

Unit 2: Open access: History and development

Objective: In this topic, the genesis of OA publishing is briefly discussed; highlights different benefits OA publishing promises, different approaches and business models of OA; and finally, this gives participants an overview of long-term preservation models available for OA and other scholarly electronic contents.

Learning Outcomes

After going through this topic, the participants are expected to be able to:

- Define and explain OA from the perspective of its historical developments;
- Distinguish between Green and Gold OA, and also understand emerging approaches to OA;
- Explain the OA advantages, and argue for promoting OA to scientific information;
- Identify business models for promoting OA; and
- Understand long-term digital preservation models available to OA knowledge resources.

Areas of focus

- Open access - definitions, Philosophy, Evolution
- Approaches to open access
- Benefits of open access
- Arguments against open access and responses
- Open access business models
- Long-term preservation models

Open Access –Definitions, Philosophy, Evolution

Open access – definitions

Open access to knowledge is a generic term used for knowledge resources made available in the public domain for public access or public consumption at large scale, without any hindrance of subscription fee or access charges.

How is this made possible - internet-based online environment

Open Access literature is digital, online, free of charge, and free of most copyright and licensing restrictions - Peter Suber (2012)

Terminologies used in popular OA movement - Link to FOSTER Open Science -

<https://www.fosteropenscience.eu/content/definitions-terms-used-open-science-and-open-access-introductory>

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



Open Science and Open Access Taxonomy - <https://www.fosteropenscience.eu/foster-taxonomy/open-access-definition> [ask participants to review terminology and find differences – study the open science and open access taxonomy diagram and make comments]

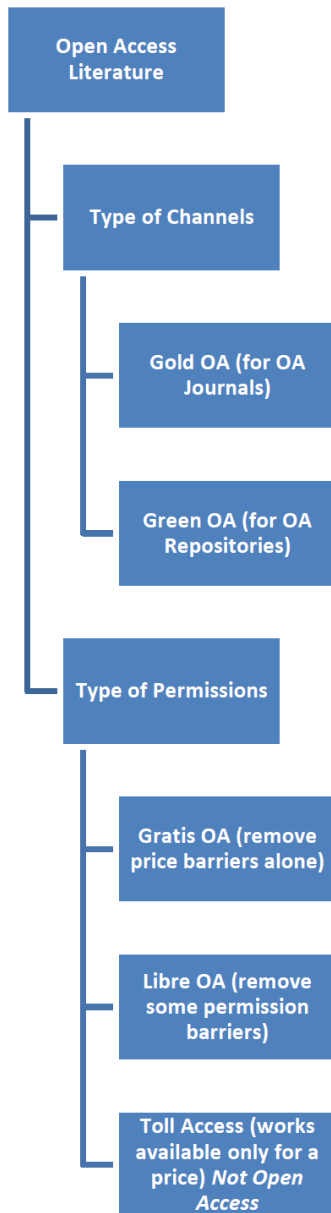
- Gold OA for OA delivered by journals, regardless of the journal’s business model;
- Green OA for OA delivered by repositories.
- Self-archiving is the practice of depositing one’s own work in an OA repository.
- Toll Access (TA) - Work that is not open access, or that is available only for a price.
- Gratis OA is when price barriers alone are removed
- Libre OA is when we remove at least some permission barriers.

Popular OA Terms and their categorization – see figure below

License

This work is derived from UNESCO’s Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.





Open Access Philosophy

Three OA declarations, commonly known as BBB declarations, in the beginning of the 21st century have shaped OA publishing environment in the successive decades. These declarations also have hinted strong philosophical foundations for supporting the ideas and principles of OA.

Budapest Open Access Initiative (2002) - released to the public on February 14, 2002 - <https://www.budapestopenaccessinitiative.org/> - concerns making research free and available to anyone with internet access and promote advances in the sciences, medicine, and health.

Berlin Declaration (2003) - The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities is an international statement on open access and access to knowledge. It emerged from a

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



conference on open access hosted in the Harnack House in Berlin by the Max Planck Society in 2003 - <http://www.berlin9.org/about/declaration/> - <https://openaccess.mpg.de/Berlin-Declaration>

Bethesda Statement (2003) - defines the concept of open access and then supports that concept -

Note:

- These three pioneering declarations got wide supports from the Noble laureates and renowned global thinkers.
- Similarly, other global, national, regional and institutional OA mandates, introduced after BBB declarations, have recognized and enacted upon philosophical foundations carved in these three pioneering declarations.
- All of them endorse the principles of the OA model for maximizing the access and benefit to scientists, scholars and the public throughout the world.

Open Access Evolution

Indicative Open Access Timeline

1991

- arXiv.org Repository Launched

2000

- PubMed Central Repository Launched
- EPrints software Released
- PLOS journals Launched
- BioMed Central journals Launched

2001

- OJS (Open Journal Systems) Software Released

2002

- SPARC Launched
- DSpace software Released
- Creative Commons Licenses Released
- Budapest OA Initiative (Declaration)
- OAister Database Launched

2003

- Berlin, Bethesda Declarations
- WSIS Action Lines Launched

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.

- DOAJ (Directory of Open Access Journals) Launched

2006

- OpenDOAR (Directory of Open Repositories) Launched

2007

- Celebration of Open Access Week Started

2008

- OA Scholarly Publishers Association (OASPA) Launched

Key observations/ takeaways

- There were many events in the first decade of the 21st century that marked the emergence of OA literature as a substantial mode of scholarly communications.
- Many stakeholders came forward in building institutions and resources for shaping up the global OA movements.
- Some of the institutions emerged during this decade are namely, Public Library of Science (PLOS), BioMed Central (BMC) – publishers of peer-reviewed OA journals, the Scholarly Publishing and Academic Resources Coalition (SPARC), and Open Access Scholarly Publishers Association (OASPA).
- Most importantly, the Budapest, Berlin and Bethesda (BBB) OA declarations or statements got signed by the scholarly communities, particularly by the funding agencies, research councils, learned societies, institutions, universities, and scientists for the OA dissemination of public funded research.

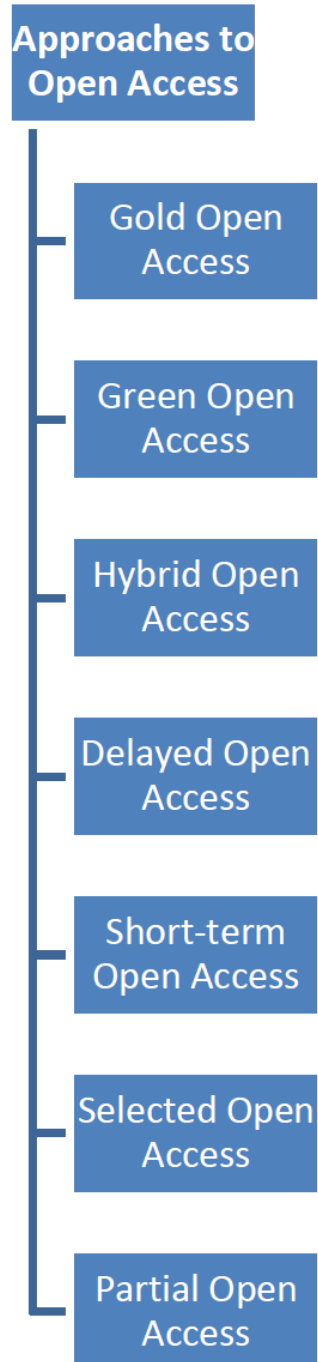
Approaches to Open Access

Popular OA Approaches

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.





Some of the popular OA models as practiced by the e-journal publishers are: [start here](#)

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online>. The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.

- i. Hybrid OA - publishers publish OA articles in toll-access scholarly journals, after receiving certain article processing charges (APC) from the authors
- ii. Delayed OA - publishers offer free access after a specified period, anywhere from 6 months to 2 years
- iii. Short-term OA - publishers offer free access until a specified period, anywhere from 6 months to 1 year - then after, contents are available to subscribers only
- iv. Selected OA - publishers selectively offer free access to selected contents only - other contents are available to subscribers only
- v. Partial OA - publishers selectively offer free access to contents of particular sections only, e.g., research papers, but not review papers
- vi. Gold OA and Hybrid OA models - publishers publish articles with Creative Commons (CC) licenses. These two models belong to Libre OA category. OA contents available with other four models don't explicitly carry CC or similar licenses. These four models mainly belong to Gratis OA category

Benefits of Open Access

The BBB open access statements and associated literature have identified major benefits of OA scholarly publishing.

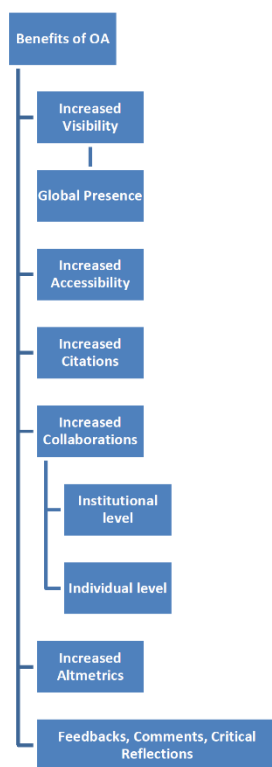
- a) Provide removal of access barriers
- b) Brings full potentials of the communicated research
- c) Increased global visibility, accessibility, possibilities of get cited, and article level metrics or altmetrics
- d) Research collaborations at individual, institutional and international (I3) levels
- e) Offer a window for receiving constructive feedbacks, comments, and opinions

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



f)



Notes: - [not included in the slides – to be read to the students]

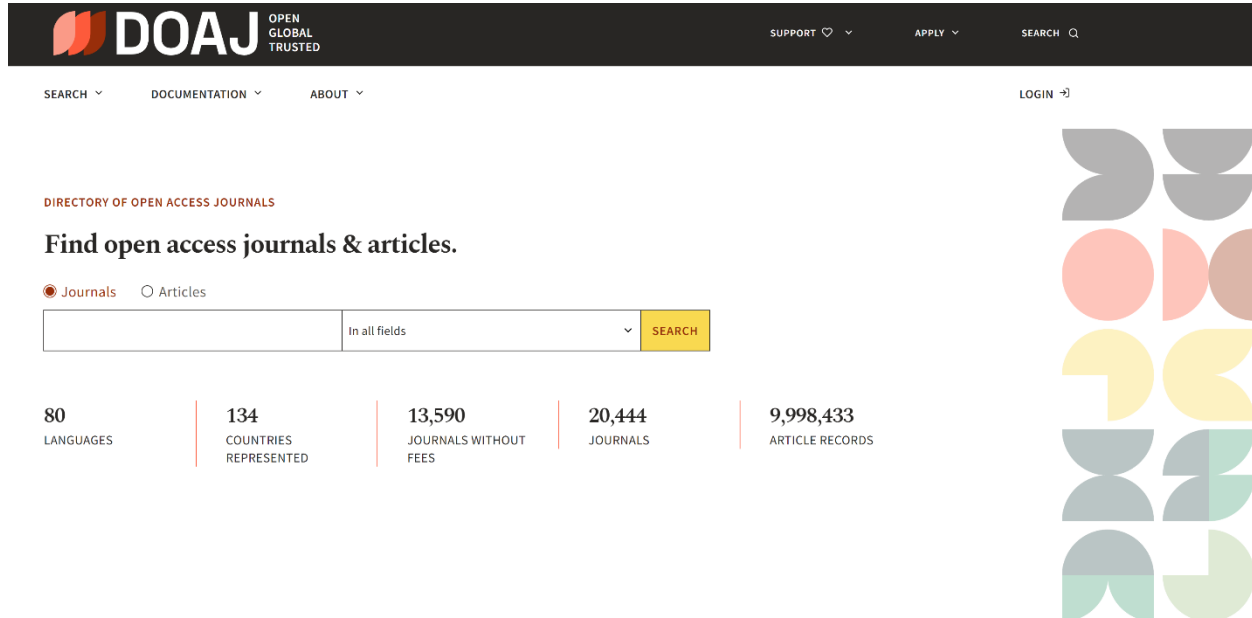
- a) Primary benefit is to provide removal of access barriers, as there is no cost associated with subscriptions or online access. There is no access restriction in OA mode, leading to bridging knowledge divides between global North and global South.
- b) Many benefits of OA publishing are related to global nature of Internet. Internet brings every piece of online content to a general or specialized audience, depending on nature of contents. These free contents are outreach globally, accessed and appreciated by global communities. So, OA publishing brings full potentials of the communicated research.
- c) To an author these include increased global visibility, increased accessibility in both developed and developing countries, increased possibilities of get cited, and increased article level metrics or altmetrics.
- d) Other researchers seeking research collaborations get engaged with the publishing authors for possible international collaborations at the institutional or individual level.
- e) The OA contents also offer a window for receiving constructive feedbacks, comments, and opinions. These critical reflections enrich the published OA contents. Both readers and authors can then be a part in the advancement of knowledge, offered by OA scholarly literature.

2.7 Arguments against Open Access and Responses

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online>. The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.

DOAJ – Directory of Open Access Journals [*add screenshot and current record number of OA journals*] - <https://doaj.org/>



The screenshot shows the DOAJ (Directory of Open Access Journals) homepage. At the top, there is a navigation bar with the DOAJ logo (OPEN GLOBAL TRUSTED) and links for SUPPORT, APPLY, and SEARCH. Below the navigation bar, there are links for SEARCH, DOCUMENTATION, and ABOUT, along with a LOGIN button. The main heading reads "DIRECTORY OF OPEN ACCESS JOURNALS" and "Find open access journals & articles." There are radio buttons for "Journals" (selected) and "Articles". A search input field is present, followed by a dropdown menu set to "In all fields" and a yellow "SEARCH" button. Below the search area, there are five statistics: 80 LANGUAGES, 134 COUNTRIES REPRESENTED, 13,590 JOURNALS WITHOUT FEES, 20,444 JOURNALS, and 9,998,433 ARTICLE RECORDS. On the right side, there is a decorative graphic consisting of a grid of colorful, stylized shapes.

Activity: Participants to search for OA Journals in their subject areas – those that would be used by their researchers at their universities/ institutions

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online>. The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



Jisc Digital Resources > Open Access

OpenDOAR

About Directory Statistics Tools and support Contact

Welcome to OpenDOAR

OpenDOAR is the quality-assured, global Directory of Open Access Repositories. You can search and browse through thousands of registered repositories based on a range of features, such as location, software or type of material held. Try it out for yourself:

Repository Name Search

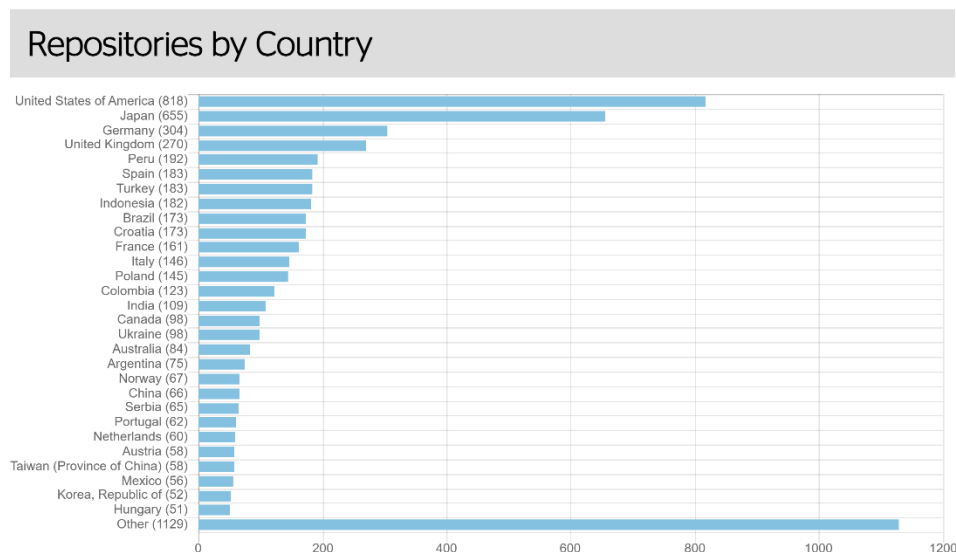
Browse by Country Advanced Search

Activity: Participants to search for OA-IR and find out which ones are available for Uganda, and those for Africa – as well their institutions

OpenDOAR Statistics - https://v2.sherpa.ac.uk/view/repository_visualisations/1.html

Activity – [Open the link to OpenDOAR Statistics and allow discussions by the participants]

An overview of the data held in OpenDOAR



License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



Predatory OA Journals – APC (Article Processing Costs) – checks and balances to restrict operations of predatory OA journals

- Strict inclusion criteria at DOAJ and OASPA
- Beall List (ScholarlyOA.com) provides alerts to scholarly communities about potential, possible, or probable predatory scholarly open-access publishers

Arguments Against Open Access	Responses
OA journals don't have exhaustive or in-depth peer reviewing process.	COPE and OASPA-accredited OA journals follow very exhaustive and in-depth peer reviewing process, comparable with traditional non-OA scholarly journals.
Peer reviewing is not satisfactory enough to validate scientific findings matching existing standards and methodologies.	Peer reviewing is highly satisfactory in many journals, particularly which are having high rate of citations or altmetrics. These journals have comparable academic rigour while accepting papers.
Academic rigour in OA journals is not proven.	Academic rigour is proven when an OA journal becomes a high ranking journal in a specialized or specific scientific discipline, or, when the journal receives high rate of citations/ altmetric score.
APC (article processing charge) is major hurdle in getting published in OA journals.	Some studies indicate that only a handful of OA journals accept APC from prospective authors. Others don't accept an APC from the authors. Many of them don't consider APC as main source of revenue. On the other hand, toll-access journals charge a print or online subscription fee – unaffordable to many institutions in the developing as well developed nations.

2.8 Open Access Business Models [*Group the participants and ask them to visit each of these sites, study them carefully and identify how they support OA and OS initiatives*]

- OA repositories provide access to a mixed kind of resources, whereas some gateways or portals are available for dissemination of specific kind of resources.
- Open Educational Resources (OER) have special role to supplement lifelong learning, continuous education, vocational education and distance learning.
- Massive Online Courses (MOOCs),

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online>. The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.

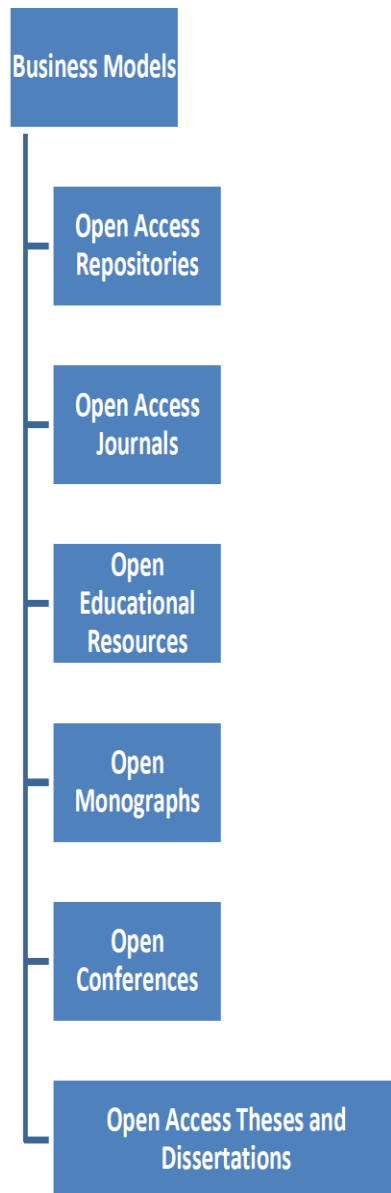
- d) Open Textbooks and Open Courseware are also associated with global deployment of OER.
- e) Some publishers now have been publishing OA books and OA monographs utilizing author's pay model, receiving an APC from authors for publishing such books or monographs.
- f) OA books and monographs can be searched from the Directory of Open Access Books (DOAB) - <http://www.doabooks.org>.
- g) An open source software – the PKP Open Conference Systems (OCS - <http://pkp.sfu.ca/ocs/>) is available from the Public Knowledge Project, helping organizers of scholarly conferences with a free web publishing tool
- h) ETD (electronic theses and dissertations) repositories. An international organization - the Networked Digital Library of Theses and Dissertations (NDLTD) promotes the adoption, creation, use, dissemination and preservation of electronic theses and dissertations.
- i) Many of the ETD and OA repositories are indexed in the OAIster - <http://oaister.worldcat.org>

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



Business Models in Open Access Publishing



2.9 Long-Term Preservation Models

Presently, two major long-term preservation programmes are available to academic libraries, researcher institutions and scholarly publishers, namely

- LOCKSS - <http://www.lockss.org> [*participants to watch this vide* - <https://www.youtube.com/watch?v=POJf38RzihA>]
- CLOCKSS - <http://www.clockss.org>

Notes - *[not included in the slides – to be read to the students]*

License

This work is derived from UNESCO's Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online>. The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.



The LOCKSS Programme, initiated in 1999 at the Stanford University Libraries, is an open-source, library-led digital preservation system built on the principle of “Lots of Copies, Keep Stuff Safe”.

LOCKSS follows a few unique principles that are vital to successful long-term preservation. Those principles are:

- Decentralized and distributed preservation (Lots of Copies Keep Stuff Safe)
- Give libraries local custody and control of their assets
- Preserve the publisher’s original authoritative version
- Perpetual access – guaranteed and seamless
- Affordable and Sustainable

The CLOCKSS (Controlled LOCKSS) initiative, launched in 2005 as a nonprofit venture, is a partnership of libraries and publishers committed to ensuring long-term access to scholarly work in digital format.

- a) It maintains the CLOCKSS Archive for long-term preservation of scholarly contents archived by its members.
- b) CLOCKSS has provision of permanent preservation of abandoned and orphaned contents with a Creative Commons license to ensure these contents remain available forever.
- c) CLOCKSS runs on LOCKSS technology.
- d) While LOCKSS is an open network, CLOCKSS is a closed system.

How a worm showed us the way to open science - <https://www.youtube.com/watch?v=CTwcYQ9WHOA>
[participants will be asked to watch this video]

License

This work is derived from UNESCO’s Open Access (OA) Curriculum that is available online at <https://www.unesco.org/en/articles/unescos-open-access-oa-curriculum-now-online> The material is modified to the Uganda setting and should be used under the same license - Creative Commons Attribution-ShareAlike 4.0.

