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
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 platforms / social media)
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

Scientific responsibilities

- To be globally inclusive
- 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
Academic research forms the backbone of scientific progress and innovation, driving advancements in various fields. As researchers (and editors), we constantly strive to contribute valuable insights to our respective disciplines through scholarly publishing, aiming to make a positive impact on society.

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, collaboration, and accessibility.
"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
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.

but science is public good!!!
Open Science is essentially an umbrella term for these various practices.
France

Australia
ARC Policy on Open Access (2013)
Australia Research Data Commons

China
The Peking University Open Research Data Platform (2019)

USA
Memorandum on Ensuring Free, Immediate, and Equitable Access to Federally Funded Research (2022)

Europe
European Union
Amsterdam Call for Action on Open Science
Vienna Declaration on European Open Science Cloud (EOSC)
European Data Portal

Japan

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

Africa
Africa Open Science Platform Initiated in 2016

Brazil
Mandatory Data Management Plan

Indonesia
Presidential Regulation Satu Data Indonesia (2016)

India
National Data Sharing and Accessibility Policy (NDSAP)

China
The Peking University Open Research Data Platform (2019)

Australia
ARC Policy on Open Access (2013)
Australia Research Data Commons

Canada
Federated Research Data Repository (FRDR)
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?

- Compliant with grant rules
- Higher citation rates
- Your research can influence policy
- Taxpayers get value for money
- Practitioners can apply your findings
- The public can access your findings
- Researchers in developing countries can see your work

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 addressed:
  - 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 long-term.
  - 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
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.
Most Malaysian journals are Diamond 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.

*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.
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.
Indexation status

- 15 Core journals (13 SCIE, 1 SSCI, 1 AHCI)
- 43 ESCI
- 118 Scopus
- 383 MyCite
- 1064 MyJurnal

58 Web of Science

1064 journal titles
Directory of Open Access Preprint Repositories

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

To suggest a new repository, or provide feedback on a repository already included in this directory, please see the feedback page.
BENEFITS OF NORMALIZING PREPRINTS FOR THE ASIAN SCHOLARLY COMMUNITY

1. Rapid sharing, timely updates
2. Enhanced visibility, early citations
3. Fostering collaboration and feedback; external validation
4. No publication fees, funding efficiency
5. Promoting openness and transparency
6. Supporting early career researchers
7. Alignment with global practices
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

To conclude

Both Diamond OA journals and the normalization of preprint servers, supported by publishers and editors, are crucial (and easily 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
The Case for Reform of Scientific Publishing

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