

Researchers Identifiers, Metadata and Scholarly Communication in the Linked Data Environment: The Implication for University of Tennessee, Knoxville.

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ABSTRACT

Modern researchers use multiple platforms to distribute their scholarly and creative works and to establish their researcher profiles (Tran and Lyon, 2017; Smith-Yoshimura, K. and others, 2014). This creates the impact on an institution's ability to collect researchers' information for the archive, that is the metadata for such collection needs to be robust and inclusive of the metadata elements from these diverse systems. Thus this study aims to evaluate different researcher identity management systems and their metadata in order to design the metadata model that can accommodate the data and metadata elements from these systems as a recommendation for the University of Tennessee, Knoxville. Researcher identifier systems under study were selected based on these criteria; 1) academic and other researcher profiles, 2) multidisciplinary systems, 3) relevant to the United States, with international coverage in their scopes, 4) based on diverse types of library materials, 5) both professional and self-registered services (Panigabutra-Roberts, 2015), 6) both closed and open data platforms, and 7) excluding discipline-specific systems. The selected systems are LCNAF, VIAF, ISNI, ORCID, SCOPUS, ResearcherID, Google Scholar, Microsoft Academic, ResearchGate, Academia.edu, Mendeley, LinkedIn, Symplectic Elements and PIVOT. For data collection and analyses, metadata elements from these systems were compiled in Excel spreadsheets and analyzed for the key metadata elements. Each system and its metadata elements were evaluated based on the FAIR principles (Wilkinson, M. D. et al., 2016); from each system's purpose, its organization/corporate ownership and business model, its type of service, data access, data creation process, sources of data, metadata guidelines, APIs/interoperability, linked data capability, citation metrics and altmetrics, social media to other special features. The preliminary findings are that service types (professional or self-service), organizations and business models (not-for-profit or for-profit) impact metadata elements, data access and rights, openness of data and their interoperability. The services vary from open data, semi-open data to closed data for subscribers. The linked data services are available among the systems hosted by OCLC. Other systems are cross-linked via APIs. Citation counts, metrics and/or social media features are only available in some for-profit services. Combined among the selected systems, the top-level metadata elements are, for researchers, name, identifier, role, affiliation, contact, field of study, research interests, education and work experience. The metadata for creative and scholarly works are citation, collaborator (name and affiliation), funding information, subjects, references, cited by, citation metrics and altmetrics. Further questions to explore concern 1) how the business models of these systems impact researchers' and their institutions' rights to access, use and preserve the profiles and associated data, and 2) how rights statements should be applied to researcher profiles. Once the access and rights questions can be answered, the metadata profile resulting from this study will be recommended to the author's institution for its faculty, researchers and graduate students, with the implication for web archiving of these data. It can also be replicated by other institutions with similar environment. This study will also contribute to the research on researcher identifiers, metadata, linked data, web archiving, and scholarly communication.

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