Scholarly Communication and Author Identification Services: an Overview

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Abstract

The emergence of library 2.0 platforms such as academic social networks and author identification tools helped the researchers and authors to reach a new audience beyond their boundaries. This article tried to explain the essential author identifiers systems such as ORCID, Researcher ID, Scopus ID, PubMed Author ID, Google Scholar Profile ID, and Vidwan of Indian origin. These technologies would assist writers and researchers in creating and managing their academic research profiles to increase the visibility of their academic research in a cutting-edge scholarly communication system.

Keywords: Author identifier services, Google Scholar Profile, Researcher ID, Scopus ID, Vidwan Database.

1. Introduction

Author identification services are globally trending initiatives nowadays. Advancements in scholarly communication have increased over the past two decades as technology has removed information access and communication barriers. Author identifiers services, social networking platforms, and reference management software are helping the researcher to improve academic and social connections. However, uncertainty in names is a serious concern as varieties of name styles used by the authors, such as duplicate or similar expressions, name changes over time because of marriage, and changes in affiliations. Hence, unique author/ researcher identification systems such as ORCID are required to eliminate naming confusion, ensure proper attribution, and help the researcher to control their research productivity in one place. To facilitate the tracking of research activities, the unique identification of researchers and authors is in high demand. This article explains the various author identifiers services like ORCID, Researcher ID, Scopus ID, PubMed Author ID, Google Scholar Profile ID, and Vidwan ID of Indian origin.

2. Need for author identifiers services

Most scholarly communication systems do not use author identifiers but benefit authors, research scholars, publishing bodies, and funding agencies. **(Fenner, 2011).** There are various standards like ISBN allotted for books, ISSN for journals, and DOI for journal articles, which are not ensuring author name ambiguity, unique identification, and evaluation

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process. Author identifiers systems are useful exclusively for each author with a unique number for the following reasons:

1. To prevent the ambiguity of author names in the scholarly communication system.
2. To create a unique profile for researchers to discover, share, access, research management, evaluate productivity and impact, etc.
3. To distinguish authors from others to ensure the researchers' work is recognized.
4. A unique number sequence identifies a scholarly author by registration or assigned when they publish their work.
5. To build a scholarly profile with biographic and bibliographic information associated with the identifier.
6. To help the researchers claim and exhibit their collection of publications, other researchers can quickly locate and cite work and increase the researcher's impact and professional standing.
7. To find collaboration to researcher research interest, showcase institutional research and researcher.
8. To simplify the publication workflow, peer-review process, and research grants submission process.
9. To track & evaluate researcher achievements, contributions, and collaborations to researchers' research interests.

3. Significance of author identifiers services

The following are the significant advantages. However, they are not exhaustive:

1. Funding agencies confront difficulties in accurately identifying their researchers and tracking their progress over time.
2. Universities and postdoctoral affairs offices have similar issues gathering valuable data about their researchers.
3. Researchers can better identify themselves, collect data, and track their career outcomes with enhanced discoverability.
4. Young researchers face the problem of their work not being recognized and identified due to name ambiguity.

4. Review of related literature

There are various studies available on author/researcher identification services. Some relevant studies are being referred to and reviewed here:

Fenner outlines some of the most widely used author identification platforms and their features. The author also discussed numerous significant challenges that author identification systems must handle, including identity, credibility, and trust. **(Fenner, 2011**). It has been explained by Shanks & Arlitsch that the categories of research services like researcher identification, expert networking, and reference and citation management. The authors tried to explain necessary author identifiers systematically **(Shanks and Arlitsch, 2016).** Das has described the critical habits that should follow by the researcher for better scholarly

communication and visibility of the research. It was suggested that academic research information must be reached to regenerate the new dimensions of knowledge.

Nowadays, various online digital tools are available to get researchers working in a similar area of interest **(Das, 2014).** The study presents an overview of significant unique author identifiers and identification systems available for researchers to create and manage academic research profiles to improve their research visibility in the updated educational communication process. **(Viral Asjhola et al. 2018).** The authors described the aspects of identifier services and highlighted the requirement of identifier acceptance regarding ORCID. Having an author's unique identifier ensures that publication outputs are correctly recognized and helpful for future research, including publishing, analyzing, accessing, citing, and reviewing previous research. The agencies are responsible for implementing projects in developing countries. **(Bhatt & Patel, 2018).**

The study of Madhan & Arnuchalam explained all about implementing ORCID as a unique identifier in scholarly communication. How is ORCID essential for publishers, associations, universities, funding agencies, libraries, and repositories (Madhan &Arnuchalam, 2016). This online cross-sectional survey of faculty at a large public university examined their knowledge of author IDs, networking platforms, and social media use in their professional capacities. **(Tran&Lyon, 2017).** This study explained that 24 professors and 35 publications linked to their authority in the study. After searching social networking and identification websites directly for faculty members' profiles and publications, the researchers used the Google search engine, Bing browser, and Google scholar profiles to fix which articles and profiles were in the top 50 results. **(French & Fagan, 2019).** A university in France evaluated two author identification services (ORCID and ResearcherID). In addition, the University of Caen Normandy compares the results with two online academic networking sites i. e. Academia.edu and ResearchGate. All three metrics were evaluated, including the number of publications, citations and h-indexes. **(Boudry, 2020).**

5. Objectives

It is crucial to the reputation and career of an individual to identify and attribute their research output appropriately. Scientific discovery and research impact tracking are easier when contributors are attributed properly across the research ecosystem. The main objectives of this review study are as follows:

1. To provide a systematic overview of different author identifiers services.
2. To define the terminology and create awareness among researchers and authors.
3. To stay updated, proactive, and competitive in the research communication process.
4. To explore the online platforms to evaluate research productivity and impact.

6. Methodology

To write this paper, data was gathered from various formal and informal information sources, including documentary sources such as research papers, books, conference publications, online websites, and documentary resources such as conversation and deliberation.

7. Brief Descriptions of Author Identifier Services

Following are the significant author identifiers systems used by the research community for scholarly communication.

7.1 ORCID

In a collaborative effort to resolve the lack of consistency in authors' names in a scholarly communication system, the ORCID platform was launched in 2009 by publishers of academic research. ORCID was created temporarily before incorporation as the 'Open Researcher Contributor Identification Initiative.' Open Researcher and Contributor ID (ORCID) describes itself as a non-profit organization whose purpose is to create and maintain a database of distinct researcher identifiers and provide an open way to link research activities and outcomes.
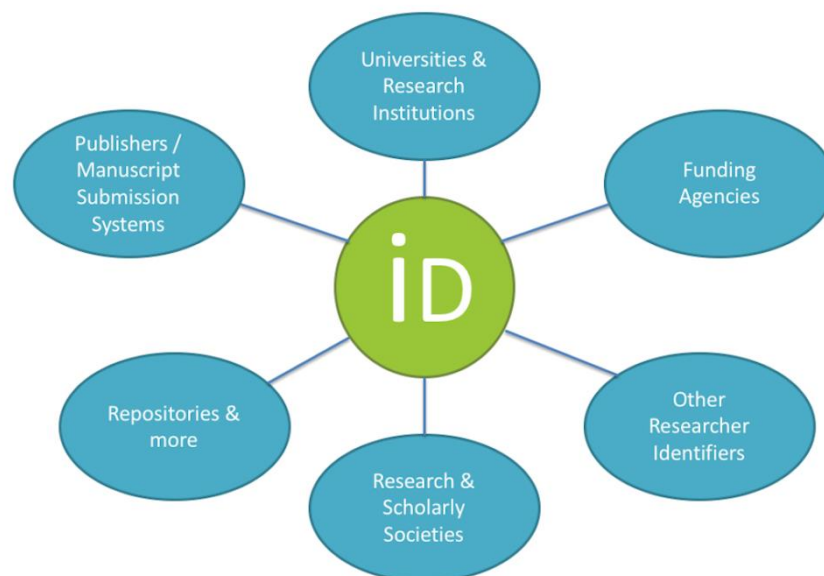

Figure 1. Benefits of ORCID

7.2 Scopus ID

Scopus Author ID is a proprietary product of Elsevier Publishing Group started in 2006. This algorithm-based abstracting and indexing service solely uses data from peer-reviewed

journals. It does not collect information from blogs, institutional repositories, or other websites, unlike Google Scholar. It, like ResearcherID, generates a unique identifier for each researcher and connects with Elsevier's SciVal product and ORCID. However, while ResearcherID allows data to transfer in both directions with ORCID, Scopus can currently only transmit its entries to ORCID. Scopus is also working on adding the ability to receive papers from ORCID. **(Memon & Azim, 2019).**

7.3 Researcher ID

ResearcherID is a Thomson Reuters tool that creates identities for research scholars and permits them to generate research profiles, including their titles, affiliations, research interests, and publications listings. It integrates with EndNote, a prominent citation system, and WoS (Web of Science), among other Thomson Reuters products. It also includes the possibility to link to ORCID. When an author uploads publications via EndNote, manually, or through Web of Science searches, ResearcherID builds publication lists. **(Shanks & Arlitsch, 2016a)**

7.4 PubMed Author ID

The project began in 2010 and was abandoned in 2014 in favour of external identifiers provided by publishers. Each publication in PubMed has a PMID, a unique identity number. When an article is entered into the PubMed system, it is given a PMID. Unless it's released as an electronic pre-publication, an "in press" publication won't have one. A PubMed citation's PMID# can be seen at the bottom. PMIDs are never reused and don't alter over time or during processing.

7.5 Google Scholar Profiles

Google Scholar is a search tool for finding academic information such as research papers, books, preprints, abstracts, and judgments of courts from different publishers, professional associations, institutional repositories, and websites. The results appear in order of relevance. Google Scholar is free on the web. Institutions with holdings accessible through a link resolver can include their Google Scholar search links. Researchers can profit from the Google Scholar Citations profile in citation metrics and a list of publications. This researcher identification tool, built on the solid Google Scholar foundation, matches and automatically update publication information. **(Shanks & Arlitsch, 2016 b).**

7.6 VIDWAN: Expert Database

VIDWAN is India's most comprehensive database of scientists, researchers, and other faculty members who work at India's top academic institutions and other research organizations. INFLIBNET produced and maintained this database. It provides research profiles of professionals in numerous fields from top Indian and international organizations. There has been a consistent effort to give relevant, accurate, and up-to-date information regarding experts. The web interface was developed to make searching and browsing expert profiles easier. Name, designation, area of speciality, organization, state and other criteria can be used

to search databases. Experts with profiles in the database have been given login IDs and passwords and a persistent URL to update their profiles. **(INFLIBNET, 2022).**

Table 1. The functionality of author identifier services

Name	Organizations	Persistent Digital Identifier	Network ing	Reference and Citation Management
ORCID	ORCHID	Yes	No	Yes
Google Scholar ID	Google	No	No	Yes
Scopus ID	Elsevier	Yes	Yes	Yes
Researcher ID	Thoms Reuter	Yes	Yes	Yes
PubMed ID	NLM	Yes	No	No
Vidwan ID	INFLIBNET	Yes	Yes	No

8. Future of Author Identifiers Services

Unique author IDs could have far-reaching effects in the future, like linking with the publications process. Online publications indices will be able to add author identifiers for published articles, allowing researchers to locate all of their work quickly. When fully implemented, author identifiers will make it much easier to find all of an individual's works and evaluate the output of individuals, departments, organizations, and programs. ORCID records will automatically be updated with information about researchers' articles published using the auto-update feature. The peer-review feature will be available soon, allowing organizations to record review activities in a researcher's record. The main aim is to make submitting publications, applying for funds, and finding collaborators easier and faster for researchers.

9. Suggestions and Observations

Library professionals should encourage all our authors/researchers to take advantage of this new mechanism for laying claim to their research contributions. The following are suggestions and recommendations to connect the research and researchers.

1. The researcher should create author identifiers for unique identification as global scholars working on academic projects.
2. Set up a researcher profile on a dedicated website and keep it up to date with scholarly research in the related field.
3. Create author profiles for researchers on academic and social networking sites and connect with identifiers.

4. Authors ad researchers should disseminate study findings through open access repositories and educational and social media sites.
5. Discuss your research ideas or ongoing projects in an email-based discussion forum in the area.
6. To acknowledge the author's effort, use free online citation and reference managers.

10. Conclusion

The Open Researcher and Contributor Identifier (ORCID) initiative is a global step to create a unique digital identity for authors by eliminating naming ambiguity. Researchers at many universities and research institutions are encouraged to have identities and networking profiles, which can be used in research papers. Author identifier services can allow for the analysis of research-related knowledge, information, and people flow by putting insight into scholars and factors that affect research productivity.

A librarian's role as a Multidisciplinary User Education Specialist can include creating educational content and conducting workshops about how to raise the discovery of academic profiles on campus. ORCID registration is highly recommended and encouraged for scholars and other collaborators who contribute to the scholarly literature. In addition, organizations, funders, and researchers are suggested to have this implementation to improve scholarly communication.

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