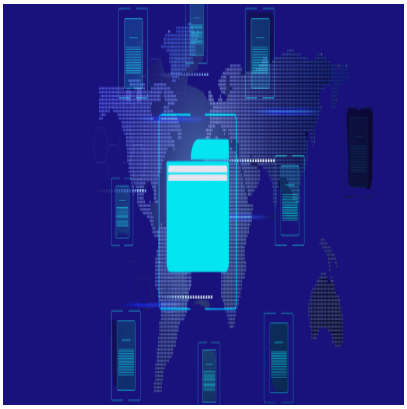


Description

The open access (OA) movement advocates for equitable knowledge sharing and facilitates access to academic research. It has revolutionized academia by removing paywalls, thereby improving access to scholarly works. OA enables researchers, students, and the general public to stay updated on global research advancements.

Researchers are increasingly choosing to publish their work in open access journals that can be indexed in open access repositories. This allows them to comply with grant requirements for public access and increases the visibility of their work. Furthermore, authors can be rest assured their work is safely archived and accessible to all.

Open Access Repositories

Open Access Repositories (OA Repositories) also known as Open Repositories are legal digital platforms that provide free, immediate, and permanent access to published academic work. OA repositories serve as centralized databases for high-quality publications, datasets, and supplementary materials.

Traditional repositories include institutional repositories at research libraries, subject specific repositories, and repository software. Examples of subject-specific repositories include media/rep/ (media studies), Social Science Open Access Repository (SSOAR) (social science), Centre of Excellence for Data Analytics (CEDA) Repository (environmental science), E-LIS (Library and Information Sciences), Aquatic Commons (food and agriculture), and PubMed Central (biomedical and life science).

Types of Open Access Repositories

Open access repositories play a crucial role in making research freely accessible, discoverable, and preserved for long-term use. Whether you're sharing a preprint, archiving a thesis, or searching across disciplines, different repositories serve distinct purposes. The table below breaks down the main types of repositories, their key features, and well-known examples to help you navigate the open access landscape more effectively.

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Repository Type	Examples	Key Features
Institutional Repositories	DASH (Harvard), eScholarship (UC), DRUM (UMN), ORA (Oxford), QSpace (Queen's), DSpace@MIT	Hosted by academic institutions; archive theses, dissertations, faculty publications; support long-term preservation.
Subject-Specific Repositories	SSRN (social sciences), ICPSR (social data), RePEc (econ)	Discipline-focused; use field-specific metadata; tailored search and submission formats; ideal for domain researchers.
Government / Nonprofit Repositories	PubMed Central, Europe PMC, ERIC (education), NASA ADS, AGRIS (FAO)	Publicly funded; open access mandated; high-quality metadata and archival stability; often focused on science/health.
Aggregators / Meta Repositories	BASE, CORE, OpenAIRE, WorldWideScience, OAIster	Aggregate records from multiple repositories; enable federated search; improve visibility and interoperability.
Preprint Repositories	arXiv, bioRxiv, ChemRxiv, SocArXiv, Research Square, Preprints.org	Allow pre-peer-review sharing; accelerate dissemination; encourage early feedback; often linked to journal submission.

Preprint repositories are a dynamic and growing segment of the open access ecosystem. They can be general (like arXiv), field-specific (like bioRxiv or ChemRxiv), geography-based (such as AfricArxiv), or even integrated with publishers (like Research Square or Authorea). While preprints are not peer-reviewed, they offer rapid dissemination, DOI assignment for citation, and increased visibility.

As open access practices evolve, many institutional and generalist repositories are beginning to support preprints. However, they often lack the advanced features of dedicated preprint servers—such as version control, community feedback, and integration with formal peer review workflows—highlighting the importance of choosing the right repository based on research goals and audience.

Among all the repositories we have outlined the strengths and limitations of 4 generalist repositories that are widely used by academics. These points will help you choose the right repository that best suits your needs, as you effortlessly navigate OA-published research.

FigShare

FigShare is a popular open-access repository that allows researchers to store and share a wide range of research outputs including datasets, presentations, videos, and code. Widely used by institutions and publishers with strong journal integration.

Strengths:

- Supports a wide range of research outputs: datasets, posters, presentations, code, videos, etc.
- Provides DOIs for all uploads, enhancing discoverability and citation.
- Integrates with ORCID, institutional repositories, and journal submission systems.
- Offers metrics (views, downloads, citations) and visualizations of engagement.

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Limitations:

- Not discipline-specific, which may affect the discoverability of niche datasets.
- While integration is a strength, customization for institutions often requires a paid version (Figshare for Institutions).
- Less emphasis on curation or review of datasets
- Does not support FAIR principles better (Findable, Accessible, Interoperable, Reusable) with structured metadata.

Dryad

Dryad is a non-profit, curated repository focused on publishing datasets underlying peer-reviewed research, primarily in the life and biomedical sciences. However, it also accepts data from any field of research and in any file format. Dryad's mission is to make research data available for reuse in research and education, both now and in the future.

Strengths

- Designed specifically for research data, often linked to peer-reviewed articles supporting transparency and reproducibility.
- Ensures curation and metadata quality, improving data reusability.
- Enforces CC0 licensing to maximize reuse potential, making data freely available for others to use.
- Helps researchers comply with data sharing mandates from many journals and funders by providing a curated and FAIR-aligned open-access repository that integrates with publishing workflows and ensures datasets are properly documented, accessible, and citable.

Limitations:

- Requires data to be linked to a published or submitted manuscript, limiting standalone dataset submissions.
- Dryad charges modest Data Publishing Charges for submissions, which could pose a barrier for unfunded researchers.

Zenodo

Zenodo is a general-purpose open-access repository developed by CERN and backed by the European Commission. It accepts all types of research outputs and is widely used in Europe and by open science initiatives.

Strengths:

- Highly inclusive and supports all research outputs, including software and grey literature.
- Backed by CERN and the European Commission, ensuring long-term sustainability.
- Supports versioning, embargo options, and DOIs for all uploads.
- Promotes open science by encouraging open licensing.

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Limitations:

- Minimal curation or quality control—relying on researchers to ensure data integrity.
- Less specialized metadata structures, which may hinder discoverability for specific domains.
- Limited integrations with institutional workflows or funder mandates outside Europe.
- Limited metadata and lack of domain-specific tagging make it harder for researchers to find, interpret, and reuse datasets within their specific fields.

Open Science Framework

The Open Science Framework (OSF) is a free, open-source repository supporting collaborative research, data sharing, and reproducibility. It is ideal for managing research projects and pre-registration across disciplines.

Strengths:

- OSF is also a project management and collaboration tool.
- Supports preregistration, version control, and linking to external storage (e.g., Dropbox, GitHub).
- Encourages transparent and reproducible research workflows.
- Emphasizes on open science principles and flexible project visibility settings.
- Incorporates metadata to enhance the discoverability and reusability of research materials, including projects, registrations, and individual files.

Limitations:

- Less intuitive interface for new users and can be overwhelming due to its broad functionality.
- Limited citation tracking and discoverability compared to Figshare or Zenodo
- Pre-registration templates may not be tailored to non-psychology disciplines and early-career researchers.

What is your primary criterion in selecting an Open Access repository?



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Each repository has its limitations. Some raise privacy concerns, while others include gray literature, predatory journals, and on-peer-reviewed content. Most of these shortcomings can be addressed by using multiple tools for a comprehensive literature review.

Vote

Additionally, the new generation of OA repositories aims to streamline academic research. These repositories aim to enhance secure access to peer-reviewed content while fostering collaborative research and advancing societal progress.

Category

1. Manuscript Preparation
2. Selecting Journals

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