grants awarded in 2009-2012 as a proxy for the scale of research publication activity.

In the 2013/14 academic year, the total block grant fund of £17m (\$23m USD) aimed to enable Open Access to 45% of journal articles. Block grants ranged in amount from £6,330 to £1,151,812 (\$8772-1.6m USD), with funds to each institution set to increase incrementally each year. This was to account for an expected growth in take up, but the relative size of each block grant remained linked to historic research funding.

The new funding mechanism left institutions projected to receive less than £10,000 (\$13,859 USD) by the fifth year of funding without a block grant. Others receiving smaller grants did not have enough funding to achieve even target levels of compliance, given the preference for gold open access. At Northumbria, the RCUK block grant of £8,033 (intended for 5 APCs) in 2013/14 and £9,451 (for 6 APCs) did not provide sufficient funding for the target 45% compliance in the first year, and would not keep pace with the targeted 15% annual growth in RGCI at the University set to achieve the University’s transformative research vision. (\$11,133 USD in 2013/14 and \$13,098 in 2014/15)

The 2015 review of policy implementation highlighted difficulties for institutions in administering block grants and ensuring compliance to the policy, as the new funding mechanism required completely new workflows and institutional payment infrastructure (Burgess, 2015, p. 21). Academics had to be made aware of changes to the policy and the OA requirements, and institutions had to manage centralised funds and decide policy to determine access and usage. There is also a fundamental difficulty in enabling and measuring open access to funded articles, as it is not always clear where a published paper is linked to a particular grant. The link largely depends on the grant recipient notifying whichever central service manages the block grant and/or institutional repository of their intent to publish to make arrangements for compliant Open Access. It is possible to check after publication if a funder is acknowledged on the paper, but this too depends on the grant recipient to make a declaration at a particular point in the publication lifecycle. Checking acknowledgements after publication is unlikely to result in compliant OA, as at this stage it is too late to advise on compliant green options or pay an APC. Furthermore, this is not possible for institutions with a high volume of research publication (Burgess, 2015, p.21).

By the end of the 2014/15 academic year some institutions reported underspend of their block grant. Examples, from data shared publicly, include a surplus of £1,751,863 (\$2.43m USD) at Imperial College London (Reimer et al, 2015), £213,888 at Queen's University Belfast (\$296,431 USD), where £26,313 (\$36,467 USD) were spent on non-staff costs (Holden & Gorman, 2015), and £172,234 (\$238,702) at the University of Glasgow, with a £19,919 (\$27,606 USD) non-publisher spend (McCutcheon, 2015). At Northumbria, in order to achieve 83% compliance - using the green route for some publications, and using funds carried over from the first year of implementation (permitted by RCUK) - the University spent £1,349 (\$1,869) of institutional funds on APCs in RCUK-funded research publications (Woolley & Cole, 2016).

The block grants enable some institutions to develop OA infrastructure and give authors choice of green or gold routes, with greater opportunity to enable immediate open access to their funded research, with funds to spare. Those with smaller block grants must commit all funds to APCs in order to ensure compliance, and risk problems where, once the fund is spent, a journal may not be compliant with the embargo policy for green OA. This limits author choice in OA and restricts access to publications until embargoes end, and risks creating a two-tier system for open access to RCUK-funded research as highlighted in the Burgess review (2015, p25).

## **Case study – Northumbria University: From 0 to 83% compliance**

Northumbria University's OA policy is underpinned by a commitment to grow high quality research and apply knowledge for the benefit of society. The University's ambitious vision to become a top 30 UK university by 2025 requires a step change in research volume, quality and intensity, including in research grant and contract income (RGCI) and publications. This overarching strategy informed the University's response to the challenges presented by OA, and in particular our view on the balance between Green and Gold OA. The fact that the RCUK block grant allocation is based on historical success - and therefore is relatively low - is particularly challenging for an institution like Northumbria wishing to grow research activity.

The combination of institutional and national policy context presented above provides the Stakian (1995) frame of issues for this case study. The two key questions guiding and setting the boundaries for this case study are: 1) How can a university with limited external resources respond effectively to the challenges and opportunities presented by open access?; and 2) To what extent are the approaches taken by Northumbria adaptable in other institutional contexts, both within the UK and worldwide? The remainder of this article addresses these questions by describing and critically reflecting on work carried out collaboratively by Library and Research and Business Services staff at Northumbria. The case study is structured under four main thematic headings which reflect different areas of the work which led ultimately to an increase in compliance with RCUK OA policy: Policy and APC fund; OA workflows; Advocacy; and Collaborative working. This is presented roughly in chronological order, though some of the reflections on the processes and collaborative working require discussion of several different periods at once to give an assessment of the effectiveness of various activities. We believe the lessons learned from this case study will be interesting and useful especially for those institutions with similar research profiles and/or where staff resource for OA is limited.

### **Policy and APC fund**

In early 2013, the University Library, already involved in management of the institutional repository and piloting payment of article processing charges, identified that an institutional fund that made up the shortfall in RCUK funding and offered support for APCs for unfunded research presented an opportunity to align professional advocacy and service delivery to our corporate strategy objectives of increasing research publication and RGCI. In addition to a policy requiring deposit to NRL upon acceptance, a data-driven business case for funds could turn the challenges of OA into an opportunity to increase access to our research and drive up research quality. The rationale was that access to the fund would be contingent

upon either having funded research or having a paper accepted for publication by a high quality and impactful journal.

A Research and Innovation Committee meeting in February 2013 considered a paper by the University Library setting out the implications of the Finch Report for the University. In response, they convened an OA working group, with representation from all academic faculties, Finance, Research and Business Services and the University Library, to consider both a University policy on Open Access and an institutional fund for APCs. This signalled a key aspect of the approach to OA at Northumbria, a commitment from senior management to engage both academic and professional support service in developing policies that considered all stakeholders.

A paper setting out an approach to Open Access, suggesting policies and cost models for APC funds, was considered again in May 2013, and sent to University Executive for approval. The Executive requested a more detailed analysis of potential costs under different Green and Gold OA scenarios (100% Gold to 100% Green and various options in between). In February 2014, a policy and publication fund were approved by University Executive, with the size of the fund calculated by considering current and planned levels of research and an average article processing charge based on high ranking journals.

The REF 2014 submission was the basis of existing levels of high quality research. Projections for expected growth in number of publications were used to calculate an estimated number of publications to be submitted to the next REF. Costs of APCs were calculated by identifying the top twenty journal titles for each unit of assessment in Journal Citation Reports and calculating an average APC for each. This created a cost model with variable levels of funding to achieve OA for variable levels of REF-able research. University Executive approved a fund of £50,000 (\$69,296 USD) for the first year of the institutional fund, set to increase by £50,000 (\$69,296 USD) in the second year.<sup>3</sup>

## **OA workflows**

Once the internal APC fund had been agreed, the next step was to agree an internal workflow and decision-making process for OA which incorporated both Green and Gold routes. This work took place during 2014. Although this necessarily focused on the publication phase of the research lifecycle, Research and Business Services (RBS) and the Library developed the workflow jointly because of the connection with funder policies, in particular RCUK. It was decided at an early stage that all publications which arose from

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<sup>3</sup> The cost modelling tool has been adapted for use by other institutions:  
<https://oapathfinder.wordpress.com/2015/07/06/cost-modelling-tool-now-available/>



research funded by a funder which mandates or prefers Gold OA (including RCUK) would be able to access the APC fund. This was important to ensure that the process was as straightforward as possible for funded researchers, and to make sure they were not burdened by additional bureaucratic procedures. For other funders which do not mandate Gold OA, authors are encouraged by the pre-award team in RBS to add in APC costs at application stage where appropriate. Figure 1 shows a simplified schematic version of the OA decision-making process at Northumbria University.

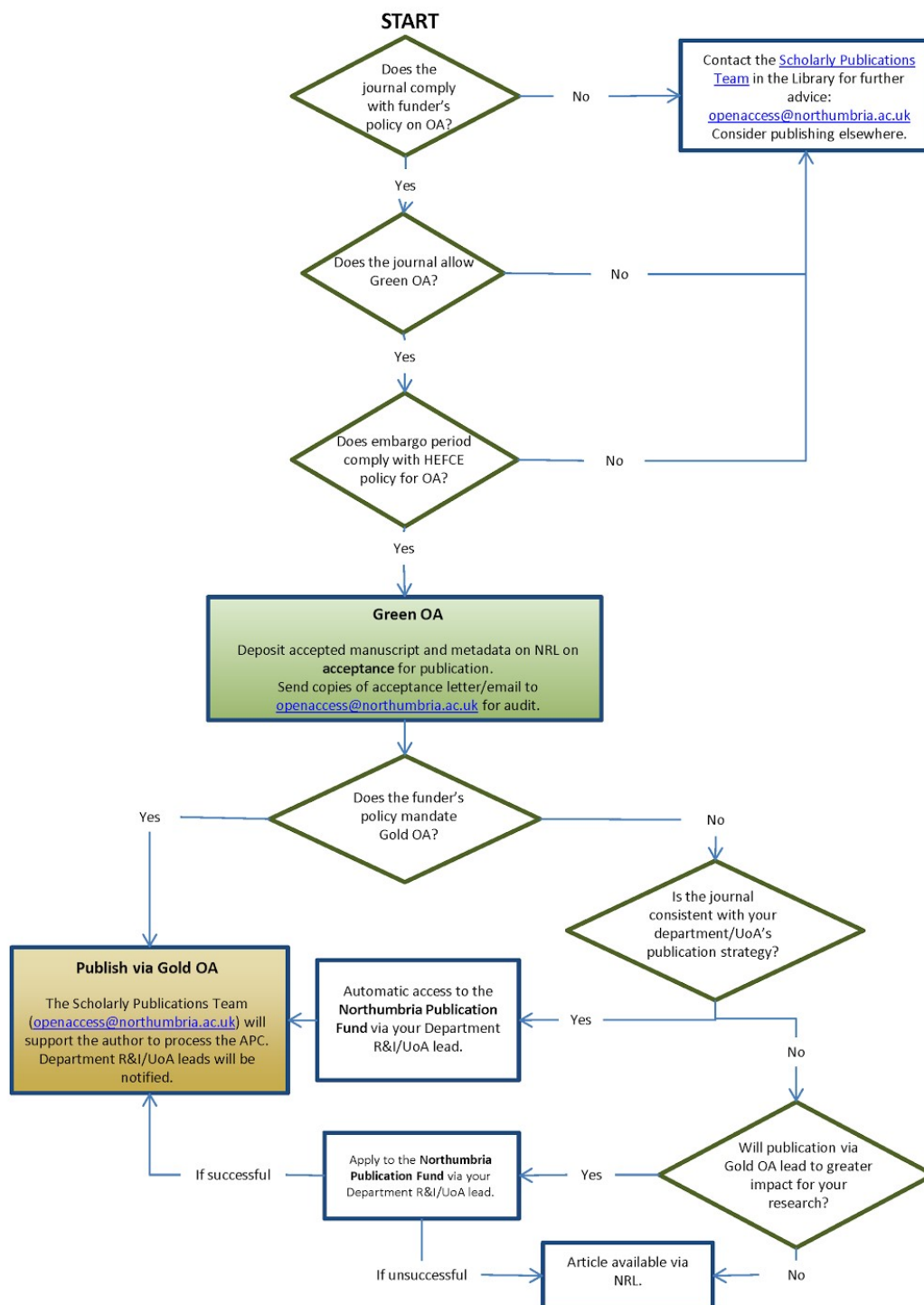


Figure 1: Northumbria University OA workflow/decision-making process

Northumbria's OA policy adopted in 2014 allows a route to the APC fund for authors not funded by RCUK but where Gold OA publication would enhance the impact and visibility of

the research.. The decision to use institutional funds to pay an article processing charge requires academic input on the significance and potential impact of the research. Initially, following discussion in the OA Working Group, this was to be achieved through the preparation of shortlists of high quality journals for each department. This was intended as a light touch process which retains a level of academic judgement - on the quality of the journal and its peer-review processes, rather than the research itself. The main benefit of a list-based approach is that it saves time, because academic research leads do not have to make decisions on each individual paper. Journal shortlists were not seen as appropriate or workable for all departments and disciplines, however. In particular, arts, humanities and social science disciplines preferred to make decisions on access to the fund on a case-by-case basis, considering the quality of each publication individually. Despite these differences in approach, the common factor is that access to the fund in cases where it is not mandated by the funder is based on an academic decision, managed by departmental research leads. The usage of the fund is also reported regularly to both the OA Working Group and the Research and Innovation Committee (which is the highest level of decision-making authority on research matters in the University). This ensures that decisions can be monitored and prompt action can be taken if, for example, the fund is being over- or under-used in certain areas.

While the Gold OA route and associated APC fund required a significant amount of preparatory work, a commitment to Green OA and particularly the repository has always underpinned the University's approach to OA. Both the policy and associated workflows mandate digital deposit of the full author accepted manuscript on acceptance to ensure compliance with HEFCE policy. The balance between Green and Gold adopted by Northumbria, then, is Green in all cases, with Gold supported in "selected" cases. As mentioned, the selection is based on an academic decision making process and this is used to support and encourage the publication of high quality research in journals aligned to local and institutional research strategy.

Another key consideration was how to present the OA policy and proposed workflows to academic staff. The principle was to keep this as simple as possible and also to keep the Library as the first point of contact. Therefore the Library set up a shared mailbox ([openaccess@northumbria.ac.uk](mailto:openaccess@northumbria.ac.uk)) to ensure all queries were routed through the Scholarly Publications Team, which manages the institutional repository. A simplified version of the workflow and a decision-making tool were developed for the website and promoted to

academic staff.<sup>4</sup> By late 2014, the Library was reporting expenditure on the 2013/14 RCUK block grant allocation and compliance with RCUK OA policy (Woolley & Cole, 2014). Because the policy and APC fund had not yet been communicated widely, Northumbria's compliance was 0%. Further work was clearly needed to ensure widespread knowledge of the OA policy and fund.

## **Advocacy**

Starting in early 2015, the Library and RBS collaboratively delivered a series of 2 hour workshops to academic faculties across the University outlining the policy and the procedures to access the APC fund. These had mixed success in terms of dissemination. Two of the faculties invited academic staff and in the other two the meetings were restricted to departmental research leads and members of the faculty executive. A more effective route for dissemination and advocacy proved to be short briefings at departmental meetings, which were offered to all departments following the faculty workshops and were again delivered jointly by the Library and RBS. Departmental meetings are held approximately monthly and are not specifically convened to discuss OA: agendas cover a wide range of teaching and research items. They are also usually well attended by a broad group of staff - not only those who are already engaged with RBS and the Library. Having only a short slot as part of a wider agenda meant that the message needed to be punchy and focused mainly on compliance with HEFCE and RCUK policy, but feedback following the briefings and subsequent uptake of the APC fund indicates that, where it was delivered (see *Collaborative working, reflections and remaining challenges* below) it was an effective way spreading the message. These sessions have predominantly been delivered by one representative from the Library and one from RBS, depending on availability. As dedicated staff resources for OA are limited, Northumbria's approach has been to spread knowledge and understanding of the OA policy and its implications as widely as possible across our teams supporting research in the Library and RBS.

We also encouraged faculties to include an item on OA policy and the APC fund on their Research and Innovation Committee meetings and delivered more in-depth training as part of several University-wide staff development programmes. Tailored sessions were also delivered to RBS pre- and post-award staff to raise awareness and ensure that the message on OA was being communicated throughout the research lifecycle. Based on informal feedback after these sessions, staff felt that the strong financial commitment to the APC fund

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<sup>4</sup> Northumbria's OA decision-making tool was developed by Library staff as part of the Jisc-funded OA Pathfinder project and is based on the widely used Libsurveys tool:

<http://northumbriauniversity.libraries.com/loader.php?id=ee085006dd685e37606384a3feb2b80>

reflected a wider commitment to OA at the highest levels of the University. This commitment helped to raise the profile of OA arguably more than if Northumbria had simply mandated Green and only paid APCs from the RCUK block grant. The fund has arguably also demonstrated a commitment by the University to increase access to research, and to support its researchers working in the current environment of funding and publication. The fund may have helped to drive up research quality – promoting more internal peer review of articles prior to submission, for example, and encouraging academic staff to aim for journals which are judged in a particular discipline as “better quality” and “more impactful” (e.g. Nature).

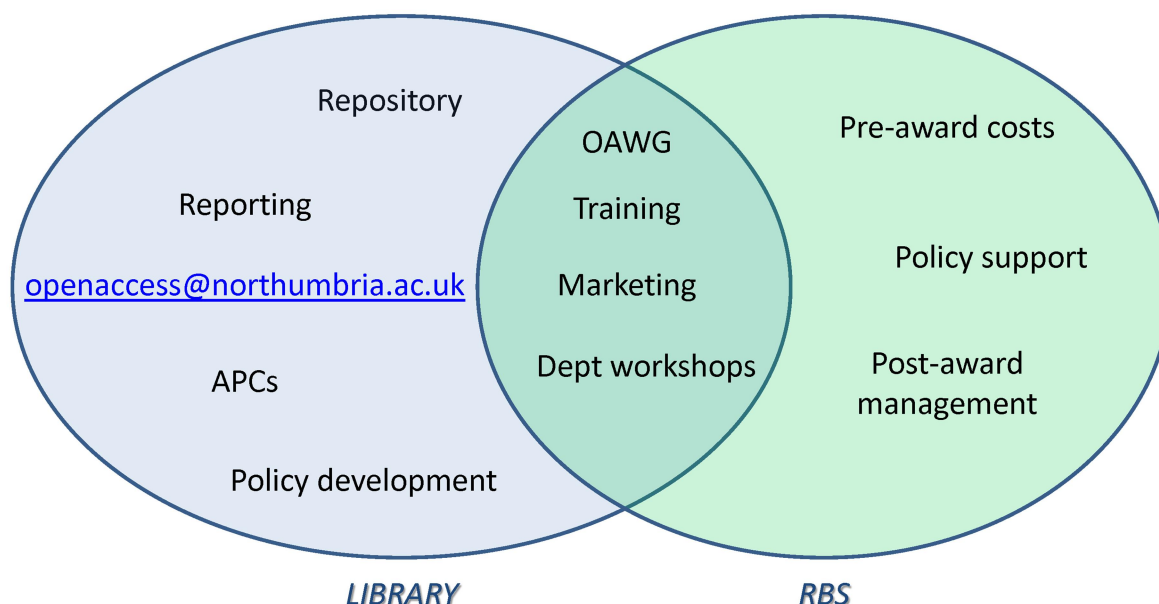
Alongside these advocacy events, we developed marketing materials and a simple campaign. We based this on another successful University-wide campaign led by Student and Library Services which focused on “when to refer” students who need specialist advice and support. The campaign involved developing a simple externally-facing web portal (<https://www.northumbria.ac.uk/research/open-access/>) for OA at Northumbria which pointed towards further resources and the policy, as well as a letter from the PVC (Research & Innovation) personally addressed to all members of academic and research staff. The letter summarised the three key steps to achieving OA at Northumbria and the support available, as well as the consequences of not complying with the policy (particularly in terms of REF 2021 eligibility). Included with the letter were a branded pen and notepad which pointed staff to the web portal and the single point of contact email address managed by the Scholarly Publications Team in the Library. This was sent out to all staff in October 2015 and followed up with reminders on University desktop messaging service and with a screensaver. Following this the Scholarly Publications Team saw a significant increase in enquiries and activity. For example, there were 25 requests to the APC fund in Oct/Nov 2015 compared to 3 in the same period in 2014. Deposits to the University repository, Northumbria Research Link, have also seen an upturn, with 707 deposits in Oct/Nov 2015 compared to 533 in the same period in 2014.

Year	No. of deposits to repository	% of deposits with accessible full text	No. of articles made gold OA
2014/15	3733	21.8%	38
2015/16	3029	38.2%	128
2016/17	2897	51.6%	114
2017/18 (by June)	2512	52.7%	90

*Figure 2: OA through both green and gold routes facilitated by Scholarly Publications team*

## Collaborative working and remaining challenges

Taken together the above measures led to a substantial improvement in compliance with the RCUK OA policy, with 83% of publications linked to RCUK grants compliant with the policy in 2014/15. This position was sustained with 92% compliance in 2015/16, 97% compliance in 2016/17 and 91% compliance in 2017/18. Requests to access the APC fund have also increased substantially over the past 6 months. Expenditure on the APC fund in the 2015/16 academic year to July was approximately £137,000 (\$189,871 USD). 92 outputs were made OA through the fund in the same year. Collaborative working between the University Library and Research and Business Services, and more widely through various stakeholder involvement in the OA Working Group, has helped to achieve this improvement. The distinct and overlapping areas of responsibility in relation to OA are shown in Figure 2 below.



*Figure 3: Diagram representing distinct and overlapping areas of responsibility around OA at Northumbria University.*

The areas of joint working in the centre of the diagram arose more or less organically following the decision to adopt the APC fund in 2014. An initial relationship between the Library and RBS around open access had already been established through collaboration to deliver the REF2014 submission in 2013, and through joint membership of the Open Access Working Group which was convened in early 2013. It was clear from the early stages that RBS would retain responsibility for activities associated with grant applications and award management, and correspondingly the Library would maintain responsibility for the repository and reporting on compliance. As the proportion of the APC fund from RCUK

sources was relatively low in comparison to that provided by the institution, it was agreed that the Library would also manage that fund rather than RBS. The OA policy and workflow provided further support for this approach as the primary responsibility is for academic staff to deposit the accepted version in the repository, which requires early engagement with the Library. Rather than divert the user to another service (RBS) following deposit, it was logical to provide continuity of service from initial deposit through to APC request and finally OA publication, all of which would be coordinated or managed by the Library.

As discussed above, RBS and Library staff co-developed marketing materials and jointly delivered training and departmental workshops to raise awareness of the OA policy and fund. The genesis of this was in a series of higher level faculty workshops which were arranged shortly after the workflow and main responsibilities had been agreed. The effectiveness of these workshops was mixed, and the messages were not always clearly communicated to staff. Partly this was due to different approaches taken by each faculty to communicating the key messages: some faculties invited all staff (though unsurprisingly not all attended), while others restricted attendance to members of the executive team (dean, associate deans and research leads for each department). Following these meetings, staff from the Library and RBS discussed alternative approaches to staff engagement and jointly agreed to deliver short 15-30 min workshops which were offered to all departments. The intention was that these would be short enough to include as an item on the agenda at a departmental or research meeting that was happening anyway, thus ensuring good attendance and wide communication of the message. Where these were taken up this was indeed a time-effective way of communicating and advocating the OA policy and APC fund. However, just under half of departments actually took up this offer which clearly limited the reach of the message.

The most limiting factor for effective collaborative working was a lack of time and conflicting workload priorities, which applied to both RBS and Library staff. As neither team focuses solely on open access delivery, this work needed to be fit around other commitments. This undoubtedly led to delays in development of some of the marketing materials. With more time and/or staff resource a more proactive approach could also have been taken to encouraging departments to engage with OA workshops and briefings.

Despite excellent and rapid progress over the past two years, several challenges remain:

- Notwithstanding the advocacy efforts described above, understanding of OA and how it relates to funder policies among academic staff still remains patchy. This will become more urgent as the HEFCE policy comes into force. Moreover, staff

recruitment and turnover means that the advocacy work needs to continue and the OA message needs to be repeated often;

- The process of managing APC payments is still occasionally time-consuming. For the first few years of the OA policies, systems were not in place in the University to link published outputs to funded grants, making reporting a manual exercise. This situation is hoped to improve with the introduction of the Pure current research information system in 2017, which facilitates linkages between information held about publications and grants.

These problems are not unique to Northumbria and there are various efforts being made to resolve them across the sector, some of which are being coordinated and facilitated by Jisc. Given that we are in a period of transition towards full OA, it is likely that there will be a continual need to keep track of good practice and review policies, systems, and processes in relation to OA for some time to come.

### **Critical Reflection**

In this section, we use Gibb's model (1988) to structure our critical reflections on the above case study description, considering what went well and what did not go well, whether there was anything we could have done differently, and ultimately how what we have learned could help others in a similar situation. The context and rationale for this reflection is a global transition towards open access, recently articulated in the Universities UK 'Monitoring the Transition Towards Open Access' report (2017). The analysis in this report demonstrates a clear move towards both publisher provision of open access options and author uptake of open access. This trend is more pronounced for UK-based authors, where in 2016 37% of all articles were accessible immediately upon publication (via either Gold or Green OA), compared to 20% in 2012. But even worldwide there has been a significant shift: 24% of global author articles were accessible immediately upon publication in 2016, compared to 18% in 2012. Looking just at Green OA, the shift is even more evident: globally the proportion of subscription-based articles accessible via Green OA within 24 months of publication had grown from 19% in 2014 to 38% in 2016; while in the UK the proportion rose from 23% to 48% (p7, *ibid*). While policies and progress towards OA will inevitably vary across disciplines and territories, the overall trend is clear. We therefore hope that our case study and the following reflections upon it provide a useful resource for research management and library professionals who may face similar issues.



### *Research Office Perspective:*

Prior to the OA Working Group being set up in 2013, my involvement in open access was minimal and, although I was aware of the requirements set out by Research Councils, I had limited knowledge about the issues surrounding OA or indeed the wider movement towards open scholarship. My co-option into the OA Working Group was, at first, a matter of convenience: the group was set up in part to respond to RCUK policy, so the Chair felt that it was appropriate to include representation from the Research Office. However, in my previous roles in other institutions I had worked closely with Library staff and I felt that professional collaboration had been beneficial in many ways to my own professional practice, so I was looking forward to working with the Library on this project at Northumbria.

Through my role on the Working Group I quickly developed an appreciation for the complex set of intersecting issues which surround open access. Open access sits at the intersection of academic research practice, dissemination of research, and research management and also speaks to wider concerns about ownership of knowledge, the value we place on certain forms of knowledge and the ethics of monetising and profiting from knowledge generation. The open access movement is a response to some of these concerns and, to some extent, can be viewed as taking back control of the means of production of knowledge.

During the process: After I had joined the OA Working Group, I was initially confused and uncertain of my role. The group had knowledgeable representation from information professionals and my knowledge of research funder policies and practices was at first of secondary importance. However, through my involvement I became more conversant with the principles and practices of scholarly publication and started to develop a more nuanced understanding of how this fits into the research lifecycle. This in itself arguably improved my professional practice in my day-to-day role of research proposal development as I was able to have a clearer view of the end-to-end process. My contributions to the work of the Group were primarily around the development of joint OA workflows to implement the policy and joint delivery of advocacy and information events, which have continued beyond the period discussed in this article. My knowledge of the research proposal development process and the role I and research office colleagues played in directly supporting academic staff through this process played a key role particularly in the advocacy component, as we were jointly able to pinpoint the critical touchpoints in this process where an academic would need to engage with and make decisions informed by the policy. During the costing and pricing stage of proposal development it is important to understand the implications and interactions of both our policy and funder policies: depending on the funder in question, APCs may or may

not be an eligible cost, and as discussed in detail some funders have explicit expectations around where and when articles are made open access.

Following the process: While the work the research office and library jointly undertook on behalf of the OA Working Group has been successful, in my view there are areas where outcomes have been mixed. For example, I don't think we gave enough consideration to academic staff turnover and knowledge of processes and systems which is inevitably lost when academics move to a new institution. Of the multiple stakeholders involved in coordinating OA policy and implementation - Library, Research Office, Departmental Research Leads and the OA Working Group itself – it was often unclear where responsibility sat for ensuring the messages about open access which we had delivered were repeated, especially to new starters. As a result, while the overall figures for the University look impressive, there has been mixed practice in terms of OA deposit across different research groups and departments. This mixed practice extends to the OA APC fund, where we have seen different degrees of access across departments. To some extent this is to be expected: as already noted, journal publication is normal in some disciplines whereas in others it is rare. While the Library produced regular detailed reports on fund usage and OA compliance, it was sometimes not clear which University body was responsible for reviewing and making recommendations or taking actions on what was contained in these reports. Overall, the initiatives we undertook jointly were effective and successful and without them we would be in a much worse position with respect to OA compliance than we are now in. In addition, our collaborative approach has been valuable in other projects, such as the implementation of our Current Research Information System, Pure. Our work to implement and embed this system has overlapped with our open access work – for example, the Library has recently conducted an exercise to identify compliance with the REF OA policy which I and others in the research office have disseminated among research leaders across the University. In many ways the work towards achieving open access has just begun and we need to constantly reflect and adjust our approach to be successful.

#### *University Library Perspective:*

The development of services to support OA dissemination of published research outputs at Northumbria University has been successful by a number of measures. Rates of deposit of accepted manuscripts to the institutional repository have increased, and demand is strong for the institutional fund for gold OA, with both elements ensuring high rates of compliance with external funder policy.

This success has been enabled by collaboration between professional support services and faculty. By having the input of stakeholders from different parts of the institution, working at

different stages of the research lifecycle, our approach to OA is not linked to particular service areas, systems or disciplines. This has proven to be extremely useful. For example, the implementation of Pure could have been disruptive, as it impacts how the researcher records details of the research activity, how they deposit manuscripts to enable green OA, and how service areas access and report on this information. However, our policies and workflows were not dependent on any particular system and were easily adapted, and existing relationships between services and faculties enabled us to deliver training and support to users of the new system without needing to build new service models.

I have learnt a lot about scholarly communication through the OA working group, particularly following the discussions around shortlists of journals pre-approved for gold OA. Though it was initially difficult to scrap a piece of work that had taken no small amount of time to produce, the process gave me insight into the strength of feeling around academic choice, which became a fundamental aspect of our approach to OA.

## **Conclusions**

While the headline improvement in compliance (from 0 – 83% compliant with RCUK OA policy in one year) may appear to present a very quick turnaround, the reality is that there was a relatively long period of work and preparation behind the scenes to develop a credible and convincing business case for an internal OA fund. Without this preparatory work, it is questionable whether the advocacy work carried out by the Library and Research and Business Services would have had as great an impact.

Although all institutional contexts are different, and what works in one case may not be as effective or even possible in another, the work we have undertaken over the past two years has taught us several valuable lessons about effective implementation of an OA policy, especially where external funding for developing an OA service is restricted. The case study has shown that it is important that senior University managers show public support for OA policies and emphasise this to all staff. Without the endorsement of the University Executive, we would have been unable to secure the additional funding required to support an institutional APC fund. As discussed in the case study, securing this support took time which meant that our roll-out of advocacy around the fund was delayed. However, the additional funding both reinforced senior management support for OA more generally and emphasised its importance in the context of the wider research agenda.

Collaboration among key stakeholders in implementation of OA policies has been critical (see also Aucock, 2014). In Northumbria, this meant collaboration primarily between RBS and the Library. Finance and Planning were also involved in developing the cost modelling tool in collaboration with the Library. Co-delivery of advocacy sessions was helpful because

questions covered the full range of issues, from technical questions about publication and repository deposit to questions about grant terms and conditions and funder policies. It also served to reinforce the message that OA was an important issue taken seriously across the University, and that support was available for all, not just grant-holders. In addition to cross-service collaboration, the case study shows the importance of involving academic staff in the decision-making processes. Northumbria's OA Working Group includes academic representation from all faculties and is chaired by an Associate Dean of Research. There is also additional academic representation via the University's Early Career Researcher Forum. This ensured there was oversight of the APC fund at all career stages, and to minimise the possibility of any inequalities in access. The decision-making process for the APC fund is also academic-led, which helps to give further confidence in the system and supports Northumbria's commitment to academic freedom.

Finally, advocacy at different levels and different stages in the research lifecycle has enhanced engagement with the APC fund and the OA policy more generally. The lifecycle of research is multi-layered and can be viewed from a variety of perspectives (e.g. Stone, Stainthorpe, Awre & Emery, 2015). Broadly speaking, research managers and librarians focus on different points in that lifecycle (grant preparation and publication) so this was an opportunity for us to ensure the OA message was communicated as often as possible at different stages. We also found that dissemination at the departmental level was most effective in terms of reaching the most staff.

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