Open Science for the Asian Scholarly Community: Embracing Diamond Open Access and Preprints

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My involvement with "Openness" [in scholarly publishing]

Professional journey (2000 - 2010)

- » Malaysian Journal of Library & Information Science
- » Malaysian Abstracting & Indexing System (MyAIS)
- » UM Electronic Thesis & Dissertations (DSpace) Institutional repository
- » MyManuscript (Malay Manuscript)
- Significant contributions (2011 2019)
 - » Malaysian Journal Hosting System (MyJurnal)
 - » Malaysian Citation Index System (MyCite)
 - » Asean Citation Index System (ACI)

Open Science (2019 - 2024)

- » Malaysia Open Science Alliance (Capacity Building & Awareness Working Group)
- » International Science Council on the Future of Scientific Publishing & Open Science
- » Directory of Open Access Books
- The Harbingers Project (2014 2024)



Open [access/science] - What works for me....

- Authoritative, NO APC or affordable open access (OA) journals (Diamond OA)
- Transparent data sharing and methodology disclosure
- Sharing pre-prints, post-prints and research reports
- International disciplinary collaboration
- Transparency & openness in the publications



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And what doesn't....

- Gold OA (unreasonable APC!!)
- Institutional repositories (Green OA)
- Career advancement and evaluation systems
- Open peer review
- Post-publication activities (sharing, showcasing on academic platoforms / social media)



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OBJECTIVES OF THIS SESSION

- To communicate to the audience on the principles and practices of Open Science, with a specific focus on Diamond Open Access and preprints.
- To highlight the benefits and challenges associated with Diamond Open Access and preprints, emphasizing their potential to transform scholarly communication.
- To demonstrate the importance of these practices for the Asian scholarly community, showcasing how they can enhance research visibility, impact, and collaboration.

What "OPEN" means to me: THE CORE PURPOSE OF SCHOLARLY PUBLISHING IS ALL ABOUT OPENNESS & TRANSPARENCY

Scientific fundamentals

To preserve and disseminate the records of science

- To make knowledge claims and to maintain rigor by openly sharing concepts and evidence for peer scrutiny and validation.
- Communicates results of scientific inquiry promptly

• To be globally inclusive

Scientific responsibilities

- Ideas, evidence and data to circulate freely, quickly and efficiently, disseminated widely and deeply, and openly available for sceptical scrutiny, application and re-use.
- Preservation for future generations

SETTING THE SCENE

Open science to revolutionize and advance the research landscape, leading to more transparent and impactful research practices



However, the traditional academic publishing model has faced criticisms, with concerns regarding access to research outputs, reproducibility, and the overall credibility of published findings.

This is where the concept of open science comes into play. **Open** science emphasizes the principles of transparency,



THE NEED FOR RIGOUR, ENABLED BY THE TECHNOLOGICAL AFFORDANCES, HAS LED TO OPEN SCIENCE

"Open Science is the movement to make scientific research and data accessible to all. It includes practices such as publishing open scientific research, campaigning for open access and generally making it easier to publish and communicate scientific knowledge. Additionally, it includes other ways to make science more transparent and accessible during the research process. This includes open notebook science, citizen science, and aspects of open source software and crowdfunded research projects" (UNESCO, 2017).

Open Science Movement | United Nations Educational, Scientific and Cultural Organization. (2017). Retrieved from http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/open-science-movement/

Open Science

It is defined as practices aimed at breaking the barriers that prevent the free flow of knowledge produced by researchers in all disciplines, leading to an increased impact associated with wider sharing and re-use, as well as research ethics, thus building the public's trust in science and in the reliability of scientific results.

Traditional Research and Publication



but science is public good !!!



Open Science is essentially an umbrella term for these various practices Public & Citizen science Researchers and Scientists

Librarians and Information specialists

Scientific socities / Professional associations

Data repositories archives OPEN SCIENCE ACTORS Academic / Research Institutions (Universities)

Scholarly publishers (Journals)

Technology providers

Government / Policy makers Funding agencies / Grant providers

OPEN SCIENCE INITIATIVES GLOBALLY



European Union

China

The Chinese Academy of Sciences published Open Access policy (2014). The Measures for Managing Scientific Data (2018), Policy Statement on Open Access by NNSFC and CAS (2018) The Peking University Open Research Data Platform (2019)

Japan

Open Science in 5th S&T Basic Plan (2016) JST Policy on Open Access to Research Publications and Research Data Management 2017

Korea

Addendum to Regulations on Management of National Research and Development under the Framework Act on S&T (2019) **Open Research Data Strategy** (2018)

Singapore

3 Open Access Repositories registered in the Registry of Open Access Repositories (ROARMAP).

Malaysia Malaysia Open **Science Platform** (MOSP) Initiative

Australia Research Data Commons



Malaysia Open Science Platform

Open science today for new science tomorrow

To make Malaysia's research data as **valuable national assets** by developing a trusted platform that enables accessibility and sharing of research data and to aligned with national priorities and international best practices.

https://mosp.gov.my/





Why do the scholarly community want open science? What problems does it aim to address?



Adapted from an original graphic under CC BY by Danny Kingsley and Sarah Brown.

SCIENCE AS A PUBLIC GOOD*

- The academic community (including the library and publishers) should recognize the essential purpose of "science" [knowledge] that aligns with open science: a) scientific fundamental (to preserve and disseminate the record of science) b) scientific responsibilities (to be globally inclusive)
- * non-excludability and non-rivalrous consumption
- addressing global challenges

Scholarly publishing in the open science - moving from visibility to inclusivity and transparency

How can the scholarly publishing system maximize benefit to the global science (all regions) and to wider audiences (all disciplines) for scientific research?



AN IMPORTANT PILLAR OF OPEN SCIENCE: OPEN ACCESS

A scholarly communication model that makes research output available to readers at no cost

- A publication is defined 'open access' when:
- □ it is publicly available via the Internet (PUBLICLY AVAILABLE)
- □ there are no financial, legal or technical barriers to accessing it (NO BARRIERS)
- □ it can be read, downloaded, copied, printed, searched (VERSATILE USAGE)
 - □ it can be used it in education or in any other way within the legal agreements.
- typically published with a Creative Common license
 role of CC BY. (Freely share, Adapt, Attribution)
- □ Apply to various types of scholarly output
 - □ Articles: Peer-reviewed journal articles made freely available to the public.
 - Data: Research data sets shared openly to promote transparency and reproducibility.
 - □ Software: Code and software tools distributed openly to support scientific research and collaboration.



2 MAIN ROUTES TO OPEN ACCESS

OA JOURNALS

Gold Open Access

Publication, e.g., as:

- an article in an OA journal
- an OA monograph

 a contribution to an OA collection or OA conference proceedings

e.g. PLOS ONE, BioMed Central



OA ARCHIVES

Green Open Access

Self-archiving

- of a publication published with a publisher / in a journal
- In an institutional or disciplinary repository

e.g. Zenodo, arXiv, SSOAR

OPEN ACCESS TERMINOLOGY

ARTICLE -LEVEL

GOLD

- Immediate OA via APC or other payment
- APC is paid by or on behalf of author
- GREEN
 - Via deposit in open repository
 - May be subject to embargo
 - Articles may be free to read but may not be OA

BRONZE

- Free access by publisher policy or practice
- May be temporary or continuous

JOURNAL-LEVEL

HYBRID

- Subscription journal
- Option for gold articles funded by APC or other payment

GOLD

- Articles are Gold Open Access
- Typically funded by APCs
- DIAMOND (also known as PLATINUM)
 - Articles are Gold Open Access
 - Typically no APCs
 - Institutional or sponsor supported

Does the current open access scholarly publishing system serve the essential purpose? To what extent does it serve the "openness" needs of science and society?

• Deficits to be adddressed:

- Financial Burden: Many Gold OA journals, charge high APCs. This can be a significant financial burden for researchers, especially those from low-income regions or institutions with limited funding.
- Funding Models: Finding sustainable funding models for Open Access journals is difficult. Many rely heavily on APCs, which may not be sustainable longterm.
- Misconceptions: Persistent misconceptions about the quality and prestige of OA journals compared to traditional subscription-based journals.
- Recognition and rewards: Concerns about how new or less-established OA publications are recognized and rewarded in academic evaluations and career advancement.
- Peer Review Process: Ensuring a robust and transparent peer review process can be challenging, especially for new or less-established OA journals.



ISSUES WITH GOLD OPEN ACCESS PUBLISHING IN ASIA

- High publication fees: Affordability and funding disparity
- OA is about paying to publish
- Inequalities in distribution of APCs
- Limited institutional support for APCs
- Quality concerns raised by grey journals; and possible, probable and potential predatory journals
- Equity and accessibility
- Cultural and academic resistance
- National policies

THERE IS A COMMITMENT TO PROMOTE OPEN SCIENCE THROUGH DIAMOND OPEN ACCESS JOURNALS AND NORMALIZATION OF PRE-PRINTS THROUGH PRINT SERVERS

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FROM GREEN OA TO PREPRINT SERVERS

FROM GOLD OA TO DIAMOND JOURNALS

Rounds of drafting & informal feedback

> Preprint Work in progress Submitted version

Submitted to journal Peer review Author corrections

Postprint Author-accepted manuscript (AAM)

Copy-edited Typeset Formatted



Published Version of record PDF / HTML / XML DOI from journal

MAINTAINING THE RECORDS OF VERSIONS

Can always be shared in an established pre-print server concurrently with peer preview process

Can always be shared in an established pre-print server concurrently with revision process / external validation

Can always be shared if published by a diamond open access journal





• Homegrown OA journals - initiated, managed, and published by local academic institutions, professional societies, or scholarly communities rather than by large international publishers.

• Often focus on regional research and issues, providing a platform for local scholars to disseminate their findings and contribute to the global body of knowledge.

Promotion of equitable access to knowledge.



*While many homegrown OA journals have embraced the Platinum/Diamond model, quite a number of Malaysian journals have moved to Gold OA driven by financial motivations to generate revenue.

OA models where neither authors nor readers are required to pay any fees. Instead, the costs of publishing are covered through other means, such as institutional funding, or sponsorships. This model ensures that financial barriers do not impede the dissemination of research or the ability of researchers to publish their work.

Community-driven, academic-led, and academic-owned publishing initiatives.

Roles of Diamond OA journal editors



- Ensuring quality and rigor in peer review.
- Maintaining transparency in editorial processes.
- Encouraging new and established authors to submit articles
- Setting up a reliable panel of expert reviewers.
- Advocating for the removal of financial barriers to publishing.
- Promoting the journal's mission and values to a wider audience.
- Promoting the journal as the "best journal to publish in"

Challenges of being Diamond / Platinum

Financial Sustainability:

- Dependent on continuous institutional funding: Securing consistent funding can be challenging, as homegrown journals often lack the financial backing compared to larger, commercial publishers.
- APCs and Revenue Models: Balancing the need to cover operational costs with the goal of remaining accessible can be difficult, especially if author processing charges (APCs) are introduced.

Editorial and Operational Management:

- Resource Constraints: Limited staff and resources can make managing the submission, peer review, and publication process, and the use of publishing platforms challenging.
- Quality Control: Ensuring rigorous and timely peer review and maintaining high editorial standards can be difficult with limited expertise and reviewer availability.
- Editorial Oversight: The editorial board, working on behalf of the publisher, faces the additional challenge of upholding these standards with constrained resources

Visibility and Indexing:

- Indexing in Databases: Achieving inclusion in prominent indexing databases (e.g., Scopus, Web of Science) can be a hurdle, affecting the journal's visibility and credibility.
- Marketing and Outreach: Without substantial marketing budgets, increasing the journal's visibility and attracting high-quality submissions can be challenging.

For Malaysia, there is a clear plan to improve the performance of Malaysian OA journals

There is a clear plan to get indexation status of Malaysian journals > General Search
 > Advanced Search
 > Journal Citation Report
 > Contact Us

Delivering access to bibliographic and citation information from scholarly literature published in Malaysian journals, conference proceedings, chapters in

books and theses in the sciences, technology, medicine, social sciences and the

Malaysian Citation Index

> MyCite / Malaysian Citation Index

".. We would like to take this

opportunity to congratulate your

Malaysia Applied Biology Journal

team for the great job!"

Ms Melissa Wong

21 Feb 2013

Editorial Assistant,

Humanities

establishment of the Malaysian Citation Centre (MCC) in 2011. MCC is responsible for collating, monitoring, coordinating and improving the standard of scholarly journal publications in Malaysia. MCC will maintain a citation system, named MyCite or Malaysian Citation Index. MyCite will provide access to bibliographic as well full-text contents of scholarly journals published in Malaysia in the fields of Sciences, Technology, Medicine, Social Sciences and the Humanities. Besides this, MyCite will provide citation and bibliometric reports on Malaysian researchers, journals and institutions based only on the contents within MyCite. It is estimated that there are over 500 Malaysian journals, the contents of which needs to be made visible globally so that Malaysian researchers can identify expertise, areas of possible collaboration, stimulate use and citations.

"Thank you for sending me the

report on the Performance of

Malaysian Journals in MyCite:

2012. Congratulations for the

excellent initiative and effort"

Malaysian Journal of Nutrition

Prof Dr Khor Geok Lin

21 Feb 2013

The Ministry of Education (MOE) Malaysia initiated the

journals through the Malaysian Journal Management System (MyJurnal) so that their impact in Malaysia can be gauged. MyCite currently contains [126187] articles from Malaysian scholarly

Publishers are encouraged to self-

submit and archive the articles in their

> Home

> About

> MyJurnal >>

articles from Malaysian scholariy journals. Publishers will be considered for MyCite indexation only if they meet all the criteria specified in the MyCite Journal Selection criteria.

".. and wish to put this on record that the report is really useful and informative. I personally find such a report practical and handy. I wish to congratulate you for the briliant work your centre is doing and hope that MyCite will continue to establish itself as a pioner in providing crucial data related to scientific publication in this region."

Dr Nayan Deep S.Kanwal Chief Executive Editor (UPM Journals), 27 Feb 2013

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Editor

testimonials





Indexation status

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NORMALIZING PREPRINT SERVERS



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FAQ

Directory of Open Access Preprint Repositories

Home Repositories ▼ Functions Disciplines Integrated Services Feedback

It is becoming an increasingly common practice for researchers to share their preprints because it allows them to disseminate their research results quickly and openly with the rest of the world. As a result, there is a growing number of preprint-specific and generalist repositories that support the sharing of preprints.

This directory provides a list of preprint repositories that are available to the research community. It helps researchers find the most appropriate platform for them, enabling them to browse through existing repositories by discipline, location, language, functionalities, and other facets.

The directory is jointly managed by <u>Centre pour la Communication Scientifique Directe (CCSD)</u> and <u>Confederation of Open Access Repositories (COAR)</u>. The data in this directory was originally compiled through the GPPdP (Groupe Projet Plateformes de Prepublications) project, with financial support from the French <u>Ministry of Research's Open Science Committee (CoSO)</u>.

To suggest a new repository, or provide feedback on a repository already included in this directory, please see the feedback page.



CCSD. Centre pour la Communication Scientifique Directe

> This website was developed by <u>Antleaf</u> for <u>COAR</u> and <u>CCSD</u>, and is licensed under <u>Creative Commons CC-BY 4.0</u> Deployed with Hugo v. 0.124.1 on Tue, 02 Jul 2024 12:41:24 UTC

BENEFITS OF NORMALIZING PREPRINTS FOR THE ASIAN SCHOLARLY COMMUNITY



Principles for scientific publishing

I. Affordable, universal open access

- II. Open licensing of the record of science
- III. Rigorous, efficient, timely peer review
- IV. Concurrent publication of data and evidence (FAIR)
- V. Maintaining the record of science
- VI. Respecting the needs of disciplines and regions
- VII.Adaptability to new opportunities
- VIII. Accountability to the scientific community

The science community is raising its voice; funders, governments, universities and research institutions must now step up to reform open access to the scientific record according to the principles



The International Science Council's Future of Scientific Publishing and Open Science Project

Options for reform

Normalize

Rapid communication to disciplinary peers through preprint servers.

Overlay processes

Innovative approaches to peer review and quality control

Rights retention strategies and open licences

Concurrent deposition of relevant data/evidence in line with FAIR principles as a condition of publication.

Develop and implement

Business models that support 8 principles and diverse publication modes

A sustainable business model for learned society open access publication

Reform peer review

Platform-agnostic discovery services

Global curation infrastructures for the Record of Science

A record of versions, not a version of record

Reform incentives away from bibliometrics

Governance

International organizations as custodians of the scientific interest

Compliance and audit of agreed standards (8 principles)

Adhere to UNESCO open science values

Foreground academic institutions

Build on robust, distributed, community controlled infrastructures

Boulton, G. 2021. ISC Future of Scientific Publishing Project: Purpose, Process and Action. A presentation at the International Science Council General Assembly



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To conclude

Both Diamond OA journals and the normalization of preprint servers, supported by publishers and editors, are crucial (and easliy achievable steps) for advancing open science.

Diamond OA journals provide free access to research, promoting equity and inclusivity.

Preprint servers speed up knowledge dissemination, encourage collaboration, and enhance transparency.

By promoting the normalization of preprints, Diamond OA journal editors can contribute to a more transparent, efficient, and inclusive scientific ecosystem.

Together, these efforts create a more open, collaborative, and efficient scientific ecosystem, benefiting researchers, policymakers, and society.

Publications of the International Science Council

Major report and occasional papers on specific issues in scientific publishing



OPENING THE RECORD OF SCIENCE

MAKING SCHOLARLY PUBLISHING WORK FOR SCIENCE IN THE DIGITAL ERA



Business Models and Market Structure within the Scholarly Communications Sector

ISC Occasional Paper September 2020





Strengthening Research Integrity—the Role and Responsibilities of Publishing

Draft ISC Discussion Paper October 2021





THE NORMALIZATION OF PREPRINTS

ISC Occasional paper March 2022



The Case for Reform of Scientific Publishing https://council.science/wp-content/uploads/2023/11/The-Case-for-Reform-for-Scientific-Publishing_2023.pdf



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Thank you abrizah@um.edu.my

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