Making science count: Open Access and its impact on the visibility of science

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**Headline findings:**

**Journal market value and volume**

| **Universe of 20,000-25,000 peer-reviewed scholarly journals serving 5.5 million researchers – plus other readers- globally** |
| **Very poor data about buyers of scholarly journals beyond higher education** |
| **Existing market studies not comprehensive (focus only on STM)** |
| **More survey data directly from the publishers themselves (anonymised) would go a long way to filling the gaps** |
| **60% of all journals are published online (most are also parallel published in print).** |
| **Publisher revenues of circa $5 billion for English-language journals in STM in 2004 – but this is a significant under-estimate (it excludes non-English language journals and journals in disciplines outside of STM).** |

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Assessing the Evidence. Reporting on the "UK scholarly journals: 2006 baseline report. David Worlock"
Citations, impact factors and their role
Are traditional (i.e., subscription-based) journals more likely to be cited than OA journals?

Key methodological challenge: article cannot be OA + non-OA at the same time = no like-for-like comparison

Deposit of articles in OA repositories seems to be associated with a larger number of citations, and earlier citations for articles

But reasons for this not clear. The little existing evidence suggests that authors put their best work into OA format

Evidence of IF advantage for OA journals over toll-access journals less consistent - one study of a hybrid journal shows higher citation counts for OA articles than subscription-access articles – but only covers one journal = more work is needed

Evidence scattered, uses inconsistent methods and covers different subject areas
Consistent longitudinal data on IF trends needed
Qualitative factors should not be ignored – range of factors can affect citation counts

Assessing the Evidence. Reporting on the “UK scholarly journals: 2006 baseline report. David Worlock
Hype cycle*: OA repositories

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Where have we come from?

Subject-based repositories, 1991-
Institutional repositories, 2000-
OAI PMH, 2001-

Policy developments
  BOAI, 2002
  Bethesda Statement, 2003
  Berlin Declaration, 2003
  Scottish Declaration, 2004
  NIH, 2004
  RCUK, 2006,
  The Bangalore Policy statement
    India, China, Brazil, South Africa, and Ethiopia

Investigations and reports
  UK Science and Technology Committee, 2004
  European Commission, 2006

Initiatives and services
  ROMEO/SHERPA/DOAR
  Cream of Science
Where are we now?

Repositories: 790+ OAI repositories worldwide (c.f. 250 in 2004)
Content: 12 million+ records
National/large-scale initiatives
  JISC initiatives, UK
  SURF programmes eg DARE, Netherlands
  DEST initiatives eg ARROW, Australia
  EU work eg DRIVER, Europe
  etc
Publisher policies
  self-archiving
  hybrid options
Some facts

- Awareness of Open Access is increasing amongst scholars in all disciplines
- The number of repositories has increased at an average of 1 per day over the last year
- The rate of increase is rising
E-Lis: Research in Computing and Library and Information Science

Generated by http://archives.eprints.org/

No. of Records (red)

Month (mm/yyyy)


0 1000 2000 3000 4000 5000
A few more facts

There are circa 800 repositories globally
There are 32 documented policies
There are 10 mandates
Here’s the problem...

- Only 15% of research articles are spontaneously self-archived
- The average number of postprints self-archived in institutional repositories is 297
- We analyzed the effect of providing 'Open Access' (OA; free online access to research articles) on their 'citation impact' (how often they are cited). Using a subset of the ISI CD-ROM database from 1992 - 2003, we compared, within each journal and year, articles to which their authors had (OA) or had not (NOA) provided open access by self-archiving them on the web. The number of OA and NOA articles and their respective citation counts were calculated within biology, business, psychology and sociology journals. The percentage of OA articles varied from 5-20% (mean and median, 12%). The citation counts (OA-NOA/NOA) showed a consistent OA advantage (mean 96%, median 73%) for all four fields and 28 subspecialties tested, varying from 25% to over 250%. An OA impact advantage has already been reported in the physical sciences and engineering (physics, computer science), but there was uncertainty about whether the same thing happens in other disciplines. Our data now show that both the biological and the social sciences show the OA advantage.


- JISC discovered at least a twofold increase in citation rates across most subject areas
- Antelman found a greater research impact in philosophy, political science, electronic engineering and mathematics
OpenDOAR

Search or Browse for Repositories

Any Subject Area

Any Content Type

Italy (24)

Any Language

Filter

Any Software

Summaries, 20 per page

Sort by Repository Name

To search the contents of the repositories listed in OpenDOAR, please see our trial search page.

Results 1 - 20 of 24.

Alm&DL - Biblioteca Digitale dell'Università di Bologna

Organisation: Centro Inter-Bibliotecario (CIB), Università di Bologna, Italy
Description: This site is a university repository providing access to the publication output of the institution. The site interface is only available in Italian. The site has several collections containing work by staff and students including cultural contributions and electronic reviews.
Size: 2795 items (2006-03-04)
Subjects: Multidisciplinary
Content: Preprints, References, Theses, Unpublished
Languages: Italian

Almae Matris Studiorum Acta (AMS Acta)

Organisation: Università di Bologna, Italy
Description: This site is a university repository providing access to the publication output of the institution. The contents reflect the interests of the institution and are particularly rich in material from the theoretical & applied science and technology fields. The site is still under construction and currently help and guidance material is unavailable. The site interface is available in Italian only.
OAI-PMH: http://amsacta.cib.uniba/opendoar2
Software: GNU EPrints
Size: 1943 items (2006-03-04)
Subjects: Multidisciplinary
Content: Publications, Conferences, Theses, Books
Languages: English, Italian

Almae Matris Studiorum Campus (AMS Campus)
Abstracts 260  (16)  Downloads  177  (19)
Views by country (derived from IP address of query) for all years

<table>
<thead>
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<th>Country</th>
<th>Abstracts</th>
<th>Downloads</th>
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Grand Totals:  260 abstract views originating from 16 distinct countries

The numbers in (parentheses) are the number of distinct countries that views/downloads originated from.

177 document downloads originating from 19 distinct countries
Citation advantage
Mandate what?

- The author’s final version
- In the native format
- Because text-mining and data-mining tools need to work on OA articles
- They work best on XML
Early Download Impact Predicts Later Citation Impact

• Open access articles are cited **SOONER**

• Open access journal articles are downloaded **MORE OFTEN**

• Open access abstracts are viewed **MORE FREQUENTLY**

• There is a **SIGNIFICANT CORRELATION** between downloads today and citations two years later.

  – This correlation has two immediate implications:

    (1) Download counts can be used as early performance indicators for papers and authors, even before their impact is reflected in citation counts

    (2) Enhancing usage impact is yet another reason for authors to provide open access to their articles by self-archiving them.
Cream of Science: Showcasing Research

Cream of Science showcases prominent research from the Netherlands.

The website lists the names of 219 top Dutch academics, providing worldwide access to their 4500 publications. About 80% of these can be accessed full text. Access to the other publications is unfortunately protected by copyright.

You can:
- Search scientific publications of 219 prominent researchers in the Netherlands from one convenient place.
- Browse the site 'Cream of Science' by name, discipline or institute.
- Find the publication lists of these 219 researchers, of which 80% is full text available.

Cream of Science is the result of the DARE programme, funded by SURF. All Dutch universities, the National Library of the Netherlands, the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Scientific Research (NWO) participate. Adding new CReamS researchers is done locally.
OPEN AND UNRESTRICTED ACCESS TO THE OUTPUTS OF PUBLISHED RESEARCH

Policy summary
It is a fundamental part of our charitable mission to ensure that the work we fund can be read and utilised by the widest possible audience.

In support of this objective the Wellcome Trust Grant Conditions have been amended such that electronic copies of any research papers that have been accepted for publication in a peer-reviewed journal, are supported in whole or in part by Wellcome Trust funding, must be deposited into PubMed Central (PMC) (or UKPMC once established). These papers will be made freely available via these web-based repositories as soon as possible, and in any event within six months of the journal publishers' official date of final publication.

This requirement applies to all grants, regardless of award date.

For further details, see the full position statement on open and unrestricted access to the outputs of published research, and the authors' guide and FAQ.

Latest developments: September 2006
The Wellcome Trust, as part of a group of UK research funders [PDF 24KB], has announced that the contract to run UK PubMed Central (UKPMC) has been awarded to a partnership between the British Library, the University of Manchester and the European Bioinformatics Institute (EBI).

Based on the PMC model currently used by the US National Library of Medicine at the National Institutes of Health, UKPMC will provide free online access to the digital archive of published articles resulting from research paid for by any of the funding consortium. It will be fully searchable and extensively linked to other online resources.

Launch of the service is scheduled for January 2007. See the press release (31 July 2005) for further information.

Page last updated: 20 September 2006
Why does it matter?

- UK Research Assessment Exercise
  - 1* = nationally significant
  - 2* = international reputation
  - 3* = working ONLY at international level
  - 4* = global superstar (with own TV show)

- Metrics based on:
  - Esteem
  - Research environment
  - Publications and increasingly citations
And also because....

- World league table of universities
  - Has two metrics:
    - Who knows/mentions the institution in a survey
    - Citation count

And how do you increase both of these.....