
Editorial:

Records and Repositories: A brief text for PhD Students

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Abstract

This brief editorial tries to make known the main research records and repositories, with the aim of being known and used early on by PhD students. It raises the importance of using the ORCID author's ID and knowledge of other key records of the editorial process among which are the ISSN, the DOI and the ROR, referring to the journal, the document and the institution, respectively. Subsequently, the main databases whose primary function is as an academic search engine (Scopus, Web of Science, Dimensions and Google Scholar) are described. The main academic social networking sites are then described (ResearchGate and Academia.edu), finishing with the main characteristics of the Sci-Hub case. It concludes by mentioning the relevance of integrating all these digital platforms to open PhD students up to the digital world and with it a series of possibilities for exchanges.

Keywords: PhD Students, records, repositories, ORCID, ISSN, DOI, ROR, Scopus, WoS, Dimensions, Google Scholar, ResearchGate, Academia.edu, ASNS, Sci-Hub.

Admission to PhD programs brings with it a number of challenges for selected students. One of the main ones is the lack of knowledge of scientific culture, since they must be familiar with a series of notions that are not always part of the formal processes in this type of program. Although all high-level training requires effort and work on the part of the student (Carrasco & Kent, 2011), the approach to scientific culture can be a rocky road insofar as there are no instances of guidance in this regard. Such questions cannot be charged to the thesis director either, since this role is not necessarily present in all doctoral programs from day one. Additionally, the doctors who are in charge of this important function are generally people with a very busy schedule.

Although the student-director relationship is the greatest predictor of doctoral student satisfaction (Dericks, Thompson, Roberts & Phua, 2019), the role of the latter is more linked to the content of the thesis, which implies successive meetings to develop the planification of the problem, the review of the literature and even a series of methodological issues, so there may be directors who do not carry out any tutoring or remedial guidance in scientific culture matters.

The present text focuses only on a minor part of this culture, that is to say, it is directed towards a first approach to digital records and repositories. Although it is true that some students report in their entry profile their participation in research projects and that some have even published in indexed scientific journals, this does not happen in all cases, and even if it has happened it does not guarantee an adequate knowledge of this series of resources that are important for their training and daily work. In this sense, the objective of this editorial is to make known some of these resources oriented to the registration, search and dissemination of science.

The question of names and first records

A first important issue to consider before exploring the digital records is the standardisation of the author’s signature. Students should be encouraged to decide from the beginning of their academic career how to sign their publications, as this is crucial for author recognition and differentiation, especially considering the growing number of authors present in the databases. The following is an example of different ways of writing the name of the same person: ‘Noelia Gálvez’, ‘Noelia H. Gálvez’, ‘Noelia Gálvez Díaz’, ‘Noelia Gálvez-Díaz’. It is important to decide on one of the options and to be consistent in the future. Clear identification of the author allows for the correct assignment of their publications and has an impact on bibliometric impact indicators, such as the author’s H-Index.

Table 1 provides four basic and initial records of the editorial process, each corresponding to its essential components. Of the four, it is up to the author to register his *Open Researcher and Contributor ID* (ORCID). ORCID is a not-for-profit organisation funded by a variety of member organisations; it acts as a kind of digital curriculum vitae for all researchers (Friedberg, 2010), attempting to solve the problems of ambiguity and duplicity of name, to facilitate identification and act as a unique registry. In addition, the lifelong ORCID is linked to several databases, making possible interesting connections (García-Gómez, 2012). It is important to mention that other author IDs exist, among which are *Scopus Author Identifier*, *Researcher iD* and *arXiv Author ID* (Martínez-López, Barrón-González, & López, 2019), although ORCID is the field leader.

Table 1
Main records of edition process

Category	Acronym	Website	Twitter
Author	ORCID	https://orcid.org	@ORCID_Org
Journal	ISSN	https://www.issn.org	@ISSN_IC
Document	DOI	https://www.doi.org	-
Institution	ROR	https://ror.org/	@ResearchOrgs

The other records in the table are the responsibility not of the author but of the journals and institutions. The *International Standard Serial Number* (ISSN) is an eight-digit serial number used to uniquely identify a serial publication and is the equivalent of the *International Standard Book Number* (ISBN) created to identify books. Another important use of the ISSN is to distinguish between serial publications with the same title.

On the other hand, and in relation to documents, there is an alphanumeric registration code called *Digital Object Identifier* (DOI) that allows identification of a digital object (articles, books, book chapters, letters, etc.) regardless of its URL, so that if the URL changes, the object maintains its same identification. The system was launched internationally at the Frankfurt Book Fair in 1997 with the aim of facilitating the trade of materials published on the Internet (Risher & Rosenblatt, 1998; Simmonds, 1999). It is important to add that since that date, this indicator has been progressively incorporated into a large number of indexed journals, although it should not be surprising that some journals still do not incorporate it into their editorial process.

Finally, the *Research Organization Registry Community* (ROR) is probably the least known acronym, given that it was only in 2016 that it was decided to create an organisation ID. A steering group composed of *California Digital Library*, *Crossref*, *DataCite* and *Digital Science* was in charge of implementing the pilot in 2018 (ROR, 2019) and it went on to become the missing piece of infrastructure around achieving research organisation identifiers and their associated metadata.

Databases

An enormous number of databases exist for the search and dissemination of scientific information, so it is impossible to mention them all in this brief editorial. It was thus decided to present just four of them, two of closed access, one with a hybrid model and one of open access (see Table 2). There is consensus that *Web of Science* (WoS) by Clarivate Analytics and *Scopus* by Elsevier are the main databases worldwide. Both are paid databases that require subscription. Additionally, both have an open access platform that provides additional data on the journals indexed in their catalogue. In the case of WoS, it incorporates the *Master Journal List* (<https://mjl.clarivate.com/home>), which provides information about the journal’s website, frequency and presence in the different citation indexes of the WoS Core Collection (Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index and Emerging Sources Citation Index)

Table 2
Main databases for PhD Students

Database	Institution	Country	Model
Web of Science	Clarivate Analytics	United States	Subscription
Scopus	Elsevier	Netherlands	Subscription
Dimensions	Digital Science	United Kingdom	Hybrid Model
Google Scholar	Google LLC	United States	Open Access

In the case of Scopus, there is the *Scimago Journal & Country Rank* (<https://www.scimagojr.com>), a site that ranks journals with information on various metrics, among which are the quartiles (Q) by area of knowledge, the H-Index, the SJR, details of international collaboration and various citation indicators.

On the other hand, *Dimensions* (www.dimensions.ai) is a ‘scholarly search engine’ belonging to Digital Science. It is a hybrid model, meaning that it has a free access version and a paid version called *Dimensions Plus*. One of its advantages is the use of Altmetrics, patents and citations, giving the context of a piece of research (Hook, Porter, & Herzog, 2018). In this sense, it is innovative since it has been pointed out that Altmetrics measures should be included and considered as another type of alternative measure (López-López, 2018).

In relation to the open access databases, *Google Scholar* (GS) has been selected as it has been suggested as a complementary resource to the WoS and Scopus databases, due to its great coverage and access (Aguillo, 2012). GS has incorporated a page for authors that includes an h index and an i10 index (Renjith, 2019).

Although not listed in Table 2, there are other well-known Ibero-American projects such as the Red de Revistas Científicas de América Latina, el Caribe, España y Portugal (Redalyc), which presents a non-profit publication model to preserve the academic and open nature of scientific communication, and the *Scientific Electronic Library Online* (SciELO), an initiative of the Foundation for the Support of Research of the State of São Paulo, Brazil, which is currently part of Clarivate Analytics.

It is not possible to close this section without mentioning the ranking Libraries of the University of Wisconsin-Madison, which ranks 10 research databases, although it combines specific knowledge databases with other general ones according to its analysis, which can be found in the site: (<https://www.library.wisc.edu/find/top-10-databases/>)

Academic Social Networking Sites

Among the main academic social networking sites (ASNS) are ResearchGate (RG) and Academia.edu, which have become indispensable channels for millions of researchers, since they allow them to communicate, interact, share interests and collaborate (Huang, Zha, Yan, & Wang, 2019).

ResearchGate. RG's ultimate mission is to connect the world of science and make scientific research accessible to all. On the platform it is possible to upload and download articles, follow others, quote articles, and create and answer questions (ResearchGate, 2020). It also has a series of indicators such as the RG Score, which has gained visibility in the scientific world (Copiello, & Bonifaci, 2019; Salas, 2017), and can be used for recruitment, promotion and other tasks for which researchers are evaluated. Although RG describes it as an indicator of academic reputation, research conducted in this regard belies this (Orduna-Malea, Martín-Martín, Thelwall, & Delgado López-Cózar, 2017).

Academia.edu. Is an ASNS developed to enable researchers to share academic work with a public audience. Since its creation in 2008, the site has experienced rapid growth and is now one of the largest and most widely used ASNSs. Academia.edu provides resources that enable academics to increase the impact and reach of their research within a digital network environment (Williams, 2018).

The *Sci-Hub* Case

This text cannot be concluded without reference to *Sci-Hub*, without which many researchers and PhD students would have great difficulty in carrying out their research projects. *Sci-Hub* is a search engine created by Alexandra Elbakyan, a woman from Kazakhstan; it is famous for providing free access to millions of paywall-protected scientific articles, challenging the hegemony of the big publishers (Novo & Onishi, 2017). Its importance arises due to the high cost of journal articles, which has led many researchers to seek new ways of access. It is easy to enter this site of 'pirate' articles, although it is important to note that using stolen credentials and downloading them can be illegal (Hoy, 2017).

The use of *Sci-Hub* is increasing and in France it is being widely used by early career researchers (ECRs). However, its use in the UK, the USA, Malaysia and China is lower, although in the case of China this is for two reasons: firstly, because it is banned and secondly, because there is already an equivalent resource in the country (www.91lib.com) (Nicholas et al., 2019).

Closing

PhD students in their process of transformation into ECRs must begin to use various registers and platforms in order to develop interconnected nodes that allow them to try out a virtual community and a scientific digital network in which to connect and develop their work. New knowledge is needed every day, and many options appear in the work of doctoral students, among them some disruptive ones that, legitimately or illegitimately, promote openness and exchange (Nicholas, et al., 2019).

This editorial has tried to explain a minor part of the records and repositories linked to scientific research. It is important, however, to explore other interesting tools such as *Publons* by Clarivate Analytics, *Mendeley*, which was recently bought by Elsevier, and other 'reference sharing sites' such as *Bibsonomy*, *Zotero*, and *CiteULike*, which generate the possibility of publishing research results and connecting them to each other (Thelwall, & Kousha, 2014).

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References

- Aguillo, I. F. (2012). Is google scholar useful for bibliometrics? A webometric analysis. *Scientometrics*, *91*(2), 343-351. doi:10.1007/s11192-011-0582-8
- Carrasco, A.C., & Kent, R.L. (2011). Leer y escribir en el Doctorado o el reto de formarse como autor de ciencias. *RMIE*, *16*(51), 1227-1251.
- Copiello, S., & Bonifaci, P. (2019). ResearchGate score, full-text research items, and full-text reads: A follow-up study. *Scientometrics*, *119*(2), 1255-1262. doi:10.1007/s11192-019-03063-6
- Dericks, G., Thompson, E., Roberts, M., & Phua, F. (2019). Determinants of PhD student satisfaction: The roles of supervisor, department, and peer qualities. *Assessment and Evaluation in Higher Education*, *44*(7), 1053-1068. doi:10.1080/02602938.2019.1570484
- Friedberg, E. C. (2010). Good news on the horizon: The open researcher and contributor ID (ORCID). *DNA Repair*, *9*(2), 102. doi:10.1016/j.dnarep.2009.12.005
- García-Gómez, C. (2012). Orcid: Un sistema global para la identificación de investigadores. *Profesional De La Informacion*, *21*(2), 210-212. doi:10.3145/epi.2012.mar.14
- Hook, D.W., Porter, S.J., & Herzog, C. (2018). Dimensions: Building Context for Search and Evaluation. *Frontiers in Research Metrics and Analytics*. 3, Article 23.
- Hoy, M. B. (2017). Sci-hub: What librarians should know and do about article piracy. *Medical Reference Services Quarterly*, *36*(1), 73-78. doi:10.1080/02763869.2017.1259918
- Huang, C., Zha, X., Yan, Y., & Wang, Y. (2019). Understanding the social structure of academic social networking sites: The case of ResearchGate. *Libri*, *69*(3), 189-199. doi:10.1515/libri-2019-0011
- López-López, W. (2018). Sobre la evaluación de la investigación y los investigadores: Críticas a las métricas y recomendaciones. *Universitas Psychologica*, *17*(4), 1-2. doi.org/10.11144/Javeriana.upsy17-4.seii
- Martínez-López, J. I., Barrón-González, S., & López, A. M. (2019). Which are the tools available for scholars? A review of assisting software for authors during peer reviewing process. *Publications*, *7*(3) doi:10.3390/publications7030059
- Nicholas, D., Boukacem-Zeghmouri, C., Xu, J., Herman, E., Clark, D., Abrizah, A., . . . Świgoń, M. (2019). Sci-hub: The new and ultimate disruptor? view from the front. *Learned Publishing*, *32*(2), 147-153. doi:10.1002/leap.1206
- Novo, L. A. B., & Onishi, V. C. (2017). Could sci-hub become a quicksand for authors? *Information Development*, *33*(3), 324-325. doi:10.1177/0266666917703638
- Orduna-Malea, E., Martín-Martín, A., Thelwall, M., & Delgado López-Cózar, E. (2017). Do ResearchGate scores create ghost academic reputations? *Scientometrics*, *112*(1), 443-460. doi:10.1007/s11192-017-2396-9
- Renjith, V. R. (2019). Authorship pattern and citation level of i10 cited research papers of DESIDOC journal of library and information technology in google scholar. *Library Philosophy and Practice*. 2679.
- ResearchGate. (2020). *About*. Retrieved from <https://www.researchgate.net/about>.
- Risher, C. A., & Rosenblatt, W. R. (1998). The digital object identifier—An electronic publishing tool for the entire information community. *Serials Review*, *24*(3-4), 12-20. doi:10.1080/00987913.1998.10764462

- ROR. (2019). *About ROR*. Retrieved from <https://ror.org/about/>
- Salas, G. (2017). La universidad del siglo XXI y las bibliometrías. *Revista Guillermo de Ockham*, 15(2), 9-11. doi.org/10.21500/22563202.3495
- Simmonds, A. W. (1999). The digital object identifier (DOI). *Publishing Research Quarterly*, 15(2), 10-13. doi:10.1007/s12109-999-0022-2
- Thelwall, M., & Kousha, K. (2014). Academia.edu: Social network or academic network. *Journal of the Association for Information Science and Technology*, 65(4), 721-731. doi:10.1002/asi.23038
- Williams, A. E. (2018). Exploring the utility of academia.edu: A SWOT analysis. *Information and Learning Science*, 119(11), 662-666. doi:10.1108/ILS-09-2018-0094