Module 2: Open Access Infrastructure

Topics/ Units

- Open access infrastructure - Introduction
- Open Access Repositories
- Open Journals
- More About Open Approaches

Wednesday 29th May 2024

Session 6

UNIT OBJECTIVES

Objectives of Scholarly Communication

- This unit briefly discusses implementing an Open Access Service to make research openly accessible for all, aligned with the strategy of an organization.

Learning Outcomes

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

- Explain the concept of repositories;
- Identify the types of OA repositories;
- List Open Source repository software;
- Compare the features of some open source repository software;
- Carryout needs analysis for OA repository and list the features of OA repository software;
- Prepare a business plan for deployment of repository software; and
- Take appropriate steps to install and manage repositories.

AREAS OF FOCUS

- Open Access Repositories
  - Institutional repositories
  - Subject/discipline specific repositories
  - Data repositories
- Open Source Repository Software
  - Repository software
  - Criteria for the evaluation of an institutional repository
  - Comparison of repository software
- Deployment and Implementation
  - Needs assessment (analysis)
  - Business Case (Plan)
- Software Installation, Management and Services

Open Access Repositories

- There are mainly two routes to Open Access, namely
  - the green
  - the gold routes.
- Open Access repositories are referred to as the green route to Open Access, while publishing in Open Access journals is referred to as the gold route to Open Access.
- Institutions such as universities and research organisations can implement either or both - not only to support Open Access, but also to preserve the digital research assets of the institution.

Open Access Repositories

- Categories of Repositories
  - Institutional repositories;
  - Subject/discipline specific repositories
  - Data repositories.

Open Access Repositories

- Institutional repositories

"… a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution."

***Activity: I**n Groups visit OpenDOAR - http://www.opendoar.org/find.php search for your institution's IR – if it is not there, search any other institution/s in Uganda, East African, then Africa – what is your opinion of the IR coverage by Content – then National*

Open Access Repositories

Activity: *In Groups visit SSOAR - https://www.gesis.org/ssoar study the database – What is the coverage by subjects in your institutions – programme of study – relate to areas of specialization in your institution*

Other Subjects IRs – CiteSeer https://citeseerx.ist.psu.edu/ -

What subjects are covered?

Open Access Repositories

Data Repositories

- A dataset is a set of files containing both research data - usually numeric or encoded - and documentation sufficient to make the data reusable.
- The documentation can refer to any digital files such as a codebook, technical or methodology report or user guide, which explain the research data's production, provenance, processing or interpretation.
- Same principle as IRs and Subject/ Discipline specific IRs
- This focuses on providing access to datasets

Activity: *Visit Busitema University List of datasets – statistical databases*

Open Access Data Repositories

Examples of data repositories:

- Edinburgh DataShare – University of Edinburgh - https://datashare.ed.ac.uk/
- National Geographic Data Center - https://www.ngdc.noaa.gov/
- Dryad - https://datadryad.org/stash

Open Source Repository Software

There are mainly two different categories of repository software:

- A Open Source software, e.g.
  - DSpace,
  - Fedora,
  - EPrints
- Hosted solutions, e.g.
  - Digital Commons,
  - SimpleDL,
  - ContentDM,
  - DSpaceDirect.

Number of Repository Instances according to software

	DSpace http://www.dspace.org/	EPrints http://www.eprints.org/	Digital Commons http://digitalcommons.bepress.com/
OpenDOAR http://www.opendoar.org/	1 049 instances	369 instances	116 instances
ROAR http://roar.eprints.org/	1 414 instances	517 instances	187 instances

Review Activity: *During your free time, especially when you return to your institutions, find time and review studies comparing repository software pp. 11*

- *Creating an Institutional Repository: LEADIRS Workbook – pp. 12 – 16*
- *Writing a business plan – pp. 17 – 40 – review and discuss*

Software installation, management and services

- *Decide on a URL for the repository*
- *Register with a handle server e.g. CNRI handle server – handles are persistent identtifiers for internet resources – DOIs by DataCite – (DataCite Resources shall be shared on Friday session)*
- *Install the software – Examples of repository software systems*

	Download	Documentation	Mailing Lists	Bug Reports
DSpace 3.2	http://www.dspace.org/latest-release	https://wiki.duraspace.org/display/DSDOC3x/	http://www.dspace.org/Mailing-Lists	http://www.dspace.org/jira
EPrints 3.3.12	http://files.eprints.org/	http://wiki.eprints.org/w/EPrints_Manual	http://wiki.eprints.org/w/Contact	https://github.com/eprints/eprints
Digital Commons (Bepress)	Hosted solution http://www.bepress.com/	http://digitalcommons.bepress.com/subscriber_resources/	Not available	Not available

Software installation, management and services

- *Repository system Backup & Monitoring (Disaster Recovery Planning)*
- *IR Policy – See Busitema University IR Policy*
- *OA Policy - See Busitema University OA Policy – see UNESCO policy guidelines for the development and promotion of OA, 2012*
- *Optimization and registration with harvesters – see table below for directories and harvesters to register a repository with*

Software Specific Directories e.g. DuraSpace (DSpace)	http://registry.duraspace.org/register-repository
OAIster	http://www.oclc.org/oaister/contribute.en.html
ROAR	http://roar.eprints.org/cgi/register
OpenDOAR	http://www.opendoar.org/suggest.php
Open Archives Initiative	http://www.openarchives.org/Register/ValidateSite
Google Scholar	https://support.google.com/scholar/troubleshooter/2898950?rd=1
re3data.org	http://www.re3data.org/suggest/

Software installation, management and services

- *Marketing – LEADIRS Workbook contains a comprehensive section on marketing a repository*
- *Training and user support – for librarians, researchers, academics, administrators*
- *Populating the repository*

Review Activity: *Review a set of questions – check your progress later in the evening – you can work as a group – pp. 50-51*

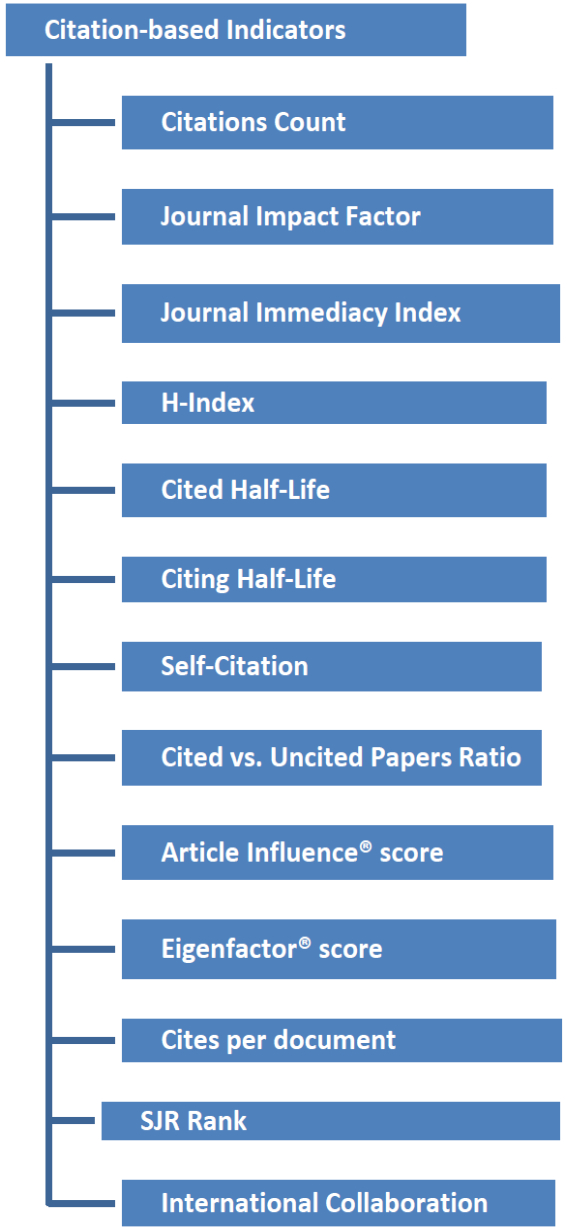
Metrics

Dimensions of Research Evaluation

Activity: *Review the terms in the file on pp. 57-58*

Activity: *Review the applications of Scientometrics and Bibliometrics in Research Assessment*

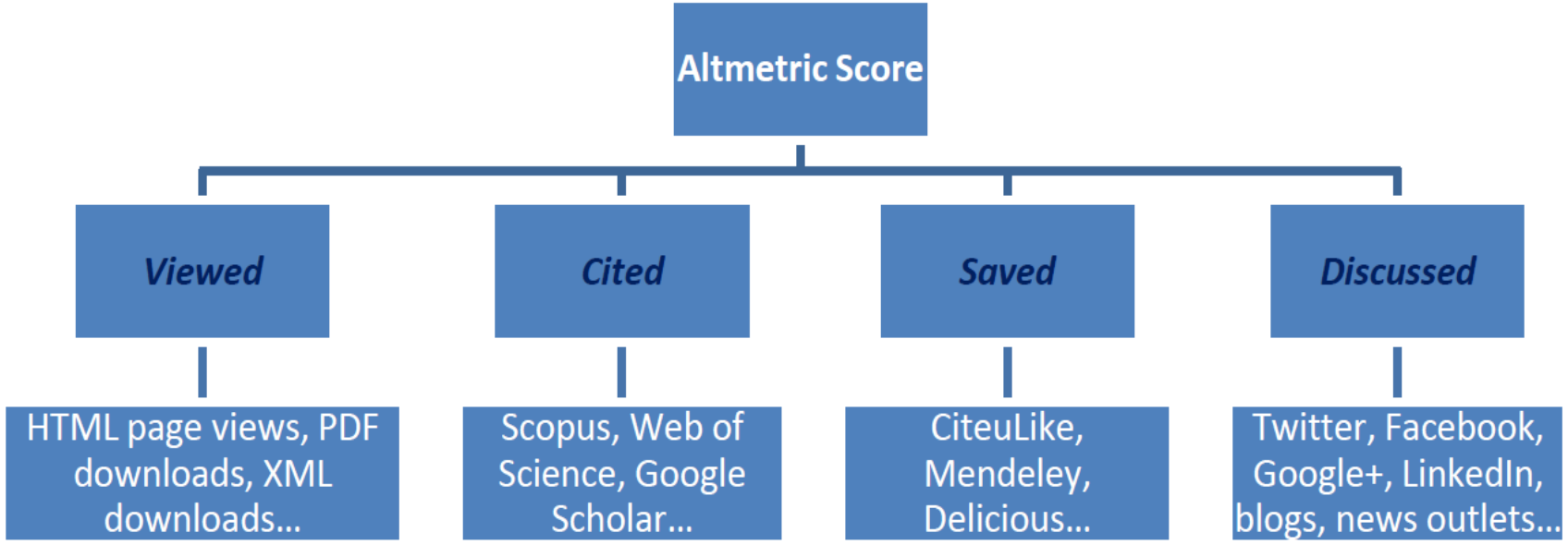
Common Bibliometric Indicators



- **Activity:** What do you make of these citation indicators? Pp. 60
- **Activity:** Visit the Ranking Web of World Repositories – http://repositories.webometrics.info what do you make of it?
- **Activity:** Study the methodology used – Visit http://repositories.webometrics.info/en/Methodology does it make sense to you? See Text Box 5.1: Methodology

Article Level Metrics (Altmetrics)

Deriving an Altmetric Score



Activity: *Review the terms in the file on pp. 57-58*

Activity: *Review the applications of Scientometrics and Bibliometrics in Research Assessment*

Metrics

Emerging Indicators (H-Index and Derivatives)

- The Journal Citation Reports (JCR) is derived from the Web of Science
- JCR combines the Science Citation Index Expanded (SCI-E) and Social Science Citation Index (SSCI)
- JCR can only provide evaluation metrics based on overall journals' performance
- JCR failed to measure performance of individual papers and individual authors.
- The necessity of measuring scholarly impact of individual researchers led to the development of the H-Index by Physicist Jorge E. Hirsch
- The H-Index measures scholarly impact of individual researchers, and is the largest number h such that h publications have at least h citations. For example an H-Index value 6 denotes 6 publications have at least 6 citations each.
- An author H-Index can also be obtained for a journal, an affiliating institution, a research group.

Metrics

H-Index

An author H-Index can also be obtained for a journal, an affiliating institution, a research group

Activity: *in groups study a Google Scholar Public Profile of a researcher of your own – then that of your institution – then identify the different information details displayed – and other functions of the application that you would explore – could you encourage researchers in your institutions to open Google Scholar profiles?*

Metrics

Publish or Perish

- The Publish or Perish (POP) Software -
- POP is a freely downloadable software for personal non-profit use - used for author impact analysis.
- The software fetches bibliographic information of papers written by specified author from the Google Scholar search engine and presents different author citations metrics such as h-index, g-index, cites per paper, hc-index (the contemporary h-index), citations count for each paper, cumulative citations count, publishing years (i.e., productive years of a scientist), etc. Similarly, this software can also be used for journal impact analysis with similar citation metrics.

Metrics

Open Citation Databases

- The Open Citations project (OpCit is a conceptual framework for publishing bibliographic and data citations as linked open data within Open Citations Corpus (OCC).
- OpCit gathers citation data from OAI compliant open archives such as arXiv.org and PubMed Central for “reference linking and citation analysis for open archives”.
- Its citation-based linked open data are gathered in a central database called ‘Citebase’ for citation analysis and data mining.

Activity: *in groups study other freely available online portals that derive different indicators for comparative impact analysis of authors, journals, institutions, and countries – see pp. 66. – what metrics does each of these applications support?*

Metrics

Activity: *Homework – pp. 68-70 – then review the Glossary of terms*