Indicators of Open Access for universities

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Motivation

Open Science

This is the ongoing transition in how research is performed and how knowledge is shared. News, events, publications related to Open Science
Motivation

• What is the current state of OA penetration?
• Is the implementation of OA in accordance with policy desires and mandates?
• Which models of OA are more expanded?
Our understanding of OA

Criteria for the analysis of OA uptake:

• **Sustainable**

  Publications are OA in the public domain, without immediate and direct risk of disappearing behind a pay-wall.

• **Legal**

  Identification as OA should not be based on ‘illegal acts’ and should not be based on copyright infringement.
Our understanding of OA

Data sources that do not comply with the two requirements (*Sustainability and Legality*) for OA detection:

- ResearchGate
- SciHub

Many suggest their inclusion as OA!
Data sources

• **Web of Science**
  – **Advantages**: consolidated database, citation linkages, and complete metadata (author affiliations and classification scheme available)
  – **Disadvantages**: commercial/proprietary, coverage issues (SSH, books, conference papers)

• **Unpaywall**
  – **Advantages**: comprehensive (multiple sources considered in the identification of OA evidence), systematic, large coverage (Crossref publications), ‘free’ source, becoming ‘standard in the business’
  – **Disadvantages**: lack of relevant metadata (affiliations, classification, doc types), dependency of DOIs (Crossref)

• More validation and research needed (how good is the data? does Unpaywall track all possible OA evidence?)
Identification of OA evidences

Four types of OA are identified:

• **Green OA** self-archived versions of a manuscript
• **Gold OA** journals publishing in OA regardless of their business model
• **Bronze OA** journals offering free Access but retaining copyrights
• **Hybrid OA** toll journals offering APC for making articles OA
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Identification of OA evidences

Van Leeuwen, T.N., Costas, R., Robinson-Garcia, N. Indicators of Open Access publishing in the CWTS Leiden Ranking 2019. CWTS Blog May 15. https://tinyurl.com/oaleidenranking
Results: Overall OA
Results: Gold OA

World median
Results: Green OA

World median
### Results: Green OA

| University                      | Country            | Pubs  | % Green | % Repository |
|---------------------------------|--------------------|-------|---------|--------------|
| Bilkent Univ                    | Turkey             | 1851  | 96.0    | 94.8         |
| Hong Kong Polytech Univ        | China              | 8866  | 86.7    | 2.4*         |
| Univ Jaume I                    | Spain              | 2098  | 84.9    | 81.3         |
| Durham Univ                     | United Kingdom     | 6723  | 81.6    | 69.2         |
| City Univ London                | United Kingdom     | 2328  | 81.6    | 72.9         |
| Univ Strathclyde                | United Kingdom     | 4321  | 80.5    | 74.1         |
| London Sch Hyg                  | United Kingdom     | 5949  | 80.4    | 64.3         |
| Univ St Andrews                 | United Kingdom     | 5123  | 79.3    | 69.3         |
| Loughborough Univ               | United Kingdom     | 3883  | 76.6    | 66.6         |
| Univ Leeds                      | United Kingdom     | 10333 | 75.5    | 63.3         |

Top 10 universities with the highest share of their output available through green OA and the share of their green OA which is included in their institutional repository searching for url strings of repositories.
Results: The PMC effect on Green OA

| Country     | Green OA | PMC   | PMC only | % Gold | % Bronze | % Hybrid |
|-------------|----------|-------|----------|--------|----------|----------|
| Taiwan      | 16233    | 12836 | 10777    | 65.7   | 6.8      | 17.8     |
| South Korea | 36677    | 28867 | 22966    | 45.3   | 9.2      | 32.7     |
| China       | 161903   | 116282| 93418    | 60.9   | 8.9      | 17.7     |
| Malaysia    | 5670     | 4027  | 3038     | 77.8   | 5.0      | 10.1     |
| Thailand    | 4378     | 3438  | 2255     | 55.1   | 12.4     | 16.3     |
| Egypt       | 3036     | 2034  | 1397     | 57.7   | 9.9      | 15.6     |
| Lebanon     | 603      | 450   | 274      | 55.8   | 11.1     | 12.9     |
| Japan       | 50007    | 29560 | 22226    | 53.7   | 18.5     | 17.7     |
| Singapore   | 9058     | 5614  | 3669     | 57.1   | 14.4     | 15.6     |
| Poland      | 16459    | 8531  | 6416     | 49.6   | 8.2      | 33.6     |

Top 10 countries with the highest share of green OA publications coming from PMC. Shares of gold, bronze and hybrid OA are based on the total number of PMC publications.
Results: Hybrid OA

World median
Results: Bronze OA

World median
Discussion

The 2 main routes to open access are:

A. Self-archiving / 'green' open access – the author, or a representative, archives (deposits) the published article or the final peer-reviewed manuscript in an online repository before, at the same time as, or after publication. Some publishers request that open access be granted only after an embargo period has elapsed.

B. Open access publishing / 'gold' open access - an article is immediately published in open access mode. In this model, the payment of publication costs is shifted away from subscribing readers. The most common business model is based on one-off payments by authors. These costs, often referred to as Article Processing Charges (APCs) are usually borne by the researcher's university or research institute or the agency funding the research.
Discussion
Discussion

Step 1 - Depositing publications in repositories

Beneficiaries must deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications. This must be done as soon as possible and at the latest upon publication.

This step applies even where open access publishing ('gold' open access) is chosen to ensure that the article is preserved in the long term.
## Discussion

### Plan S. Principles and Implementation

Plan S, the plan of publishing under Open Access, is a collaborative effort among several funders to promote Open Access publishing. The plan is based on several principles that outline how researchers should publish their work. The implementation of these principles involves transitioning from subscription venues to Open Access publishing venues.

The table below summarizes the funding route for different types of venues:

| Open Access publishing venues (journals or platforms) | Subscription venues (repository route) | Transition of subscription venues (transformative arrangements) |
|-------------------------------------------------------|----------------------------------------|---------------------------------------------------------------|
| Authors publish in an Open Access journal or on an Open Access platform. | Authors publish in a subscription journal and make either the final published version (Version of Record (VOR)) or the Author’s Accepted Manuscript (AAM) openly available in a repository. | Authors publish Open Access in a subscription journal under a transformative arrangement. |
| cOAlition S funders will financially support publication fees. | cOAlition S funders will not financially support ‘hybrid’ Open Access publication fees in subscription venues. | cOAlition S funders can contribute financially to Open Access publishing under transformative arrangements. |

For more information, visit: [https://www.coalition-s.org/principles-and-implementation/](https://www.coalition-s.org/principles-and-implementation/)
Discussion

An important aspect in opening up: Engagement

- **Green OA** by archiving final, peer-reviewed drafts in a freely accessible institutional repository or disciplinary repository
  - **Self-archiving?** When any of the authors has archived the publication
  - **Institutional self-archiving?** When any of the authors of the institution has archived the publication
  - **PMC OA?** Is it the same as self-archiving? Does it capture engagement in OA?
Conclusions

• Penetration of OA overall seems to be the result of isolated efforts rather than implementation of national policies.
• Formulas for OA vary by region, i.e., Brazil and Gold OA or UK and Green OA.
• Theory and practice in what is OA and its types are not aligned, i.e., PMC effect, bronze OA.
Questions?

Many thanks!

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