

Why open access is not enough: Spreading the benefits of research

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Executive Summary

Open access (OA) is one of the main discussion points of the twenty-first century research environment. Catalysed by three declarations on open access in 2002 (Bethesda, Budapest and Berlin), the last two decades have seen growing commitment not only to open access but also to open research.¹

In August 2021, UK Research and Innovation (UKRI) announced up to £46.7 million in annual funding to support a new open access policy.² A year later in the US, President Biden's administration announced that by 2026 'US research agencies should make the results of federally funded research free to read as soon as they are published'.³

The benefits of open access are clear: evidence shows OA research outcomes are more impactful in terms of increased citations, and more accessible given their wider availability within and outside of academia.⁴ However, open access alone does not resolve the challenges policymakers, higher education institutions, academics and others face in making the best use of research.

A previous HEPI report on open access stimulated widespread debate; however, the controversy stemmed from the precise method proposed to provide online access to academic research – a national licence scheme.⁵ Both those who supported and those who opposed the report's proposal typically agreed that opening up access to research for more readers was a good idea.

This Policy Note takes the debate to the next stage by considering how best to encourage the use of research. We project ourselves into a future where all research outcomes are open access and available to all readers. In this open future, we focus on what challenges may remain to facilitating engagement with research outside of academia, focusing particularly on the continued growth in outputs and the use of opaque language and terminology.

We explore some activities that might be undertaken collaboratively by key participants (researchers, decision makers, industry, the public and publishers) in the research and scholarly communication process. We believe collective activity would help us all work towards the goal of presenting research outcomes in a more accessible and useable manner, and support 'knowledge mobilisation', a term that refers to 'the process of moving knowledge to where it can be most useful'.⁶

It is important to recognise that this Policy Note partly reflects the views of a UK-based stakeholder group. The ideas below would benefit from future conversations, collaborations and input from the global community, specifically stakeholders in lower and middle-income countries.

Key terms

Open access

The Budapest Open Access Initiative defines open access as:

free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.⁷

Further key terms related to open access are defined by Fiona Counsell, Head of Open Access Operations & Policy, in a HEPI blog post.⁸

Knowledge mobilisation

Sir Paul Nurse describes research as:

a network of activity, ranging from discovery science acquiring new knowledge, through translation of knowledge into innovation, and of developments of that innovation for useful applications. It is a complex interactive system, with knowledge generated at different places within the spectrum of activities influencing both upstream in the creation of new discoveries and downstream in the production of new inventions and applications. New discoveries enable new inventions, and new inventions enable new discoveries.⁹

The term knowledge mobilisation is defined by Management scholar Dr Vicky Ward as ‘the process of moving knowledge to where it can be most useful’.¹⁰ Simply put, knowledge mobilisation is about how to ensure research can be translated across contexts (for example, from academia to industry) to deliver the most impact.

Concepts related to knowledge mobilisation include absorptive capacity, knowledge transfer and, most simply, research impact.¹¹

Translating the wider availability of research into improved access

While open access offers to democratise access to the ever-expanding volume of research outcomes, the wider availability of yet more academic books and articles does not necessarily translate into the wider useability of scholarly work. Simply put, users need first to be aware of the existence of the research material; secondly, they must be able to access it; and thirdly, and most importantly, they need to be able to engage with the material.

Open access and research can give rise to issues such as participation in knowledge creation as well as research security.¹² For the purposes of this Policy Note, we imagine an open access world in which we have resolved the issue of access, and yet awareness of and engagement with research freely available online continue to present significant challenges, as do time constraints, the difference between cultures in academia and policymaking, and a lack of established routes for bridging those cultures. Below, we focus on two of these issues in detail: the sheer volume

of growth in research, and the differing vocabularies used by different stakeholders. We then outline some obstacles that are specific to academics, decision makers, industry, the public and publishers as we navigate the research and scholarly communication ecosystem.

A. Continued growth in research

Today, more research is being carried out by more people than ever before.¹³ We have reconfigured the sites for depositing research into a digital landscape, facilitating greater collaboration and interaction through online fora, allowing anyone to interact with new research provided they have access to the internet. The expansion of academic publishing is evident from the following figures.

- Between 2015 and 2020, there was an average growth rate of between 5 and 6.5 per cent in the publication of research articles. This is despite the average rate of growth in journals having slowed from 5 per cent in 2018 to between 2 and 3 per cent.¹⁴
- Between 1950 and 2002, the total number of books published annually in the UK trebled to 125,000. Estimates suggest that 53 per cent were academic or professional books.¹⁵ While the academic market for eBooks continues to grow, the pandemic is expected to have catalysed a pre-existing downward trend in revenue for academic print books.¹⁶

This supercharged research climate coupled with the provision of networked online spaces have created favourable conditions for research to have more impact on our lives, economies and societies than ever before. However, the sheer volume of content makes it hard for users to engage with the material. Furthermore, the length and format of research articles may act as barriers to readers who are looking for clear and brief answers to their research questions.

B. Inaccessible language

Another key challenge around realising the benefits of open access is a cultural one. There is a tendency in all spheres, including within academia, to use language and terminology that can be inaccessible to different audiences. The use of such language can stem from a desire to streamline communications; to frame concepts or problems in a novel way; or it can be used as a form of gatekeeping, to 'exclude interlopers' from participating in academic research.¹⁷ The use of inaccessible language is a hindrance to the research-to-policy exchange as it often 'impairs people's ability to easily process scientific information'.¹⁸

There are widespread calls for more transdisciplinary or cross-disciplinary research efforts to address global challenges, including climate change, poverty, and equality, through initiatives such as the United Nations' Sustainable Development Goals.¹⁹ However, these can be hampered by language and terminology that are not readily understood across disciplines and, more broadly, the language, cultures and objectives of academia and policymaking may often be perceived as incompatible. Democratising access to openly available research outcomes means communicating in language that is understandable across and outside of academic disciplines, as well as equipping readers (or users) with the tools (and language) to engage with and respond to the material.²⁰

Key participants

1. Academics and research performing organisations

The Taylor & Francis researcher survey in 2019 found that academics are generally keen for their research to have impact outside of academic circles and see open access as a means to support this aim.²¹ One of the most significant changes we have seen to the Research Excellence Framework is

the introduction of 'impact' as an element of the assessment.²² How impact on policy is measured is not always clear, however, while measuring the impact of research within academia has a more straightforward evaluation mechanism, such as through citation metrics and Impact Case Studies. Grant funding and individual career progression are often linked to the number of citations a paper gains in top-tier journals, rather than incentives to translate and synthesise specialist academic work for the wider public through blogs, for example, or for policymakers through key summaries or policy notes.²³

2. Decision makers

There have long been calls from within the UK government for closer relations between academia and policymaking. In a speech in 2000, the then Secretary of State for Education and Employment, David Blunkett, called for 'a revolution in the relationship between government and the social research community'.²⁴ However, as many scholars of Management and Public Policy have pointed out, there remain at least three challenges to fostering a closer relationship between the two entities:

- i. researchers operate on a much longer timescale than policymakers;
- ii. academic research is not made to offer clear-cut solutions; and
- iii. there remains the risk of bringing academics' own political biases to the table.²⁵

As Pro-Vice-Chancellor (Careers & Enterprise) at the University of East London, Paul Marshall, wrote in a HEPI blog, ministers are often 'driven by the need to find simple, fast, solutions to often extremely complex problems' and are therefore in need of 'short, clear briefings' that present 'clear answers, delivered quickly'.²⁶ How researchers can synthesise their work to feed into these briefings is not always clear. The timescales and starting points from which research questions are identified do not always seem compatible.²⁷

3. Industry

Open access is described by Paul Ayris and colleagues as being advantageous for small and medium-sized enterprises (SMEs), allowing them to 'view blue-skies and applied research relevant to their particular business'.²⁸ However, the route from research to innovation is rarely linear, meaning the translation of research into commercial applications is multifaceted and complex.²⁹ There appears to be a missing link between doing and communicating research, and making research applicable. Open access can support businesses in the way Ayris describes, but only if we resolve the broader challenges around translating research first.

4. The public

There has been increased interest in research, with levels of trust in science and scientists on the rise as a result of the COVID-19 pandemic according to the *Wellcome Global Monitor 2020*.³⁰ Even while research outputs may be more widely available, however, the issue of the public understanding of science and research remains. The same issue has been encountered by government institutions. In 2010, anthropologist Annetta Cheek helped bring into US law the Plain Writing Act, 'to enhance citizen access to Government information and services by establishing that Government documents issued to the public must be written clearly'.³¹ The parallel issue of inaccessible language used in academia, and the various criticisms to which it gives rise, are explored in an article in *The Atlantic*.³² Even while research outputs may be available free of charge, those not versed in the ways and language of academia can find articles inaccessible, contributing to the perception of academia as exclusionary.

5. Publishers

Publishers support academics in validating the outputs of their research, disseminating them and ensuring that they are available and findable in the long term. They work with academic

communities, and often in partnership with learned societies, to support emerging fields of research and help identify areas of consensus. They are stewards for the scholarly record, maintaining and correcting this record as needed over time, and investing to help users find and make use of content online.³³ They are also striving for research to have more impact and influence in the wider world and to engage more users with their content.³⁴ Open access helps with these aims, but non-specialist audiences still struggle to engage with and apply knowledge from research outcomes.

Addressing challenges and driving impact beyond open access

Open access offers opportunities for the more widespread circulation of academic research; however, as outlined above, the wider availability of research does not necessarily translate into its wider accessibility.

We offer below some reflections on how to create enabling conditions for research impact based on a conceptual framework first proposed by Sarah Chaytor at UCL at a joint HEPI and Taylor & Francis event on open access and evidence-based policymaking.³⁵

Academia and research institutions

Issue: supporting knowledge mobilisation or wider engagement with research outcomes

- Possible quick win: Focus on researcher training to build translational capability.
- Communication of research and collaboration with policy networks should be embedded within PhD training. UKRI's internships and placements, including ESRC Policy Fellowships, and organisations such as the University Policy Engagement Network (UPEN) and Capabilities in Academic Policy Engagement (CAPE), offer compelling examples.³⁶
- The focus of training should be on a research narrative that puts the needs of the end user at the heart of that story. Tracey Brown, Director of Sense About Science, expresses this shift as a change in perspective from 'what is my research, how do I publicise it?' to 'what are the policy questions – what can we contribute to that?'³⁷
- Longer term goal: Support greater collaboration with policy by creating spaces for interaction that exclude cultural differences. Professor Nic Beech, Vice-Chancellor at Middlesex University, and colleagues offer a model for this engagement with their proposed 'paradox boxes'. These spaces encourage participants to disregard the normal rules of the cultures they operate in and instead focus on 'collaborative generation and use of research' in research and policy exchange.³⁸

Decision makers

Issue: engaging with research to support effective evidence-informed policymaking

- Possible quick win: Build internal capability by having more researchers (and those with academic experience) embedded in decision-making bodies. Parliamentary Thematic Research leads, which are to act like Chief Scientific Advisors but for a parliamentary context, offer a compelling example.³⁹ The collaboration between Parliament and the Economic and Social Research Council (ESRC) is due to be piloted in 2023. These academic experts could serve a dual function, directly analysing the evidence base and helping institutions and colleagues build their own skills. Additionally, these experts could help develop relational capability through building networks that span policy and academia.
- Longer term goal: Consider regional collaboration and co-production to deliver benefits and solutions faced by local communities. The Y-PERN initiative, for example, is aimed at building more links between local government and academia to identify actions and solutions to some of the major opportunities and challenges across Yorkshire collectively.⁴⁰

Industry

Issue: the application of research to deliver commercial benefits

- Possible quick win: Build internal absorptive capability by offering placements to academics, with a focus on early-career researchers. As explored above, ESRC Policy Fellowships are one possible example.
- Longer term goal: Working with institutions to support greater research mobility across academia and industry, supporting greater coordination and collaboration across both groups as a result.⁴¹

Public

Issue: understanding and applying research

- Possible quick win: Engage with local and citizen science or community projects to co-produce testable research questions that focus on local issues, as suggested in the literature review in the 2019 *Public Attitudes to Science* report.⁴²
- Longer term goal: Build relational capability through participation in advocacy efforts such as Sense about Science's 'Ask for Evidence' initiative. The initiative offers resources and support to encourage the public to ask for 'the evidence behind health claims, news stories, ads and policies'.⁴³

Publishers

Issue: driving engagement with and impact of research

- Possible quick win: Focus on translational capability by creating new formats to enable different audiences to engage with research more easily. More accessible formats could include short summaries in plain English and syntheses of large bodies of research. See, for example, Taylor & Francis's plain language summaries.⁴⁴
- Longer term goal: Supporting consensus by providing venues to facilitate greater engagement across academia, industry and the public. These venues should enable the communication of research outcomes to non-academic audiences that cross disciplinary boundaries and make research outcomes applicable in real-world contexts.

Below we outline some other elements that span these groups and should also be taken into consideration to support the broader aim of knowledge mobilisation.

1. The role of knowledge brokers

Knowledge brokers have long played vital roles in mediating exchanges between governments and scholars.⁴⁵ They play an intermediary role between the creation of knowledge and its further use or mobilisation, in terms of summarising and translating academic research. The James Martin Institute for Public Policy, funded collaboratively by the New South Wales Government and higher education institutions in Australia, provides one example of such an intermediary.⁴⁶ Publishing houses and think tanks – often staffed by researchers with backgrounds in academia but desirous of conducting research with clearer applicability to policy issues – could play a key role in synthesising and translating academic research into more accessible language, as could research institutions themselves.

2. Reform of rewards and incentives

As noted above, current incentive mechanisms within academia often focus on metrics such as citations. There is an opportunity to reward wider impact, through activities such as public engagement, presenting research in more accessible formats and sharing outputs throughout the research process.

Conclusion

Open access presents an opportunity to make more research more widely available and thus potentially transform the face of academia and democratise access to academic research. However, making research more widely available is just the first step towards making research more widely useable. Academics, policymakers, publishing houses and other third parties need to work together to solve the challenges outlined above in order to reap the global benefits of open access. This Policy Note presents some activities for consideration that may improve research impact. Our foremost policy recommendation is for more collaboration between stakeholders.

Research environments and the policy landscape will continue to change. The purpose of this Policy Note is to contribute to a conversation as readers across different sectors consider their own approaches to open access. We look forward to further discussion as the topic evolves.

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