

ZENODO: AN OPEN ACCESS INFRASTRUCTURE FOR RESEARCH AND DIGITAL OBJECT IDENTIFIER (DOI)

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Abstract:

In India many reputed research journals publishes their literature in offline format only, many journals have regional or state language only, and this things restricts the use of the literature. In fact research is crucial for a nation's progress, driving economic growth, informing policy decisions, and fostering innovation in various fields. It helps solve societal problems, advance knowledge, and improve quality of life. Indian research has some limitations it may be different language, document authenticity, print literature limitations, inadequate scientific training, insufficient interaction between institutions, lack of funding, and challenges with data sharing and plagiarism. In the current age ISBN, ISSN showing document authenticity, but now in digital era document authenticity depends on the Digital Object Identifier (DOI), it helps for quick access also. This research paper deals the importance of DOI, zenodo repository and its role in an open access infrastructure for research and providing free digital object identifier (DOI) number for the research.

Key wards: Digital Preservation, Zenodo, Research Repository, DOI providing agencies

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Introduction:

This study deals with Zenodo, DOI platform and DOI importance. Zenodo is open access infrastructure for research in Europe. Actually it is a repository which has general-purpose to allow researchers to deposit and share research outputs like papers, data sets, software, and reports. It developed by the European organization for nuclear research (CERN). It designed to promote open science by making research more accessible, citable, and reusable. Zenodo assigns a Digital Object Identifier (DOI) to each upload, ensuring its long-term find ability and preservation and archiving of research outputs, guaranteeing persistent access to the associated DOIs. It is a green practice. Digital materials save library space. 'a simple green step towards nature protection is also a green Practice or library.' (Hemade, N. N)¹.

Role of Research in National development:

Research plays an important role in government policies and decision-making. It fuels socio-economic

growth, innovation, technological advancements and improving existing ones. It plays a vital role in tackling challenges related to the different type's issue. It also contributes to the development of new technologies and innovations that can improve the quality of life, of human being. It also encourages a culture of inquiry, innovation, critical thinking and providing evidence-based solutions and innovative approaches. Strong research ecosystems are essential for developing a nation's human capital and maintaining a competitive edge in the global landscape. This all only possible if it shares. Each share need authenticity in digital age it shows by digital object identifier (DOI).

What is Digital Object Identifier (DOI):

A distinct, long-lasting identification number for an online document is called a Digital Object Identifier (DOI). It appears as an alphanumeric string of characters that serves as an active link to the original digital version of the document or in a bibliographic citation. (report, journal article, Book Chapter etc.).

DOI serves is permanent, accurate identification for that document; a document keeps its DOI even if the host publication of an article switches platforms, names, or publishers. DOI number allotment is possible if document publish in online mode. Since 2000, publishers started giving documents DOIs. An electronic journal article or other online intellectual property is identified by its Digital Object Identifier (DOI), which is a number. DOIs offer dependable and long-lasting linkages for citation, sharing, and discovery if the host publication changes their URL. DOIs can give readers and scholars immediate access to the information they need when used correctly in citations and references.

Publishers International Linking Association (PILA) runs the Cross Ref organization, which designates and manages DOIs. It is independent, non-profit organization. Since their initial introduction in 1999, DOIs have swiftly emerged as the mainstay of Cross Ref's mission to serve as a "digital switchboard" connecting all electronic scholarly content. DOI is managed by the international DOI foundation. A DOI is to appear in an alphanumeric string of digits or as a webpage URL: <https://zenodo.org/records/15544225>

Need and Role of the DOI in Research:

A Digital Object Identifier (DOI) is important because it offers a permanent, unique, and actionable link to digital materials, like research articles, guaranteeing that they can always be located and cited accurately, even if the original URL or hosting platform changes.

Persistent Identification:

A DOI serves as a distinctive and enduring identifier that consistently directs to a digital object, such as a journal article, dataset, or book. This guarantees that the work remains accessible and can be cited over time, regardless of changes to its physical location (URL).

Enhanced Discoverability:

By offering a stable and resolvable link, DOIs facilitate

easier access for researchers, databases, and search engines (like Researchgate, Google Scholar) to find scholarly content, thereby boosting its visibility.

Accurate Citation:

The uniformity of DOIs offers a dependable way to cite sources, enabling straightforward and precise referencing of publications.

Usage Monitoring and Impact Evaluation:

DOI registration organizations monitor usage statistics, such as downloads and citations, which offer essential insights for researchers, publishers, and institutions to gauge the influence and reach of their work.

Academic Honesty:

A DOI assists in confirming the authenticity and validity of a digital scholarly item by providing an accepted and official identifier.

Normalization:

DOIs aid in the worldwide standardization of scholarly communication, establishing a uniform method for identifying and accessing research across various platforms and repositories.

Preservation:

By connecting content to a DOI, it aids in ensuring that the digital item is maintained and remains obtainable for future utilization, safeguarding it from being lost or overlooked.

Indian Agencies who provide DOI in India

In India some organizations provide DOI registration services for various types of digital objects, including research articles, datasets, and more. Every agency has different format and DOI registration process in India obtain a DOI number for the research.

DOI Foundation (IDF):

In India, the DOI (Digital Object Identifier) registration is handled by the India DOI Foundation (IDF), which is a not-for-profit organization. They are responsible for assigning and managing DOIs for Indian publications, research data, and other digital objects.

Crossref India:

Crossref is a global DOI registration agency, and they have a partnership with the India DOI Foundation to provide DOI registration services in India.

mEDRA India:

mEDRA (Multilingual European DOI Registration Agency) is another DOI registration agency that provides services in India.

INSA:

INSA (Indian National Science Academy) is a scientific academy that provides DOI registration services for Indian researchers and publications.

Apart from this all Zenodo, ResearchGate, Sci-Hub, EThOS etc organizations provide DOI numbers in india also.

Zenodo contributes to DOI allotment:

Zenodo play vital role in research in different way. It makes their research outputs citable and tractable. Increase visibility and impact of their work. Comply with funding agency requirements for data sharing and citation. Enhance research reproducibility and transparency.

DOI Registration:

Zenodo is a member of the Data Cite consortium, which allows it to assign DOIs to research outputs deposited in its repository.

DataCite DOI allocation:

Zenodo uses Data Cite DOIs, which are specifically designed for research data and other digital objects.

Free DOI assignment:

Zenodo provides free DOI assignment for research outputs, making it an attractive option for researchers and institutions.

Metadata management:

Zenodo provides a robust metadata management system, ensuring that DOIs are linked to rich metadata, making research outputs easily discoverable and citable.

Preservation and archiving:

Zenodo ensures long-term preservation and archiving of research outputs, guaranteeing persistent access to the associated DOIs.

Conclusion:

As a College librarian we know ISSN, ISBN but DOI is an advanced system, so its need to understand in detail. DOI is the essential platform for increases discovery and Citations of research. Research material includes datasets, papers and software DOIs making them openly accessible to anyone. Zenodo is a free and open platform, making it accessible to researchers from all over the world. It ensures safety, trust, long-term preservation and archiving of research outputs, guaranteeing persistent access to the associated DOIs.

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