

Special Article
Editing, Writing &
Publishing



Improving Scientific Writing Skills and Publishing Capacity by Developing University-Based Editing System and Writing Programs

Edward Barroga and Hiroshi Mitoma

Department of Medical Education, Tokyo Medical University, Tokyo, Japan

OPEN ACCESS

Received: Sep 14, 2018

Accepted: Oct 11, 2018

Address for Correspondence:

Edward Barroga, PhD

Department of Medical Education, Tokyo Medical University, 6-7-1 Nishishinjuku, Shinjuku, Tokyo 160-0023, Japan.

E-mail: barrogas@gmail.com

© 2019 The Korean Academy of Medical Sciences.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ORCID iDs

Edward Barroga

<https://orcid.org/0000-0002-8920-2607>

Hiroshi Mitoma

<https://orcid.org/0000-0003-0513-1811>

Disclosure

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Barroga E, Mitoma H.

Methodology: Barroga E, Mitoma H. Writing

- original draft: Barroga E. Writing - review & editing: Barroga E, Mitoma H.

ABSTRACT

Scholarly article writing and publishing in international peer-reviewed journals can become an overwhelming task for many medical, nursing, and healthcare professionals in a university setting, especially in countries whose native language is not English. To help improve their scientific writing skills and publishing capacity, a university-based editing system and writing programs can be developed as educational platforms. These are delivered by a team of specialist editors composed of tenured faculty members who have a strong medical background and extensive experience in teaching courses on medical research, editing, writing, and publishing. For the editing system, the specialist editors provide comprehensive editing, personalized consultation, full editorial support after peer review, guidance with online submissions/resubmissions, and detailed editorial review at different stages of the manuscript writing. In addition, the specialist editors can develop writing programs such as medical writing and editing internships, academic courses in medical writing or research study designs and reporting standards, special interactive lectures and sessions on predatory publishing, seminars on updated editorial guidance of global editorial associations, academic visits on medical writing and editing, medical writing mentoring program, networking programs in scholarly communication, and publication resources in medical writing and scholarly publishing. These editing system and writing programs can serve as integrated platforms for improving scientific writing skills and publishing capacity by providing continuing education in medical writing, editing, publishing, and publication ethics.

Keywords: Educational Platform; Editing System; Publishing Capacity; Scientific Writing Skills; Writing Programs

INTRODUCTION

Many medical, nursing, and healthcare professionals in a university setting often face the arduous task of writing and publishing their manuscripts in leading international peer-reviewed journals. To improve their scientific writing skills and publishing capacity, a university-based editing system and writing programs can be developed as educational platforms.

These educational platforms are delivered by tenured faculty members who have a strong medical background, expertise in a medical specialty and language editing, and extensive experience in teaching courses on medical research, editing, writing, publishing, and publication ethics.

These faculty members would act as a cohesive team of specialist editors of the university to 1) provide editorial support and educational consultations to the academic staff in promoting international publications and 2) develop writing programs that serve as platforms for continuing education in medical writing and scholarly publishing.

To be able to provide personalized editorial support and education to the academic staff throughout the entire writing and publishing process, the team of specialist editors needs to establish a university-based editing system and relevant writing programs.

This article describes the essential components of a university-based editing system that can be established and writing programs that can be organized to improve scientific writing skills and publishing capacity. The complementary use of both an editing system and writing programs constitutes an integrated approach for enhancing scholarly communication (Fig. 1).

UNIVERSITY-BASED EDITING SYSTEM

To meet increasing publishing demands, a university-based editing system¹ can be established. Through this editing system, specialist editors who are also tenured faculty members can provide the academic staff with personalized editorial support and education, full editing support and mentoring following peer review, technical assistance with online submissions/resubmissions, and manuscript editing and rewriting support at different stages. This internal editor-author interaction is very important in facilitating continuing education to improve author competency in medical writing and publishing.

The essential components of a university-based editing system include the following: 1) an online system for submitting manuscripts for consultation and editing, 2) a highly skilled and experienced editing team, 3) a well-organized editing workflow, 4) a systematic internal editing process, 5) baseline editorial support services, 6) an electronic filing system and an editing/delivery record system, 7) a filing system for accepted or rejected papers, and 8) educational materials for authors.

Online system for submitting manuscripts for consultation and editing

A vital component of the editing system is the mechanism where authors can submit their papers for consultation and editing. At the basic level, a dedicated e-mail system is usually used for receiving or sending files. However, to meet increasing editing demands and facilitate the efficient flow of papers, an online submission system must be developed.

Highly skilled and experienced editing team

A crucial component of the editing system is the editing team. The editing team should be composed of faculty members who have a science or medical background with expertise in medical specialties and language editing. These faculty members will serve as specialist editors, providing editorial support and bolstering the international publication competence of the university.

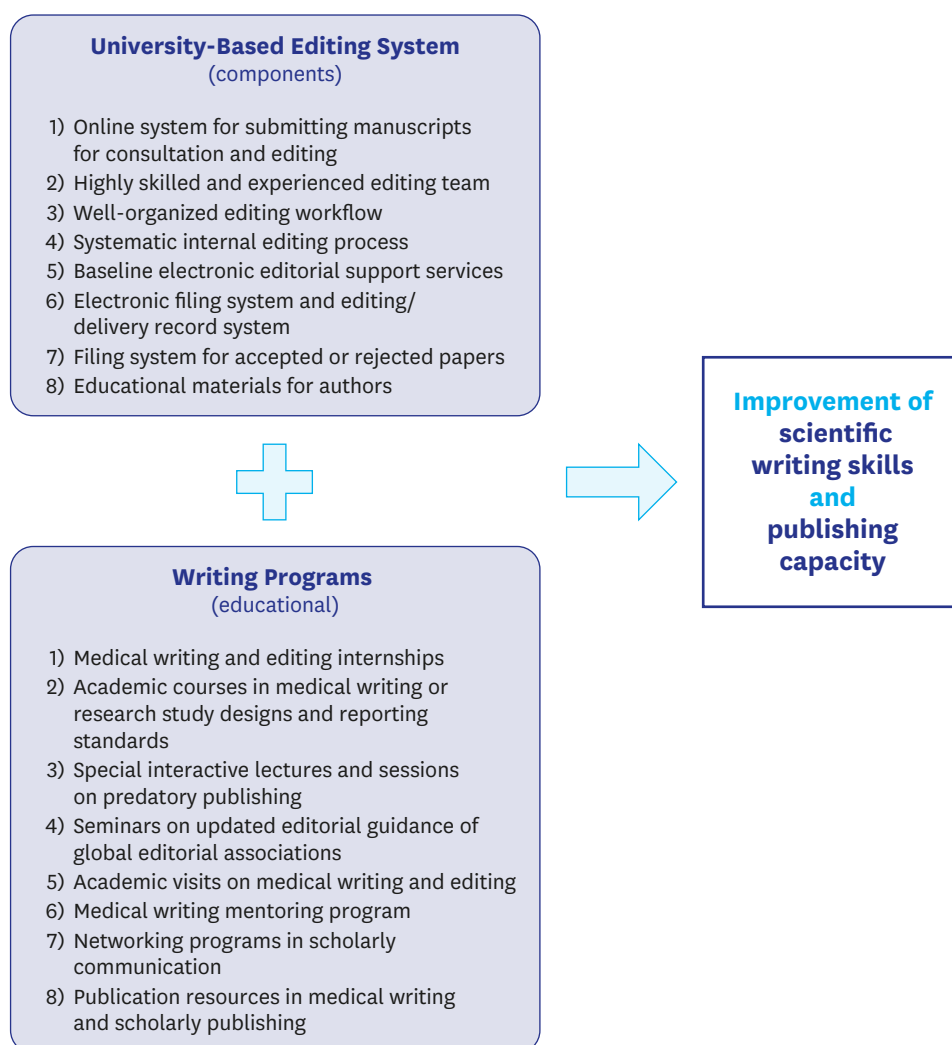


Fig. 1. Integrated approach for enhancing scholarly communication. A university-based editing system and writing programs can be developed as educational platforms for continuing education in medical writing, editing, publishing, and publication ethics to improve scientific writing skills and publishing capacity.

Well-organized editing workflow

An editing workflow must be carefully organized to give considerable opportunities for both authors and specialist editors to consult, discuss, and improve the paper either as a new submission or as a re-submission.¹

Systematic internal editing process

For the actual editing of papers, an internal consulting and editing process must be systematically organized to ensure efficiency. In this process, the senior medical editor initially evaluates all the papers for consultation and editing, plans their delivery schedule, and assigns each paper to the specialist editors according to their medical specialties. An editorial coordinator files the papers in a network hard drive before the comprehensive editing by the specialist editors and sends the delivery information to the authors.

Following the comprehensive editing and consultations, the senior medical editor makes a second check of the edited paper as necessary. The senior medical editor provides feedback

and suggestions to the specialist editors regarding the editing and further improvement of the paper.

Baseline editorial support services

The most important component of the editing system is the 'baseline editorial support services'.¹ At least 11 support services can be provided as described below:

Comprehensive editing and editor-author consultations

Correction of the style, format, syntax, language, scientific content, logical flow, overall impact, and novelty of the paper and educational consultations.

Cover letter editing

Improvement of the text and tone, acknowledgement of author contributions, declaration of competing interest, and suggestions for reviewers.

Interpretation of journal decision letter

Clarification of the journal editor's decision and provision of support in responding to reviewers' comments in a point-by-point fashion.

Resubmission editing

Assistance with the review of previous comments, re-editing of paper, and provision of advice on the selection of a new target journal.

Editing of responses to reviewers' comments

Assistance in the preparation of point-by-point responses, explanations of revisions, and guidance/education in writing polite and scientific rebuttal.

Rejection and new submission editing

Advice on new journal selection based on the subject category, peer review rigor, manuscript limitations, and impact factor.

Assistance with guidelines for authors

Ensuring adherence to the guidelines or instructions for authors of the target journal.

Assistance with online submissions/resubmissions

Clarification of online submission/resubmission instructions, and checking of missing elements and omissions.

Galley proofreading

Electronic annotations of spelling, punctuation, grammar, typescript, headers, footers, and headlines.

Poster and slide presentation text editing

Streamlining and organizing the text of poster and slide presentations.

Oral presentation script editing/coaching

Improvement of text for oral delivery and interactivity.

Electronic filing system and editing/delivery record system

To facilitate the efficient handling of papers for editing, an electronic coding and filing system should be carefully designed. This system should be organized in the network hard drive that can be easily accessed by all members of the editing team.

A simple editing/delivery record system should also be prepared in the same drive. This enables the specialist editors to plan and monitor their editing/delivery schedules.

Filing system for accepted or rejected papers

For papers that have been accepted or rejected, a separate filing system should be designed. Each author folder can be identified using the following basic information: 1) original file code, 2) surname of the first author, and 3) journal name. All other details of the acceptance or rejection are filed inside each folder for analysis of strengths and weaknesses and areas for improvement.

Educational materials for authors

A simple editing website should be designed to introduce the editing system and editorial support services. Editing pamphlets and posters can be prepared as supplements and distributed to authors at regular intervals. Relevant references on medical editing, writing, and publishing such as books and journals should be collected and regularly updated.

WRITING PROGRAMS

Medical writing and editing internships

After establishing a university-based editing system, a medical writing and editing internship program² can be developed for graduate students and medical doctors. The internship enables them as authors to acquire important skills in writing and publishing their papers. It also provides them with continuing education, hands-on training, and practical experience.

Moreover, the internship facilitates qualified education in evidence-based biomedical writing and editing and enhances the academic standing of an institution. It offers opportunities for author-editor communication, which can be a cornerstone for educational advancement and professional orientation.

Academic courses in medical writing or research study designs and reporting standards

Other academic courses can be conceptualized for continuing education in medical writing and editing. These include the following: 1) training courses in scholarly publications using specially developed medical writing modules³; 2) a systematic course on biomedical writing and editing⁴ and workshops in publication ethics⁵; and 3) special courses in research study designs and reporting standards.⁶

Training courses in scholarly publications using specially developed medical writing modules
Training courses can be offered to graduate students, medical doctors, and the faculty using specially developed medical writing modules for scholarly publications. These modules must cover important components of medical writing, editing, and publishing of scholarly articles. They should also be carefully integrated into a well-organized curriculum with a mechanism for competency evaluation.³

Systematic course on biomedical writing and editing, and workshops in publication ethics
These course and workshops can be developed for graduate students, medical doctors, and the faculty. The course can include lectures, presentations, workshops, e-learning, and online feedback, which can all be designed as an integrated systematic course. The main objective is to improve biomedical writing and editing skills through interactive learning and online feedback.⁴ The workshops in publication ethics aim to enhance postgraduate and faculty development programs by combining medical writing, training, and medical publication ethics education.⁵

Special courses in research study designs and reporting standards

These courses for graduate students, medical doctors, and the faculty aim to increase knowledge of research study designs and how to write them based on research reporting standards.⁶ Authors gain knowledge on how to thoroughly present collected data and perform systematic analysis within the frames of a chosen study design. This ensures integrity in research reporting.

Special interactive lectures and sessions on predatory publishing

These interactive lectures for graduate students, medical doctors, and the faculty can increase awareness and knowledge of unethical publishing practices in both open-access and subscription publishing models. Interactive sessions can unmask ethical transgressions by brokering editorial agencies and agents that suppress the activity of scientific authors. They can also expose schemes of predatory publishing activities such as compromised peer reviews, lack of transparency over services and fees, poor/irrelevant indexing and archiving, misleading metrics, and corrupt link to journals.⁷

Seminars on updated editorial guidance of global editorial associations

These seminars for graduate students, medical doctors, and the faculty provide up-to-date knowledge of the most recent editorial policy statements of global editorial associations for advancing scholarly publishing. High-quality and reliable research output can be effectively promoted by following the essential updates of editorial guidance from the International Committee of Medical Journal Editors (ICMJE) on scholarly writing, reviewing, and publishing; the Enhancing the Quality and Transparency of Health Research (EQUATOR) network on how to completely and ethically report research results; the Committee on Publication Ethics (COPE) on issues in ethical editing and publishing; the International Society for Medical Publication Professionals (ISMPP) on ethical reporting of company-sponsored trial results; the American Medical Writers Association (AMWA)-European Medical Writers Association (EMWA)-ISMPP on ethical obligations of professional writers and authors; the World Association of Medical Editors (WAME) on criteria for distinguishing predatory sources; and the COPE, Directory of Open Access Journals (DOAJ), Open Access Scholarly Publishers Association (OASPA), and WAME on principles of transparency of open-access journals.⁸

Academic visits on medical writing and editing

Hosting academic visits for graduate students, medical doctors, and the faculty on medical writing and editing can be organized as an institutional linkage program for representatives of local or international medical universities. This program creates a good opportunity to improve writing and editing skills and is important for 1) launching educational exchange visits, 2) arranging joint local or international courses, and 3) promoting academic exchange of ideas and experience.

As an offshoot, arrangements for writing and publishing collaborative papers in journals indexed in Web of Science with impact factors can solidify institutional linkage. Graduate courses of interest to researchers and PhD candidates can be developed, focusing on introduction to research methodology, medical writing, and scientific editing as course topics.

Medical writing mentoring program

Another important program to improve scientific writing skills and publishing capacity is to provide MS and PhD students with a step-by-step mentoring support throughout the entire process of writing and submitting their papers. Such mentoring program introduces these students to the specific mechanics of medical writing and publishing. It also fosters their ability to develop their writing skills and gain more confidence in taking charge of their own papers.

Networking programs in scholarly communication

To help authors write high-quality papers, university-based specialist editors must continuously increase their knowledge, skills, and experiences in medical writing and editing. This can be achieved by membership and active participation in academic meetings of learned societies and associations of medical/science editors.⁹

These societies and associations provide networking opportunities and continuing education on scholarly publishing. They develop guidelines for upholding the standards of medical writing, editing, indexing, research reporting, peer review, editorial independence, and other editorial policies.⁹

Publication resources in medical writing and scholarly publishing

The specialist editors can write articles or timely updates on medical writing and scholarly publishing. These publications will serve as valuable resources for authors to improve their quality of writing and the acceptability of their articles.

Relevant topics can be in the areas of preparing an article for publication,¹⁰ identifying manuscript sections,¹¹ writing the title and abstract,¹² knowing different types of studies in medical research,¹³ citing web resources,¹⁴ appraising scholarly articles,¹⁵ avoiding predatory publishing practices,^{16,17} comprehending peer review,¹⁸ choosing the target journal,¹⁹ and understanding journal impact factor.²⁰ Articles or updates on these and other topics can be used for the continuing education of authors, as well as of editors, peer reviewers, publishers, and members of learned societies.

SUMMARY

The development of a university-based editing system and writing programs is a highly feasible academic undertaking that can increase the prestige of an academic institution. These can serve as educational platforms for improving scientific writing skills and publishing capacity by providing continuing education in medical writing, editing, publishing, and publication ethics.

REFERENCES

1. Barroga EF, Turner RJ, Breugelmans R, Barron JP. An adaptable model of electronic editorial services for medical universities. *Eur Sci Ed* 2012;38(2):32-5.

2. Barroga EF. Essential components of a medical editing internship. *Eur Sci Ed* 2012;38(3):67-8.
3. Barroga EF. Essential modules for teaching publication writers. *Med Writ* 2013;22(1):4-9.
[CROSSREF](#)
4. Kim SK, Barroga EF. An adaptable model of a biomedical writing and editing course for medical graduates. *Eur Sci Ed* 2014;40(1):9-10.
5. Kojima T, Barroga EF, Yashiro T, Yoshioka T, Barron JP. Combined workshops on medical writing and publication ethics for Japanese postgraduate students and faculty members. *Med Writ* 2013;22(1):10-2.
[CROSSREF](#)
6. Barroga EF, Kojima T. Research study designs: an appraisal for peer reviewers and science editors. *Eur Sci Ed* 2013;39(2):44-5.
7. Gasparyan AY, Nurmashev B, Voronov AA, Gerasimov AN, Koroleva AM, Kitash GD. The pressure to publish more and the scope of predatory publishing practices. *J Korean Med Sci* 2016;31(12):1874-8.
[PUBMED](#) | [CROSSREF](#)
8. Gasparyan AY, Yessirkepov M, Voronov AA, Koroleva AM, Kitash GD. Updated editorial guidance for quality and reliability of research output. *J Korean Med Sci* 2018;33(35):e247.
[PUBMED](#) | [CROSSREF](#)
9. Gasparyan AY. Familiarizing with science editors' associations. *Croat Med J* 2011;52(6):735-9.
[PUBMED](#) | [CROSSREF](#)
10. Hong ST. Ten tips for authors of scientific articles. *J Korean Med Sci* 2014;29(8):1035-7.
[PUBMED](#) | [CROSSREF](#)
11. Baron TH. ABC's of writing medical papers in English. *Korean J Radiol* 2012;13 Suppl 1:S11-1.
[PUBMED](#) | [CROSSREF](#)
12. Cals JW, Kotz D. Effective writing and publishing scientific papers, part II: title and abstract. *J Clin Epidemiol* 2013;66(6):585.
[PUBMED](#) | [CROSSREF](#)
13. Röhrig B, du Prel JB, Wachtlin D, Blettner M. Types of study in medical research: part 3 of a series on evaluation of scientific publications. *Dtsch Arztebl Int* 2009;106(15):262-8.
[PUBMED](#)
14. Snyder PJ, Peterson A. The referencing of internet web sites in medical and scientific publications. *Brain Cogn* 2002;50(2):335-7.
[PUBMED](#) | [CROSSREF](#)
15. Sengupta S, Shukla D, Ramulu P, Natarajan S, Biswas J. Publish or perish: the art of scientific writing. *Indian J Ophthalmol* 2014;62(11):1089-93.
[PUBMED](#) | [CROSSREF](#)
16. Barroga E. Predatory publishing practices corrode the credibility of science. *J Korean Med Sci* 2015;30(10):1535-6.
[PUBMED](#) | [CROSSREF](#)
17. Kebede M, Schmaus-Klughammer AE, Tekle BT. Manuscript submission invitations from 'predatory journals': what should authors do? *J Korean Med Sci* 2017;32(5):709-12.
[PUBMED](#) | [CROSSREF](#)
18. Barroga EF. Safeguarding the integrity of science communication by restraining 'rational cheating' in peer review. *J Korean Med Sci* 2014;29(11):1-3.
[CROSSREF](#)
19. Gasparyan AY. Choosing the target journal: do authors need a comprehensive approach? *J Korean Med Sci* 2013;28(8):1117-9.
[PUBMED](#) | [CROSSREF](#)
20. Gasparyan AY, Nurmashev B, Yessirkepov M, Udovik EE, Baryshnikov AA, Kitash GD. The journal impact factor: moving toward an alternative and combined scientometric approach. *J Korean Med Sci* 2017;32(2):173-9.
[PUBMED](#) | [CROSSREF](#)