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EDITORIAL

As is widely known, in recent years the impact factor of scientific journals has been the main indicator of their quality, based on the premise that a citation is a quality reference. Expressly, given the unfeasibility of another type of qualitative analysis, more easily quantifiable criteria are used. In order to contribute to this debate, Jason Priem et al. published in 2010 the Altmetrics manifesto, questioning the current framework (Impact Factor), and visualizing some available options to measure other indicators [1]. Thus, rooted in the hashtag affordance, they initiate a debate that could help improve the scope of the impact factor and incorporate the scope of new alternative metrics or Altmetrics. The term Altmetrics refers to a set of indicators that attempt to accurately describe the interaction and impact of an article within the scientific community and is proposed as an alternative to the impact factor generating a better indicator than the relationship established with the journals publishing the article [2]. Another definition of Altmetrics considers the mechanisms of quantitative evaluation, in real time, of the social and academic impact of scientific publications and researcher influence. They represent a new method of measuring the impact of scientific research, based on new indicators that attempt to quantify the presence and dissemination of scientific activity on the social networks [3].

Lin and Fenner propose a set of alternative metrics, in which they also establish a logical evolution according to the degree of engagement between users and scholarly objects, considering five parameters [4]:

1. Views or use: These are the first indicators that are directly related to diffusion. It is necessary that the articles be visualized by other actors within the scientific community considering downloads and visualizations in institutional repositories, editorials, slideshare, youtube, etc.
2. Saves: The download of articles through reference managers such as Mendeley, is an indirect measure and correlates the interest that the article has aroused in other authors.
3. Discussions: Refers to the uses and interaction of the article in different forums, including social networks. It implies the dissemination and mentions in certain discussion boards creating an impact.
4. Recommendations: In this case, the recommendations are mentioned in F1000 Prime, a tool to add a quality assessment and selection of the best articles. It is not based on automatic criteria, but on the selection by scientific colleagues.
5. Citations: On the proposed scale, the citation might be the most important measure in different databases. Therefore, Altmetrics include the citation by broadening the focus of the indicators, taking into account the direct citations of the articles, not the journals that include them. Other aspects considered by other authors within the Altmetrics are set forth below [3]:
6. Captures: Favorites, bookmarks, likes on Facebook, etc
7. Mentions: Blogs, tweets, news, comments, reviews, among others.
8. Shares: Retweets, shares on Facebook, etc.
9. Readers: Number of subscribers or followers on Twitter, Facebook, etc,

Accordingly, the appearance of Altmetrics, its capabilities and potentials, and also its limitations, have generated a timely debate. Scientists specialized in bibliometry are convinced that the appearance of Altmetrics marks the birth of a new bibliometric specialty and shows the transition between the old bibliometry (based on the analysis of the journal and the use of the impact factor as the best indicator), towards a new bibliometry based directly on the analysis of documents and authors through indicators that feed on the greed of researchers not only for knowledge, but for recognition. They themselves recognize that the indicators of the alternative metrics are still unstable, and that their platforms are still settling [5].

On the other hand, several researchers have studied some of the indicators in order to prove their validity. In a study carried out on a set of more than 1,000 articles of PLOS recommended in F1000, it was found that on Facebook and Twitter, and particularly not in Figshare or Mendeley, it was possible to show indicators of articles of interest, so both social networks were recommended as a measure of the social impact of research [6]. The following are some advantages of the presence of scientific journals in social networks [7]:

- Visibility: It is considered the most important feature because it allows the diffusion to multiple specialized or general audiences; predominantly, the first results in search engines refer to social networks.
- Increased impact: Social networks allow the dissemination of content to areas different from the usual audience of scientific publications. In this sense, research projects must address in their planning the dissemination and impact on society.

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- Dynamization: Managing a community through social networks can be very useful for a journal, within the submission and post-publication processes to generate debate about published articles. To achieve this, it is advisable to publish different content, and not just self-publishing material.

- Effective social network strategy: The creation of a social network strategy can be useful provided that one of the quality indicators of the journals is the presence in one or several social networks.

- Audiovisual strategy for the dissemination of knowledge: It is important to explore other means of disseminating the information of the publication. Videos developed by authors synthetizing the article, as well as complementary material such as photographs, animations, can help explain, summarize, and disseminate the articles.

- Peer review on social networks: Both during pre-publication and post-publication processes, social networks could be used to generate debates. As a strategy to engage users, ResearchGate tries to stimulate debates and comments on published articles.

- Dissemination of datasets: related to published articles, in a complementary way to what has already been published in the journal.

Regarding the future challenges, scientific journals must consider not only competitiveness due to the impact factor but also the debate on open access and business models to ensure their sustainability. The debate goes further and is to determine if, after so many years since its appearance, the journals will be considered the most effective way of disseminating knowledge. Therefore, it is appropriate that scientific journals have a planned presence in social networks and a strategy to disseminate indicators based on Altmetrics, both for transparency, and the ability to measure the impact.

Finally, and in an environment as competitive as the current one, a synergistic combination between presence in social networks and alternative metrics can be a good strategy for scientific journals to attract potential authors, both for the service they offer before the publication (efficiency, quality of the review, etc.), as well as the dissemination and visibility strategy they can offer in the post-publication. In this sense, authors and scientific journals share some needs.

References

[1] (2010) Altmetrics: a manifesto. Altmetrics. Accessed Feb. 12, 2020. [Online]. Available: https://bit.ly/2ul0Qel

[2] A. Borrego, "Altmétricas para la evaluación de la investigación y el análisis de necesidades de información," *El Profesional de la Informacion*, vol. 23, no. 4, July 2014. [Online]. Available: https://doi.org/10.3145/epi.2014.jul.02

[3] Altmetrics = alternative + metrics. Altmetrics. Accessed Feb. 10, 2020. [Online]. Available: https://bit.ly/39O24nf

[4] J. Lin and M. Fenner, "Altmetrics in evolution: Defining and redefining the ontology of article-level metrics," *Information standards quarterly*, vol. 25, no. 2, January 2013. [Online]. Available: https://doi.org/10.3789/isqv25no2.2013.04

[5] E. Orduña, A. Martín, and E. D. López, "The next bibliometrics: ALMetrics (Author Level Metrics) and the multiple faces of author impact," *El profesional de la información*, vol. 25, no. 3, January 2016. [Online]. Available: https://doi.org/10.3145/epi.2016.may.18

[6] L. Bornmann, "Usefulness of altmetrics for measuring the broader impact of research: A case study using data from PLOS and F1000Prime," *Aslib journal of information management*, vol. 67, no. 3, May 18 2015. [Online]. Available: https://doi.org/10.1108/AJIM-09-2014-0115

[7] F. J. Herrero, A. Álvarez, and M. López, "Revista latina de comunicación social, en la red social facebook," *Revista latina de comunicación social*, no. 66, pp. 526–548, 2011.

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