Reference Accuracy: Authors', Reviewers', Editors', and Publishers' Contributions

Edward F. Barroga

Department of International Medical
Communications, Tokyo Medical University, 6-7-1
Nishishinjuku, Shinjuku-ku, Tokyo, Japan

Received: 6 October 2014
Accepted: 7 October 2014

Address for Correspondence:
Edward F. Barroga, PhD
Department of International Medical Communications, Tokyo
Medical University, 6-7-1 Nishishinjuku, Shinjuku-ku, Tokyo
160-0023, Japan
Tel: +81.3-3342-5315, Fax: +81.3-3342-5307
E-mail: eb@dimc-tmu.jp

Scientific authors are responsible for the accuracy of their writings and references to others' works. However, relying on authors is not enough when it comes to processing their manuscripts. Joint efforts of authors, peer reviewers, editors, and publishers throughout the publishing process may prevent most reference errors. This article analyzes essential aspects of bibliographic management and focuses on the importance of validating references by all stakeholders of scholarly publishing.

Keywords: References; Citations; Validation; Science Communication; Publishing Trends

INTRODUCTION

Properly selected references give credibility to scholarly articles and credit previous contributions of others working in the same field (1). They enable hypothesis formulation and sourcing of the original works in this rapidly developing digital age of publishing. Studies in the predigital era reported numerous mistakes with referencing due to the carelessness of both authors and publishers. However, the decades-long problem has not vanished; the reference error rates in academic publishing are still high (2).

It is increasingly important to unite efforts of authors, peer reviewers, editors, and publishers to improve bibliographic management and accuracy of citations throughout the publishing process. Current trends in measuring scientific impact at individual and journal levels make reference validation an absolute necessity (3, 4).

The aim of this article was to analyze essential aspects of bibliographic management and highlight the importance of reference validation by all stakeholders of scholarly publishing.

REFERENCES AND CITATIONS

Functions of references and citations

References provide a means for acknowledging previous publications, integrating new studies with previous research works, and identifying primary sources supporting authors' statements (2). They facilitate continuity and novelty of research by avoiding redundant work. Previous publications may drive the scientific discourse and arguments. Acknowledging all pertinent sources may foster an exchange of ideas and data.

Proper citations scrutinize cited works and aid in elaborating new concepts (5). Authors should pick accessible and validated references to enable verification of the original sources by evaluators. It is therefore important to cite primarily peer-reviewed sources passed through multiple checks by reviewers and editors (1).

Searching references

Authors should be skilled to search and cite references. Searches are largely dependent on ideas behind the objectives of research studies, and can be done through multidisciplinary and/or specialized databases by setting time limits, languages of the required sources, and article types (6). Authors themselves are responsible for correct searches, which can be expanded by legitimate requests of peer reviewers.

Accuracy of references

Inaccurate reference lists negatively affect the indexability and influence of a scholarly journal. Authors who cite references without retrieving and reading related full-texts may increase inaccuracies. To some extent, such practice is driven by skewed perceptions of the role of citations in boosting the notorious Impact Factor (IF) (5).

Accurate referencing is crucial for allowing readers to follow the flow of ideas and statements in scholarly works and for ensuring the integrity of science communication. Incorrect citation of author names, journal titles, volumes, or page numbers

makes it difficult or even impossible to locate primary sources. Irrelevant in-text citations may result in the misrepresentation of the sources and dissemination of unchecked statements, ultimately raising concerns over 'vanity publishing.'

Referencing in the digital age

Online publishing has changed reference formatting and interlinking. As a prime example, tagging sources with Digital Object Identifiers (DOIs) has made them more functional and easily searchable. Open access movement and availability of various online communication and archiving platforms (e.g., blogs, Research Gate, LinkedIn) have increased the use and functionality of references.

In the digital era, new scholarly sources have emerged and add more complexity to reference formatting and citing. For instance, web-based materials require listing correct URL linking routes and access dates to facilitate re-access by readers at least within a certain period.

In line with the digitization, reference management software tools have emerged to generate text reference citations. However, these software tools may become cumbersome and duplicate references (1). They rarely correct chronological and alphabetical arranging details when several references are grouped together at first use (1). To overcome such problems, authors may use several software tools to manage their references and bibliographies in different styles (e.g., EndNote) (2).

Ensuring accuracy by reference linking

Currently, individual and journal impact indicators influence academic promotion and research grant allocation globally. These indicators are heavily dependent on the accuracy of references. Electronic publishing now provides reference linking and swift navigation from primary and secondary sources (4). Importantly, reference linking not only cites a related work, but also provides a clickable link to additional information presented in the work (4). For instance, many publishers now provide e-links to gene sequences, chemical structures, multimedia, and Web data.

Impact analyses now consider the frequency, directions, and networks of citations in scholarly articles. In some cases, these may reveal 'citation cartels,' abundant auto-citations and other inappropriate citation practices, which disqualify individuals and journals. Citation analyses are thus impossible with inaccurate references.

Current strategies of navigating through the references by CrossRef matching, Highwire, PubMed linking, or XML-encoding help in detecting and correcting inaccuracies. Many large publishers have already incorporated these navigation systems in the peer review systems.

DUTIES OF STAKEHOLDERS

Duties of authors

Different styles of citing scholarly works have been practiced globally (5). The citing styles range from selective citation of studies to support the authors' statements, referring to the studies that support the authors' viewpoints, auto-citations to boost the authors' own reputation, or citations for convenience. Some authors refer to the sources, including grey literature without reading and understanding their entirety. Others give multiple examples of similar references to support a single statement or, conversely, use a single source to support multiple statements.

Basically, the relevance and accuracy of cited references reflect the authors' professionalism and writing skills. The authors' duty is to continuously upgrade their skills of processing scholarly information and referring to essential sources. They are prime contributors to the accuracy of formatting in accordance with the target journal's instructions. Rechecking the relevance and format of each reference by searching through evidence-based bibliographic databases is also the authors' responsibility toward their readers (7).

Editors' role

By filtering quality submissions, journal editors should pay attention to the overall quality and relevance of the references. They can instruct the reviewers and authors on proper validation of cited sources. Some editors may also take a step forward and organize online or on-site training courses for their authors on acceptable citation styles and formatting.

An important issue for editors is to set quantitative limits for reference lists in the instructions for authors and avoid referencing duplicate and retracted items, which may threaten the trustworthiness of science communication (8).

Authors' editors, who edit manuscripts at presubmission and resubmission stages, should also take an active part in selecting, verifying, and formatting references. This task requires from them deep knowledge of the role of references in the 'big science' era and the magnitude of any (un)intentional error.

Reviewers' role

Peer reviewers are the gatekeepers of current scholarly communications who are in the best position to pick incorrect or irrelevant references and suggest amendments. They should recheck the relevance and correctness of the reference lists, advise ethically sound additional references (preferably not auto-citations), or suggest shortening the lists by omitting redundant and retracted sources. Adding references is particularly required when the authors' statements are neither their own words of wisdom nor general knowledge.

Publishers' role

A growing number of publishers use editorial management software to digitize the validation of references by the reviewers. Such an approach may increase the efficiency of publishing reliable and highly informative reference lists. Journals still relying on manual checks and uncertain policies over reference validation risk to be excluded from the global pool of science communication.

Some publishers employ *stringent copyediting mechanisms* for reference checking (4). Copyeditors either work on original Word format files with or without macros for reference editing or use XML-based editing tools or typesetting software. Copyeditors are now also equipped with access to multiple open and subscription platforms and databases, helping them in locating references and correcting the lists.

Other publishers have implemented effective practices to *improve reference linking* (4). Higher link-matching rates are now achieved thanks to the rigorous copyediting supported by automated reference extraction and checking processes through Manuscript Central™ and Editorial Manager™ programs (e.g., Aries Systems' eXtyles technology, Thomson Reuters' ScholarOne, Inera's eXtyles, SPi's SPiCE) (4).

CONCLUSION

All stakeholders of scholarly publishing should take advantage of trainings in digital bibliographic management to further improve their skills in reference validation. With the advent of digital technologies for linking references, the interest toward proper citations and their use for bibliometric evaluations is growing.

ORCID

Edward F. Barroga *http://orcid.org/0000-0002-8920-2607*

REFERENCES

1. Foote M. *Why references: giving credit and growing the field. Chest 2007; 132: 344-6.*
2. Academic writing in english. *Available at http://awelu.srv.lu.se/sources-and-referencing/introduction/ [accessed on 21 September 2014].*
3. Gasparyan AY, Ayvazyan L, Kitas GD. *Biomedical journal editing: elements of success. Croat Med J 2011; 52: 423-8.*
4. Meyer CA. *Reference accuracy: best practices for making the links. J Electron Publ 2008. doi: 10.3998/3336451.0011.206*
5. West R, Stenius K. *To cite or not to cite? Use and abuse of citations. In: Babor TF, Stenius K, Savva S, O'reilly J. editors. Publishing addiction science: a guide for the perplexed. 2nd ed. Essex, UK: Multi-Science Publishing Company, 2008, p45-54.*
6. Gasparyan AY, Ayvazyan L, Kitas GD. *Multidisciplinary bibliographic databases. J Korean Med Sci 2013; 28: 1270-5.*
7. Foote M. *Backing up your statements: how to perform literature searches to prove your points. Chest 2009; 136: 1432-4.*
8. Steen RG. *Retractions in the medical literature: how can patients be protected from risk? J Med Ethics 2012; 38: 228-32.*