Why European Research and Education Policies must include Open Access

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Overview

- Context
- Why
- Advantages for stakeholders
- OA Policies
- Reflections
- Actions
- Conclusions
Let’s have a look at the context

- Mission
- Economic growth drivers
- Technology enablers
- Researchers’ needs
- Economic Advantages
- Societal Impact
- The role of EU and the European Research Area
- The cultural and policy framework
Institutions’ mission

- Foster education, learning and research
- Disseminate and preserve knowledge
- Advance knowledge
- Strive for quality and excellence
- Stimulate creativity
- Foster competition

What is OA?

Open Access is about dissemination of quality controlled information publicly funded, enriched with appropriate supporting evidence (raw research data) freely accessible, interoperable and reusable for research, study learning purposes accessible to academic/scientific community, amateur scientists, citizens, society, entire world
Mission (2) What OA can do

- Foster innovation
- Scientific and technology development
- Internationalization and collaboration
- Diverse, open and participatory Society

- Societal impact
  - quality of life
  - democratic values
  - scientific progress
  - economic, social and cultural conditions
  - economic, social, cultural, digital divide

Open Access is crucial to strengthen these goals and objectives

Open Access optimizes, accelerates the fulfillment of these objectives
OA fosters research

All research builds on previous work

- OA improves access and contributes to avoid duplication of research

- OA increases discovery and reduces its costs of discovery through the implementation OAI compliant discovery tools

- OA improves integration, federation, analysis of information from many disparate, distributed sources

OA enables research to move fast and more efficiently

OA facilitates international and interdisciplinary collaboration (E-Science, E-Research)
OA and dissemination/preservation of knowledge

- Innovation in the technology landscape has brought a complete and irrevocable change in creation, storage, access, dissemination of knowledge.

- Open Access is an immense opportunity to maximize access and impact of scientific content through removing physical barriers thanks to digital environment.

- Open Access collects, exposes research output and enables long preservation.
OA and creativity

- Innovation in technology gives enormous opportunities to stimulate learners and researchers’ creativity
  - semantic web technology (text and data mining) opens to new context, new discovery, new content; user generated content, social networking, annotations, etc)

- Re-usable publicly funded open content (data, text etc) is fundamental to foster creativity

- Appropriate balance between the needs of users and the rights of creators, providers/distributors are necessary
OA and quality of research

- OA improves quality of research
- OA increases impact and visibility
  - freely accessible quality research is more cited
- OA facilitates more transparency in peer reviewing process
- OA offers better monitoring and evaluation of research
  - introduces new web based metrics on usage, influence, correlations among disciplines
Economic growth drivers in 21st century

- **Knowledge**
  - circulation of knowledge: access to, dissemination and exploitation of results of publicly funded research
  - research has to be converted in knowledge to realize the investment made in research (ROI)

- **Knowledge transfer**
  - better circulation of knowledge enables knowledge transfer
  - knowledge transfer means scientific and technological progress, democracy, better social, economic, cultural conditions
Economic growth drivers in 21st century

- **Innovation**
  - is generated by an improved access to knowledge

- **Competition**
  - quality assured and excellent research output
  - visibility, Impact
  - attract funding, Faculty, Students
  - increase internalization and collaboration
Enablers: ICT

- ICT constant developments enable learning and scholarly communication to become more collaborative and inclusive of emerging technologies, moving away from a linear flow of information.

- ICT encourages and enables data intensive research and more scientific collaboration at international and interdisciplinary level (E-Science, E-Research).

- ICT contributes to make culture and science more diverse, open, and participatory.

- ICT removes barriers to knowledge circulation:
  - It is paradoxical to raise commercial, legal barriers.
  - An appropriate balance of rights.
Enablers: ICT (2)

- ICT constant developments enable enhanced publications (different type of media can be embedded in a article)

- ICT stimulates new forms of delivery of scientific output

- ICT makes real to move beyond PDF (annotation/social reading, data inclusion, new models of writing, reviewing etc)

- It is paradox: ICT enables and commercial and legal barriers lock
Researchers’ expectations

- Researchers require services to be contextualised, personalized, ‘intelligent’ and highly differentiated to their specific needs
  - new forms of creativity and economic benefit
  - new support to research excellence

- Users will increasingly demand searches that identify sources of quality information based on previous patterns of activity giving new context to content

Source: British Library 2020 Vision
Text mining: highlighted terms link directly to databases related information.
Da ECHO: researcher’s workbench

Annotation

Link to online dictionary

ECHO, European Cultural Heritage Online

Houghton calculates savings in UK (£ millions)

- 500/287 Gold OA (global/unilateral UK)
- 258/159 Green OA (global/unilateral UK)
- 520/308 Green OA + overlay services (global/unilateral UK)

Houghton calculates savings in 2 European countries:

- Denmark 70 million €

- Netherlands 133 million €

Better ratio costs/benefits: *Green Open Access*
Economic Advantages

Application of Houghton Model to 4 UK universities

Savings on subscriptions

Total savings for a university research system

Savings on library services

Swan, A. – Friend, F. How to build a case for university policies and practices in support of OA, Feb. 2010
«Because discovery is a cumulative process, with new knowledge building on earlier findings, the dissemination of research findings is crucial to ensuring that the returns on the investment are realized.»

J.Houghton, Economic and Social Return on Investment in Open Archiving Federally Funded Research Outputs, Report, 2010

Queensland University of Technology: +132% total research income  
A.Swan Open Access Advantage, 18 October 2010
European Community Treaty (‘Lisbon Treaty’)

- **Article 179**
  
  The Union shall the objective of strengthening its scientific and technological bases by achieving a European Research Area in which researchers, scientific knowledge and technology circulate freely [...].

- **Article 180 c**
  
  “[...]The Union shall carry out the following activities: [...] dissemination and optimisation of the results of activities in Union Research, technological developments and demonstration

- **Article 183**
  
  “For the implementation of the multiannual framework programme the Union shall: - lay down rules governing the dissemination of research results

source : Celina Ramjoué. Open Access: Supporting European Research and Innovation, OpenAire Presentation and Launch Event, Gent 2 December 2010
European Research Area

- A Europe-wide space or single market for research and innovation
  - **Free movement of knowledge** (‘Fifth Freedom)
    - Knowledge circulation: access to, dissemination of and exploitation of publicly-funded research
  - ERA to set clear principles or rules regarding
    - The management of intellectual property resulting from publicly funded research
    - Access to, and dissemination of publications and research data resulting from publicly funded research

source: Celina Ramjoué. Open Access: Supporting European Research and Innovation, OpenAire Presentation and Launch Event, Gent 2 December 2010
EU and Open Access

- EU has financially supported many European projects related to Open Access (economic studies on scientific publications, on impact of large-scale OA depositing, on OA publishing, on improving scientific communication and OA, infrastructure developments etc.)

- European Research Council (ERC)
  - established by the European Commission, funded by EC’ Seventh Research Framework Programme (FP7)
  - ERC Guidelines (December 2007)
    - require researchers to deposit all peer reviewed publications funded by ERC research projects in appropriate institutional or discipline based archive within 6 months after publication (December

- Open Access Pilot Project (FP7 Programme) since August 2008)
  - Eu funded project OpenAire
Open Access Infrastructure for Research in Europe

Funded in FP7 Programme – Research Infrastructures

Duration: 2009-2012

38 partners (coordination, scientific communities, technical partners, libraries/libraryIT) of which 27 national organizations covering the entire European Union

**its goal is to implement the FP7 Open Access Pilot Project:**

beneficiaries of FP7 grants in 7 areas are expected to deposit their published articles (accepted manuscript or publisher’s version when permitted) as results of FP7 funded research in a online open repository within 6 months (in sciences) 12 months (humanities and social sciences) from publication. (Clause 39 Grant Agreement- Annex)
Provides a portal for deposit, search of OA publications

Supported by National Open Access Desks (27 countries)

Provides OA “toolkits” for
- Researchers
- Institutions

Liaison with
- Other European OA initiatives
- Publishers
- CRIS systems
Cultural and policy framework: EUA Recommendations

- **EUA - European University Association**
  - Recommendations of EUA Working Group on Open Access were adopted by EUA Council on 26 March 2008 in Barcelona
  - University leadership is encouraged to:
    - develop institutional policy and strategies to foster the availability of quality-controlled research results for the broadest possible range of users, maximising their visibility, accessibility and scientific impact;
    - create and institutional repository or participate in a shared one that is established and managed according to best practices [...] complying with the OAIPMH protocol and allowing interoperability and networking for wider usage;
Cultural and policy framework: EUA Recommendations (2)

- require that their researchers deposit their publications in the institutional repositories upon acceptance of publication, with embargo permissible only for the date of open access provision but not for the date of deposit in the repository;

- include copyright in the institution’s management of intellectual property rights (IPR), to inform researchers about IPR and copyright management in order to ensure the wide sharing and re-use of digital research content and to build up a clear institutional policy;

- explore how resources could be found and made available to researchers for authors fees to support the emerging author-pays model
Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

Goals

“Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society. New possibilities of knowledge dissemination not only through the classical form but also and increasingly through the open access paradigm via the Internet have to be supported. We define open access as a comprehensive source of human knowledge and cultural heritage that has been approved by the scientific community.” (2003)

http://oa.mpg.de/lang/en-uk/berlin-prozess/berliner-erklarung/

over 290 signatories (universities, research centers, academies, ministries) signed the declaration) as of Jan. 2011
Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

Two conditions are required to qualify as open access:

1. The author(s) and copyright holder(s) grant to all users a free, irrevocable, worldwide, perpetual (for the lifetime of the applicable copyright) right of access to, and a licence to copy, use, distribute, perform and display the work publicly and to make and distribute derivative works in any digital medium for any reasonable purpose, subject to proper attribution of authorship, as well as the right to make small number of printed copies for personal use.

2. A complete version of the work and all supplemental materials including a copy of the permission stated above, in a suitable standard electronic format is deposited immediately upon initial publication in at least one -line repository that is supported by an academic institution, scholarly society, governament agency, or other well-established organisation that seeks to enable open access, unrestricted distribution, interoperability, and long -term archiving.
How to put OA into practice: implement a policy

- Writing and approving an institutional policy stating clearly the principles, reasons and objectives, the deposition rules, copyright management

- Policy can be mandatory or voluntary
  - Mandatory: researchers are required to deposit their scientific output in the institutional or discipline based repository
  - Voluntary: researchers are recommended to deposit their scientific output in the institutional or discipline based repository

- 3 types of deposit
  - Immediate deposit and immediate open access
  - Immediate deposit and optional access (e.g. full text available after an embargo period)
  - Later deposit after an embargo period
60% OA mandates are based in Europe
- 30 Research Funders
- 86 Institutions
http://www.openscholarship.org/jcms/c_6226/open-access-policies-for-universities-and-research-institutions, based on ROARmap Data
How to have success

Most of OA mandates are still in early stage of implementatoin and cannot be evaluated

Furthermore compliance rate is not always easy to measure unless the complete actual volume of work produced is known

Evidence shows

- a mandatory policy produces higher levels of deposition/self archiving
  - more than 60% of research output in 2 years
- a voluntary policy with a strong advocacy
  - 35%- 40%
- a voluntary policy no advocacy or self-selective archiving
  - 10%- 20%

Source: http://www.openscholarship.org
How to have success (2)

- An institutional policy is highly recommended if the institution wants to reach full dissemination and impact of its scientific output and be compliant with Berlin Declaration and EUA recommendations and in line with EU research funding policies (ERC guidelines and FP7 Open Access Pilot and OpenAire) policies and national and or discipline based funders.

- A license to publish should be also in place to help authors to deal with publishers.

- Key to success: a mandatory deposition policy together with author support practice:
  - Awareness, Copyright Help Desk
Advantages for institutions

- Having a mandatory policy contributes to
  - fulfill the mission of the institution
  - disseminate the research outputs
  - increase visibility, impact
  - ROI

- Implementing a mandatory policy means to have a ‘populated’ institutional repository
  - one central locus for
    - internal record
    - collecting research outputs,
    - research assessment and evaluation
    - long-term preservation

- a show case of university scientific production
Advantages for researchers/authors

- An institutional mandatory policy: it requires that the author deposits his/her research output
  - could ease the relationship with publishers and empowers authors
  - avoids duplication of effort: one deposition for publication and for assessment
  - increases self-benefits if researchers comply to requirements
    - visibility and impact, citations
    - access to more funds, incentives,
    - opens to more transparency in peer reviewing, evaluation and to evaluation and assessment metrics
    - opens to more collaboration and more interdisciplinarity
Advantages for publishers

- A clear mandatory open access policy
  - makes it easier for publishers, they know what the institutions require
    - funded and unfunded mandate: a publisher’s issue
  - opens to new ways of collaboration with institutions/authors
    - publishers have to reposition and reinvent themselves in the new scholarly communication paradigm
    - SCOAP3
Advantages for libraries/librarians

A clear mandatory open access policy

- new role and visibility of the library
- support and assistance in implementing OA
- a more active involvement with research and teaching staff
- a more direct role in scholarly article creation/production cycle
- a more active role in the library users’ workflow
- support and assistance on copyright and publishing issues
Tools: how to write a perfect policy

- EOS- Enabling Open Scholarship website
  - Information, briefing papers, data, resources, examples, recommendations, guidelines

- ROARMAP website
  - Collects OA policies from institutions, departments, funding agencies

- MELIBEA website
  - Compares policies
Open Access

Open Access provides the means to maximise the visibility, and thus the uptake and use, of research outputs. Open Access is the immediate (upon or before publication), online, free availability of research outputs without any of the restrictions on use commonly imposed by publisher copyright agreements. It is definitely not vanity publishing or self-publishing, nor about the literature that scholars might normally expect to be paid for, such as books for which they hope to earn royalty payments. It concerns the outputs that scholars normally give away free to be published – journal articles, conference papers and datasets of various kinds.

The three original, formal definitions of Open Access are the Budapest (2002), Bethesda (2003) and Berlin (2003) definitions and they are usually referred to as a consolidated ‘DBB definition’.

Not only scholars benefit from Open Access. They are the most obvious beneficiaries, perhaps, because their work gains instant worldwide visibility, and they also gain as readers if much more world research is available on an Open Access basis for them to access freely and read. But there are many other beneficiaries, too.

Research institutions benefit from having a management information tool that enables them to assess and monitor their research programmes, and they have a marketing tool that enables them to provide a shop window for their research efforts. The same advantages apply to external research funders who need to be able to access and keep track of outputs from their funding, and measure and assess how effectively their money has been spent. They also can ensure that the results of their spending have had the widest possible dissemination.

It is because Open Access is so much in the interest of research funders and employers that an increasing number of them around the world are introducing Open Access policies that require their funded researchers to provide Open Access to their work.

The advantages of Open Access for science and scholarship are, in brief:
- Open Access brings greater visibility and impact
- Open Access moves research along faster
- Open Access enables better management and assessment of research
- Open Access provides the material on which the new semantic web tools for data-mining and text-mining can work, generating new knowledge from existing findings

How Open Access is provided:
Advantages and benefits of Open Access
Author policies about Open Access
How Institutions can encourage Open Access
Open Access policies for universities and research institutions
Formulating an Institutional Open Access policy

Briefing Papers

Briefing Paper on Open Access for research managers and administrators

Further resources

A comprehensive overview of Open Access by Peter Suber
An essay that discusses the advantages of Open Access to research in more detail In English or en Español.
A presentation in Portuguese on Open Access for university directors (Powerpoint) (PDF)
A presentation on the vision of an open university by Martin Hall, Vice Chancellor, University of Salford, UK http://jiscres10.jiscinvolve.org/wp/multimedia/conference-videos/
**Register your Institutional Open Access Mandate HERE**

(Please also register your Institutional Repository in ROAR if not yet registered)

Total Mandates to Date (by type)

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Actions to be taken (1)

- OA institutional policies are adopted, they are still few
  - more work is needed (top-down and bottom up approach)

- Action is required at national government level, more lobbying is needed
  - Legislation on OA is almost inexisting in Europe
Actions to be taken (2)

- More awareness and more action is needed to put OA into practice, to change academic inertia (policy makers, researchers, professors)
  - Survey of University of Toronto: Faculty awareness, attitudes and practices regarding scholarly communication: a preliminary report, prepared by Gale Moore Feb. 2011

- The role of SPARC Europe, COAR, LIBER, LERU, IFLA, UNESCO is vital to OA implementation
  - Cooperation and reciprocal strengthening
  - Who does what – confusion and duplication of efforts can be counterproductive
  - The success of OpenAire will play a decisive role!

- More and more evidence of impact, success stories, best practice need to be collected, shared and circulated
Conclusions

I would like to conclude with quotations from Neelie Kroes, Vice President for the Digital Agenda (speech OpenAire launch, 2 December 2010, University of Ghent)

[...] Scientific information has the power to transform our lives for better— it is too valuable to be locked away. In addition every EU citizen has the right to access and benefit from knowledge produced using public funds

[...] The right to access freely the results of science does not only benefit citizens but also the public funding bodies. I believe public scrutiny of research results will improve how we allocate research funds. It will also increase the citizens' confidence confidence in research spending

[...] Scientists, libraries and society will clearly benefit from wider access to science, so I say today that open access is undoubtedly a win-win game

[...] No publisher can ignore the fact that the internet is the most powerful information dissemination tool ever. Many have already started to reinvent themselves. I applaud these efforts because I am convinced that they have a chance to continue playing a leading role in the new era of Open Science, serving European scientists and European libraries - and society at large
References

- Melibea
  - http://www.accesoabierto.net/politicas/?idioma=en
- RoarMap
  - http://roarmap.eprints.org/
- OpenAire
  - http://www.openaire.eu

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Thank you!