The 3rd Asian Science Editors’ Conference and Workshop 2016

July 20(Wed) ~ 22(Fri), 2016
The Korea Science and Technology Center, Seoul, Korea

Theme
Development of Asian STM journals to international level

Scope
During the workshop, participants also will be able to explain the current international standard of scientific journals and to communicate with each other.

Conference Venue
B1 floor, Main Auditorium The Korea Science and Technology Center, Seoul, Korea

Schedule
1. Pre-conference Workshop: CrossRef in Seoul (July 20, 2016)
2. Conference (July 21, 2016)
3. Post-conference Workshop: Journal article tag suite (JATS) Asia (July 22, 2016)

Contact
case@asianeditor.org  www.asianeditor.org
Aims and scope

Science Editing (Sci Ed) is the official journal of the Korean Council of Science Editors (http://kcse.org) and Council of Asian Science Editors (http://council.org). It aims to improve the culture and health of human being by promoting the quality of editing and publishing scientific, technical, and medical journals. Ex-
pected readers are editors, publishers, reviewers, and authors of the journals around the world; however, specially focused to those in Asia. Since scholarly journals in Asia are mostly published by the academic societies, universities, or non-profit organizations, Sci Ed is sought to play a role in journal development. The number of publications from Asia is increasing rapidly and overpass that of other continents; meanwhile, the number of international journals and highly appreciated jour-
nals is yet to be coming forward. It is task of Asian editors to pledge the journal quality and broaden the visibility and accessibility. Therefore, its scope includes the followings in the field of science, technology, and medicine.

- Policy of journal editing
- Data mining on the editing and publishing
- Systematic review on medical journal publishing and editing
- Research ethics and medical ethics including clinical registration, statement of human and animal health protection, and conflict of interest
- Publication ethics: fabrication, falsification, plagiarism, duplicate publication, and authorship
- CrossCheck
- Legal issue in journal publishing
- Peer review process
- Reporting guideline for medical journals
- Medical and scientific literature databases
- Advanced information technology applicable to journal editing and publishing including PubMed Central schema, journal article tag suite schema, Digital Object Identifier, CrossMark, FundRef, ORCID, dataset, QR code, and App

Its publication type includes original articles, reviews, case studies, essays, editorials, meeting reports, book reviews, announcement, correspondences, and video clips. Other types are also negotiable with the editorial board. All unsolicited articles are subject to peer review. Commissioned articles are reviewed by the Editorial Board.

About the journal

It launched in February 20, 2014 with volume 1 and number 1. It is to be published biannually. Supplement issues may be published. Total or a part of the articles in this journal are abstracted in Science Central, Directory of Open Access Journal, Google Scholar, and Crossref. Circulation number of print copies is 500 per issue. Full text is freely available at http://www.escienceediting.org or http://escienceediting.org. It is the member of International Committee of Medical Journal Editors’ Recommendations. The system has achieved recognition in its stability and efficiency as well as its multi-language support service, based on accumulated 10-year experience. It also has processed Electronic Manuscript Submission System to Electronic publishing automatically by emphasizing the connectivity with the Web sites of online journals.

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About Publishing M2Community
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Another High Quality Technology
We provide the participating society with full text of the article in Journal Article Tag Suite (JATS). Furthermore, as a member of PILA Sponsoring Entity, we provide various services such as CrossCheck, CrossRef, FundRef, Cited-by linking, and ORCID services. Also, this company has been a member of ALPSP since 2013 and KCSE since 2011.

Electronic Manuscript Submission System

- Online submission, review, and management
- Customizing based on the nature of a journal
- Constant management, improvement and scalability of function
- The user interface, access optimization & system stability
- PDF conversion
- Epub ahead of print

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- Fast issue-browsing capability via Quick View
- Quick scrolling through abstract summaries
- Convenient notification when a new issue is available
- Links to journal online to view supplemental material and browse the archives
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Open access publishing in the internet age

Kihong Kim
Department of Physics, College of Natural Science, Ajou University, Suwon, Korea

Open access (OA) publishing has been the hottest topic in all areas of scholarly publishing in recent years. Currently, over 11,000 peer-reviewed journals are indexed in the Directory of Open Access Journals (DOAJ). Each year many new OA journals are being launched and some of them develop quickly into top-class journals with high impact factors. The main driving force behind this phenomenon is the spreading of the internet across the world. Nowadays, online journals are dominating print journals. In scientific fields, I think print journals have almost completely lost their meaning. In the case of print journals, publishers need to charge readers and libraries who buy print copies. In the case of online journals, in contrast, it is possible to charge all expenses to authors and make them free to readers. There has been much discussion about the problems of moral hazard and predatory journals associated with this kind of OA business model [1]. Politicians have taken notice of this issue, too. Recently, a forum discussion on the pros and cons of OA was held at the National Assembly of Korea.

In spite that there are some oppositions to OA, I think the rapid spreading and dominance of OA journals in the near future are inevitable, mainly because of the basic nature of the internet. For the first time in history, the internet has made it possible for an extremely large number of the general public to access a vast amount of information, which was previously available only to a restricted group of people. It is affecting the way scientific research is conducted in a fundamental manner. Until now, research in science has more or less been an exclusive activity of professionals in a small number of institutions in more advanced countries. I anticipate that this situation will be changed greatly thanks to the internet. The number of researchers and research papers, especially from developing countries, are already increasing rapidly. In the internet space, it is difficult for paid website services to maintain their business, simply because there always exist alternative websites which provide similar information for free. In addition, the internet users have a tendency to care more about speed and convenience rather than prestige. For analogous reasons, online journals which charge large amount of fees to subscribers may experience various difficulties in the future.

One important rationale for promoting OA is the recognition that scientific knowledge developed through publicly-funded research has to be considered as a public property, and therefore should be open to the public. This idea, especially regarding the medical research, was the first impetus to the OA movement. We may be in the middle of a paradigm change in scholarly journal publishing. Most scientific research papers are the outcome of publicly-funded research. Moreover, most research results are heavily dependent on previous works done by other researchers. I feel that those who are at the end of the publishing process and haven't
contributed to the research results at all are not entitled to make huge profits from those papers.

I agree that there are problems with current business models for OA journals, though I think they are not very difficult to solve. One obvious problem is that the current article processing charges for many OA journals are too high. The publishers need to lower them substantially and find other ways to finance expenses. The way in which free websites are operating may provide some directions to OA journals. For instance, instead of relying exclusively on authors’ article processing charges, they could generate revenues from online advertisements or public/government funding. Public funding for selected high-quality OA journals published by nonprofit organizations may be an efficient policy for solving the problem. Well-organized international efforts will be highly beneficial for this purpose.

I believe that OA publishing will be the dominant form of scholarly publishing in the near future. It may also provide unique opportunities for late comers in scientific research such as developing countries to catch up more advanced countries. Establishing an international network and platform will be of a great help. The society needs to increase public funding for OA publishing and develop a strategy on how to make it work smoothly and best suit the public interests.

**Conflict of Interest**

No potential conflict of interest relevant to this article was reported.

**Reference**

1. Beall J. Predatory publishing is just one of the consequences of gold open access. Learn Publ 2013;26:79-84. http://dx.doi.org/10.1087/20130203
Towards the implementation of a system for manuscript editor certification

Hyun Jung Yi¹, Hye-Min Cho², Hee Kyung Chung², Hwan Tae Ahn², Myung-Soon Kim³, Yoon Joo Seo⁴

¹Medical Library, Hangyang University Guri Hospital, Guri; ²Infolumi, Seongnam; ³Electronics and Telecommunications Research Institute, Daejeon; ⁴Medrang Inc., Seoul, Korea

Abstract

Style and format are important criteria for evaluating a journal and indexing it in major databases. In Korean science, technology, and medical journals, interest in manuscript editing has increased over the past seven to eight years, and the responsibilities of manuscript editors have expanded as well. However, since no clear standards for the roles and qualifications for manuscript editors are yet available, a formal certification system is needed to establish appropriate standards and to provide professional training. To identify ways of developing a manuscript editor certification program in Korea, this study investigated similar certification programs in and outside the country and surveyed 195 Korean editors, manuscript editors, publishers, and medical librarians. The survey revealed that manuscript editors were necessary (mean score of 4.38 on a five-point Likert scale, with a score of 5 indicating strong agreement), and that their main contributions were efficiently managing the editorial board, improving the accuracy of references, and accelerating the editing process. The respondents were also positive about the possibility of implementing a manuscript editor certification; 45.1% showed interest in becoming certified, and 47.1% reported interest in hiring a certified manuscript editor. Regarding the system for issuing certification, respondents favored a professional training course (53.1%), validation of work experience (27.1%), or an examination (16.8%). This study concludes that it is essential to establish a formal certification program to train manuscript editors properly, and an examination system is the most efficient and suitable method for managing the certification process.

Keywords

Manuscript editor; Certification; Korea

Introduction

Style and format are important criteria when a journal is evaluated for indexing in international databases such as the Science Citation Index Expanded (SCIE) or Scopus, as well as in Korean...
databases such as the Korean Citation Index of National Research Foundation. Thus, the editorial boards of Korean science, technology, and medicine (STM) journals have displayed an increasing interest in manuscript editing over the last seven to eight years, and manuscript editors have been actively working in the field; however, no formal degree programs or clear standards for qualification exist for manuscript editors. In the United States, the Board of Editors in the Life Sciences (BELS) has administered a certification program since 1991, and associations such as the American Medical Writers Association (AMWA) and the Council of Science Editors (CSE) have recently implemented new certification programs.

In order to increase the quality and quantity of manuscript editors in Korea, it is crucial to develop effective ways to review the qualifications of manuscript editors and to establish a certification program well-adapted to the current needs of Korean journals. The aim of this research was to propose detailed plans for the establishment of a manuscript editor certification program suitable for Korea.

Methods

This study applied two analytical models to identify the features of an effective certification program that would be well-adapted to Korean journals. First, we reviewed various international manuscript editing certification programs as well as two Korean certification programs. Second, we conducted a survey investigating the opinions of journal editors and manuscript editors in the STM field.

Certification programs in and outside Korea

For this study, several international and domestic certification programs, either directly related to manuscript editors or otherwise relevant, were selected and investigated. Certification and certificate programs abroad (the distinction between certificate and certification programs is based on AMWA classification criteria; http://www.amwa.org/certification_differences) were represented by BELS, AMWA, and CSE programs. In these certification programs, journal editors and manuscript editors in STM fields are primarily responsible for training new-coming editors and manuscript editors. In Korea, however, no certification programs related to manuscript editing exist. Thus although they are not directly related to the topic, two Korean certification programs were chosen for analysis in this study: one was the Korean Medical Librarian certification program administered by the Korean Medical Library Association, and the other was the Korean Language Teacher certification system run by the Ministry of Culture, Sports, and Tourism.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Question</th>
<th>Question type</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristic of respondents</td>
<td>Affiliation</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Job title</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>Open</td>
<td>Numerical response</td>
</tr>
<tr>
<td></td>
<td>Journal editing experience</td>
<td>Open</td>
<td>Numerical response</td>
</tr>
<tr>
<td>Journal characteristic</td>
<td>Subject area</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Indexed databases</td>
<td>Closed</td>
<td>Multiple-choice</td>
</tr>
<tr>
<td>Reason for needing manuscript editors</td>
<td>Efficient management of the editorial board</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Acceleration of the journal editing process</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Accuracy of the journal references</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Accuracy of the overall paper (excluding references)</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Responding to journal evaluations</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Indexing of the journal in prominent international databases</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Overall need for manuscript editors</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td>Manuscript editor qualification and</td>
<td>Educational qualifications for a manuscript editor</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td>certification</td>
<td>Experience qualifications when hiring a manuscript editor</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Importance of manuscript editor eligibility criteria</td>
<td>Closed</td>
<td>Rank selection</td>
</tr>
<tr>
<td></td>
<td>Acquiring manuscript editor certification</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Hiring a certified manuscript editor</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Acquisition requirements for manuscript editor certification</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td></td>
<td>Manuscript editor recertification requirements</td>
<td>Closed</td>
<td>Single-choice</td>
</tr>
<tr>
<td>Other opinion</td>
<td>Opinions on implementing the manuscript editor certification program</td>
<td>Open</td>
<td>Short answer</td>
</tr>
<tr>
<td></td>
<td>Opinions on difficulties in journal publication and management</td>
<td>Open</td>
<td>Short answer</td>
</tr>
</tbody>
</table>
Table 2. Comparison of certification/certificate programs in and outside Korea

<table>
<thead>
<tr>
<th>Category</th>
<th>Examination-based certification program</th>
<th>Non-examination-based certificate program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BELS</td>
<td>AMWA MWC</td>
</tr>
<tr>
<td></td>
<td>AMWA Essential Skills Certificate</td>
<td>CSE Publication Certificate Program</td>
</tr>
<tr>
<td>Founded</td>
<td>1991</td>
<td>2015</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>2006</td>
</tr>
<tr>
<td>Educational qualification</td>
<td>Bachelor’s degree</td>
<td>Bachelor’s degree</td>
</tr>
<tr>
<td></td>
<td>AMWA MWC</td>
<td>AMWA Essential Skills Certificate</td>
</tr>
<tr>
<td></td>
<td>Korean Medical Librarian, level 3</td>
<td>CSE Publication Certificate Program</td>
</tr>
<tr>
<td>Educational qualification</td>
<td>Bachelor’s degree</td>
<td>Bachelor’s degree</td>
</tr>
<tr>
<td>Experience qualification</td>
<td>2 years</td>
<td>2 years full time or 4 years at 20 hours per week</td>
</tr>
<tr>
<td>Evaluation method</td>
<td>Examination</td>
<td>Examination</td>
</tr>
<tr>
<td></td>
<td>Point system (educational background, experience, training, examination)</td>
<td>Training and examination</td>
</tr>
<tr>
<td></td>
<td>Training and examination</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>More than 120 hours</td>
<td>Examination (written and interview)</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Participate in eight workshops, including ethics education</td>
<td>Training in eight workshops, including ethics education</td>
</tr>
<tr>
<td></td>
<td>Self-study is possible.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Write or present a research project</td>
<td>-</td>
</tr>
<tr>
<td>Recertification requirements</td>
<td>None</td>
<td>Every 5 years</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Every 3 years</td>
</tr>
<tr>
<td></td>
<td>Re-examination or points (training, courses, self-study, research papers)</td>
<td>Points (educational background, experience, training)</td>
</tr>
<tr>
<td>Ranking system</td>
<td>BELS Diplomate Editor</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Level 2: 3 years, 1,200 hours of experience</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Level 1: 5 years, 2,000 hours of experience</td>
<td>None</td>
</tr>
</tbody>
</table>

BELS, Board of Editors in the Life Sciences; AMWA MWC, American Medical Writers Association Medical Writer Certified; CSE, Council of Science Editors.

It is possible to become a Korean Language Teacher by either completing a degree or non-degree training program, but only the latter is discussed in this paper. In the case of non-degree training programs, only level 3 is obtainable; A minimum 5 years of full-time work experience within the last 10 years is needed to be able to substitute work experience for a bachelor’s degree; In the case of Korean Medical Librarians, educational background, experience, activities in academic societies and associations, and research papers are all quantified. If the total points are less than the required points, this deficit can be made up in part through examinations.
This study investigated the certification program details available on all five associations’ homepages [1-5], with a particular focus on the qualifications for acquiring certification, detailed procedures for qualifying and applying, the recertification policy, and the system for advancing to a higher level of certification.

Survey
A survey was conducted between June 10 and July 9, 2015 to solicit opinions regarding a manuscript editor certification program suitable for Korea. The survey was distributed online to the members of the Korean Council of Science Editors (KCSE) and the Korean Medical Library Association, and was also administered to the participants at KCSE workshop on July 3, 2015. The 198 survey participants were editors, manuscript editors, librarians, publishing professionals, and staff members of academic societies. Three of the 198 surveys were excluded due to incomplete information, resulting in a total of 195 that were analyzed. The survey questions are presented in Table 1.

SPSS ver. 21.0 (IBM Co., Armonk, NY, USA) was used to analyze the results. First, frequency analysis was performed to determine the characteristics of the respondents and the journals. The characteristics of the respondents were further classified based on the subject area and the status of the journals. Second, descriptive statistics and frequency analysis were conducted on the responses to each survey question. Analysis of variance was conducted to analyze how responses differed according to groups defined by affiliation, position, age, experience, and subject area. Third, cross-tabulation analysis was performed to analyze how the specific roles of the manuscript editors affected overall perceptions of the necessity for manuscript editors. In addition, regression analysis was conducted to identify the most important factors contributing to the overall need for a manuscript editor. Fourth, the results of open-ended questions in the survey were analyzed to perform an in-depth investigation of the respondents’ opinions on journal management in general and manuscript editors in particular.

Results

Results from Korea and abroad
The results of our investigation regarding various types of international and Korean certification programs are shown in Table 2. Most examination-based certifications were found to require a bachelor’s degree and two years of full-time work experience, as well as requiring an individual to pass an examination. The medical librarian program issues certifications on a point system with no specific educational or work experience requirements; however, the requirements are fundamentally no different from those of other certification programs because the medical librarian certification is only issued to those who have obtained a librarian certification from college and worked at a medical library subsequently.

On the other hand, there are certificate programs based on a combination of proper training and conference participation without an examination in AMWA Essential Skills Certificate and CSE Publication Certificate Program.

In recertification, the process does not include a separate examination but requires continuing education in most cases. Only two associations had ranked levels of certification system. In the case of BELS, if a candidate has more than six years of total editing experience and two years have passed since the certification was obtained, the individual can apply to be a BELS Diplomate Editor, the evaluation for which is based on editing experience and two essays. The Korean Language Teacher Education Center uses a three-tier ranking system, which requires 1,200 hours of experience to move from level 1 to level 2 and 2,000 hours of experience to advance to level 3. These institutions, which adopt a certification ranking system, generally have either a long history or a large pool of certified editors.

Survey results

Characteristics of the respondents
The characteristics of the respondents are presented in Table 3.

Table 3. Characteristics of respondents (n=195)

<table>
<thead>
<tr>
<th>Category</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliation</td>
<td></td>
</tr>
<tr>
<td>Academic society</td>
<td>130 (66.7)</td>
</tr>
<tr>
<td>Research institution (including universities)</td>
<td>27 (13.8)</td>
</tr>
<tr>
<td>Library</td>
<td>17 (8.7)</td>
</tr>
<tr>
<td>Publication industry</td>
<td>11 (5.6)</td>
</tr>
<tr>
<td>Other</td>
<td>10 (5.1)</td>
</tr>
<tr>
<td>Job title</td>
<td></td>
</tr>
<tr>
<td>Editor-in-chief, associate/assistant editor</td>
<td>81 (41.5)</td>
</tr>
<tr>
<td>Editorial board member</td>
<td>26 (13.3)</td>
</tr>
<tr>
<td>Manuscript editor</td>
<td>36 (18.5)</td>
</tr>
<tr>
<td>Reviewer</td>
<td>4 (2.1)</td>
</tr>
<tr>
<td>Librarian</td>
<td>16 (8.2)</td>
</tr>
<tr>
<td>Typesetter</td>
<td>8 (4.1)</td>
</tr>
<tr>
<td>Copy editor</td>
<td>5 (2.6)</td>
</tr>
<tr>
<td>Editorial assistant</td>
<td>19 (9.7)</td>
</tr>
<tr>
<td>Age (yr)</td>
<td></td>
</tr>
<tr>
<td>20s</td>
<td>18 (9.2)</td>
</tr>
<tr>
<td>30s</td>
<td>51 (26.2)</td>
</tr>
<tr>
<td>40s</td>
<td>71 (36.4)</td>
</tr>
<tr>
<td>≥ 50s</td>
<td>53 (27.2)</td>
</tr>
<tr>
<td>No response</td>
<td>2 (1.0)</td>
</tr>
<tr>
<td>Experience (yr)</td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>32 (16.4)</td>
</tr>
<tr>
<td>1-2</td>
<td>51 (26.2)</td>
</tr>
<tr>
<td>3-4</td>
<td>35 (17.9)</td>
</tr>
<tr>
<td>5-6</td>
<td>27 (13.8)</td>
</tr>
<tr>
<td>≥ 7</td>
<td>50 (25.6)</td>
</tr>
</tbody>
</table>
Most of the respondents (66.7%) were affiliated with an academic society, and editor-in-chief/associate/assistant editors and manuscript editors were the most common job titles (41.5% and 18.5%, respectively). The journals in which the respondents were involved encompassed a wide range of disciplines, with 45.6% in the health sciences, 25.6% in the engineering sciences, 12.3% in the natural sciences, 11.8% in agricultural and fisheries sciences, and 4.6% in interdisciplinary subjects. A multiple-choice question evaluated the indexing status in international databases of the journal with which the respondents were affiliated. Of the journals, 25.6% were found to be indexed in SCIE and 34.9% were indexed in Scopus.

**Perceived need for manuscript editors**

As shown in Table 4, the survey results reveal that many respondents recognized the need for manuscript editors (mean score of 4.38 on a five-point Likert scale, with a score of 5 indicating that strong agreement that manuscript editors were necessary). No differences in response were found by affiliation, position, age, experience, or subject area.

Table 5 presents the responses to six possible reasons for needing manuscript editors. Numerous respondents indicated that the most important reasons for requiring manuscript editors were efficient management of the editorial board, accuracy of the references, and acceleration of the editing process. However, for all six reasons, many more respondents agreed (reporting agreement or strong agreement: 88.7%, 90.8%, 84.6%, 86.6%, 86.2%, and 77.9%, respectively) than disagreed (reporting disagreement and strong disagreement: 2.6%, 2.6%, 4.1%, 3.6%, 3.6%, and 3.6%, respectively). Therefore, we found strong recognition of the need for manuscript editors.

Our results suggest that affiliation, position, age, and experience had no effect on the recognition of the need for manuscript editors. However, some differences were found according to subject area; for example, in the health sciences, accuracy of the references was reported to be the most important reason for needing manuscript editors (health sciences mean, 4.54; overall mean, 4.34).

In order to identify which factors affected the overall need for a manuscript editor, stepwise regression analysis was conducted on the following parameters: efficient management of the editorial board, acceleration of the editing process, accuracy of the references, and efficiency of the review process. The results indicated that the most significant factors were efficiency of the review process, accuracy of the references, and efficiency of the editing process. The model explained 84.2% of the variance in the perceived need for manuscript editors.

| Table 4. Perceived need for manuscript editors depending on the characteristics of the respondents<sup>a</sup> |
|-------------------------------------------|--------|--------|-------|
| Category                                | Mean   | SD     | F/P   |
| Affiliation                              |        |        |       |
| Academic society                         | 4.35   | 0.756  | 2.055/0.088 |
| Research institution (including university)| 4.37   | 0.839  |       |
| Library                                  | 4.35   | 0.996  |       |
| Publication industry                     | 4.82   | 0.405  |       |
| Others                                   | 4.30   | 0.483  |       |
| Job title                                |        |        |       |
| Editor-in-chief, associate/assistant editor | 4.46   | 0.725  | 0.629/0.642 |
| Editorial board member, reviewer         | 4.27   | 0.740  |       |
| Manuscript editor                        | 4.61   | 0.549  |       |
| Librarian                                | 4.31   | 1.014  |       |
| Typesetter, copy editor, editorial assistant | 4.06   | 0.878  |       |
| Age (yr)                                 |        |        |       |
| 20s                                      | 4.39   | 0.608  | 0.566/0.638 |
| 30s                                      | 4.43   | 0.700  |       |
| 40s                                      | 4.30   | 0.782  |       |
| ≥ 50s                                    | 4.45   | 0.845  |       |
| Experience (yr)                          |        |        |       |
| < 1                                      | 4.38   | 0.833  | 1.791/0.132 |
| 1-2                                      | 4.43   | 0.575  |       |
| 3-4                                      | 4.34   | 0.725  |       |
| 5-6                                      | 4.52   | 0.580  |       |
| ≥ 7                                      | 4.28   | 0.991  |       |
| Subject area<sup>b</sup>                 |        |        |       |
| Health science                           | 4.52   | 0.659  | 0.618/0.604 |
| Engineering science                      | 4.16   | 0.866  |       |
| Natural science                          | 4.38   | 0.924  |       |
| Agricultural and fisheries science       | 4.26   | 0.752  |       |
| Total                                    | 4.38   | 0.766  |       |

<sup>a</sup>Assessed by a five-point Likert scale, with a score of 5 indicating that manuscript editors were very necessary; <sup>b</sup>Excluded social sciences, arts and physical education, and interdisciplinary studies.
racy of the references, accuracy of the overall paper, handling journal accreditation, and indexing of the journal in prominent databases. The overall need for a manuscript editor was identified as the dependent variable, while the other six variables were the independent variables (Table 6).

When the six independent variables were analyzed, their standardized coefficients were as follows, in descending order: journal indexing in databases, 0.312; acceleration of the editing process, 0.243; overall accuracy of the paper, 0.199; efficient management of the editorial board, 0.184; responding to journal evaluations, 0.089; and accuracy of the references, 0.043. The need for a manuscript editor was the highest among journals pursuing indexing in prominent databases.

**Qualifications of manuscript editors**

Educational qualifications: When asked what level of education is necessary to carry out the role of a manuscript editor, 85 participants (43.6%) stated that a bachelor’s degree or above was required. Seventy-five participants (38.5%) identified a need for a master’s degree or above, and 22 participants (11.3%) stated that a doctoral degree or above was required (Table 7). Cross-tabulation analysis was conducted to identify differences in opinion regarding educational qualifications according to affiliation, job title, age, subject area, and work experience (Table 7). Differences in responses by affiliation, job title, age, and subject area were statistically significant at the P = 0.01 level. However, work experience was not found to have a statistically significant effect on opinions regarding educational qualifications.

Experience qualifications: When asked how much work experience a manuscript editor should have to be hired, 85 respondents (43.6%) responded that one to three years were necessary, 55 (28.2%) responded that three to five years were necessary, 24 respondents (12.3%) indicated that prior experience was irrelevant in their opinion, and 18 respondents (9.2%) indicated that five to seven years of experience were suitable.

Importance of eligibility criteria: The survey asked respon-
dents to rank the three most important criteria for becoming a manuscript editor. In the ranking analysis, the most important response was weighted as 3 points, the second most important response was weighted as 2 points, and the third most important response was weighted as 1 point (Table 8). Subject comprehension level (i.e., knowledge related to the subject area) ranked first with a total score of 330, the ability to document sources ranked second with a score of 321, and journal publication knowledge ranked third with a score of 207. Document editing ranked fourth at 130 points, language skills ranked fifth at 111 points, and the highest level of education and the ability to analyze and interpret statistics ranked sixth and seventh, respectively. Overall, the ability to document sources and journal publication knowledge were found to be valued, and understanding of the journal content was found to be strongly desired.

**Table 7. Opinions regarding the required educational background of manuscript editors**

<table>
<thead>
<tr>
<th>Category</th>
<th>Irrelevant</th>
<th>Associate's degree</th>
<th>Bachelor's degree</th>
<th>Master's degree</th>
<th>Doctoral degree</th>
<th>Total</th>
<th>χ²/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6 (3.1)</td>
<td>7 (3.6)</td>
<td>85 (43.6)</td>
<td>75 (38.5)</td>
<td>22 (11.3)</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>Affiliation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic society</td>
<td>5 (3.8)</td>
<td>6 (4.6)</td>
<td>45 (34.6)</td>
<td>56 (43.1)</td>
<td>18 (13.8)</td>
<td>130</td>
<td>13.531/0.009**</td>
</tr>
<tr>
<td>Non-academic society</td>
<td>1 (1.5)</td>
<td>1 (1.5)</td>
<td>40 (61.5)</td>
<td>19 (29.2)</td>
<td>4 (6.2)</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Job title</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Editor-in-chief, associate/assistant editor</td>
<td>1 (1.2)</td>
<td>2 (2.5)</td>
<td>24 (29.6)</td>
<td>42 (51.9)</td>
<td>12 (14.8)</td>
<td>81</td>
<td>46.489/0.000**</td>
</tr>
<tr>
<td>Editor and reviewer</td>
<td>2 (6.7)</td>
<td>1 (3.3)</td>
<td>7 (23.3)</td>
<td>14 (46.7)</td>
<td>6 (20.0)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Manuscript editor</td>
<td>0</td>
<td>1 (2.8)</td>
<td>22 (61.1)</td>
<td>12 (33.3)</td>
<td>1 (2.8)</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Librarian</td>
<td>0</td>
<td>0</td>
<td>12 (75.0)</td>
<td>4 (25.0)</td>
<td>0</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Typesetter, copy editor, editorial assistant</td>
<td>3 (9.4)</td>
<td>3 (9.4)</td>
<td>20 (62.5)</td>
<td>3 (9.4)</td>
<td>3 (9.4)</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Age (yr)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20s</td>
<td>1 (5.6)</td>
<td>0</td>
<td>11 (61.1)</td>
<td>4 (22.2)</td>
<td>2 (11.1)</td>
<td>18</td>
<td>28.370/0.005**</td>
</tr>
<tr>
<td>30s</td>
<td>1 (2.0)</td>
<td>3 (5.9)</td>
<td>33 (64.7)</td>
<td>10 (19.6)</td>
<td>4 (7.8)</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>40s</td>
<td>3 (4.2)</td>
<td>3 (4.2)</td>
<td>26 (36.6)</td>
<td>29 (40.8)</td>
<td>10 (14.1)</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>≥ 50s</td>
<td>1 (1.9)</td>
<td>1 (1.9)</td>
<td>13 (24.5)</td>
<td>32 (60.4)</td>
<td>6 (11.3)</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>6 (3.1)</td>
<td>7 (3.6)</td>
<td>83 (43.0)</td>
<td>75 (38.9)</td>
<td>22 (11.4)</td>
<td>193</td>
<td>193</td>
</tr>
<tr>
<td>Experience (yr)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>1 (3.1)</td>
<td>0</td>
<td>20 (62.5)</td>
<td>9 (28.1)</td>
<td>2 (6.3)</td>
<td>32</td>
<td>22.388/0.131</td>
</tr>
<tr>
<td>1-2</td>
<td>1 (2.0)</td>
<td>1 (2.0)</td>
<td>20 (39.2)</td>
<td>20 (39.2)</td>
<td>9 (17.6)</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>2 (5.7)</td>
<td>0</td>
<td>18 (51.4)</td>
<td>10 (28.6)</td>
<td>5 (14.3)</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>0</td>
<td>1 (3.7)</td>
<td>10 (37.0)</td>
<td>13 (48.1)</td>
<td>3 (11.1)</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>≥ 7</td>
<td>2 (4.0)</td>
<td>5 (10.0)</td>
<td>17 (34.0)</td>
<td>23 (46.0)</td>
<td>3 (6.0)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>2 (2.2)</td>
<td>4 (4.5)</td>
<td>46 (51.7)</td>
<td>35 (39.3)</td>
<td>2 (2.2)</td>
<td>89</td>
<td>28.827/0.004**</td>
</tr>
<tr>
<td>Subject area</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health science</td>
<td>2 (2.2)</td>
<td>4 (4.5)</td>
<td>46 (51.7)</td>
<td>35 (39.3)</td>
<td>2 (2.2)</td>
<td>89</td>
<td>28.827/0.004**</td>
</tr>
<tr>
<td>Engineering science</td>
<td>3 (6.0)</td>
<td>1 (2.0)</td>
<td>23 (46.0)</td>
<td>19 (38.0)</td>
<td>4 (8.0)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Natural science</td>
<td>0</td>
<td>2 (8.3)</td>
<td>8 (33.3)</td>
<td>8 (33.3)</td>
<td>6 (25.0)</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Agricultural and fisheries science</td>
<td>1 (4.3)</td>
<td>0</td>
<td>6 (26.1)</td>
<td>9 (39.1)</td>
<td>7 (30.4)</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>6 (3.2)</td>
<td>7 (3.6)</td>
<td>83 (44.6)</td>
<td>71 (38.2)</td>
<td>19 (10.2)</td>
<td>186</td>
<td>186</td>
</tr>
</tbody>
</table>

Values are presented as numbers (%). *Excluding two missing values; †Excluding social sciences, arts and physical education, and interdisciplinary studies. **P < 0.01.

**Manuscript editor certification program**

Acquiring manuscript editor certification or hiring a manuscript editor: A five-point Likert scale, ranging from strongly disinterested to highly interested, was used to investigate whether or not there would be demand for obtaining certification or for hiring a certified editor if the KCSE implemented a manuscript editor certification program. Each respondent was allowed to answer only one of these two questions. Regarding their interest in obtaining manuscript editor certification, 45.1% of respondents stated that they would be interested in doing so (responses of highly interested or interested) and 31.3% indicated that they would not be interested (responses of strongly or somewhat disinterested). These results indicate that the participants were inclined to become certified. Regarding their intention to hire certified manuscript editors, a much higher percentage (47.1%) intended to do so...
(responses of interested or highly interested) than did not (strongly or somewhat disinterested), comprising only 13.4\% of the participants. In general, an inclination was found to hire those who have satisfied the eligibility criteria to become a manuscript editor.

Acquisition requirements for manuscript editor certification: In order to identify opinions regarding the eligibility criteria for obtaining manuscript editor certification, a multiple-choice question was asked. Most respondents (53.1\%) supported completion of professional training courses, 27.1\% supported validation of prior work experience, and 16.8\% supported an examination for certification acquisition.

Manuscript editor recertification requirements: When asked about the most suitable recertification criteria if the KCSE were to implement a certification program, 65.1\% of respondents stated that recertification should be granted for taking training courses on a regular basis. Next, 19.5\% indicated that recertification was unnecessary and that once acquired, the certification should be permanent; and 13.3\% supported taking training courses on a regular basis and then taking an exam for recertification. These responses made it clear that training was generally considered important; however, no statistically significant differences were observed among responses according to the characteristics of the respondents or the journals they were affiliated with.

Opinions on implementing the manuscript editor certification program: In order to perform an in-depth analysis of the respondents’ opinions regarding the need for manuscript editors and certification programs, the survey included open-ended questions where the respondents could answer freely. The responses were compiled and sorted into groups by response, allowing for quantification within groups. However, some responses were quite lengthy and thoughtful, revealing important qualitative features that could not have been measured through statistical analysis.

Frequency analysis was conducted on the 85 short-answer responses that remained after 110 invalid responses were excluded. The most prevalent opinion was that the program should make an effort to have credibility (22 responses, 25.9\%), followed by the opinion that the program needs to be engaging and interesting (19 responses, 22.4\%). Eighteen responses (21.2\%) stated that there was no need for certification. Some additional responses included the opinions that hiring manuscript editors is difficult due to a lack of funding (six responses, 7.1\%), that training is more important than certification (five responses, 2.6\%), and that long training hours are stressful (four opinions, 2.1\%). Respondents also stated that manuscript editors could be trained by institutions, not necessarily through certification programs, that standards for application eligibility needed to be lowered, that the role of the manuscript editor needed to be standardized, that it would be best to hire librarians with a master’s degree or above, that those with foreign manuscript editor certification should automatically receive a KCSE certification, that the certification acquisition process should allow telecommuting, and that separate certifications should exist for Korean-language and English-language journals.

**Discussion**

The purpose of this study was to identify methods for establishing a manuscript editor certification program suited to Korea, in order to improve the quality and quantity of manuscript editors in Korea. The results of our survey indicate that the majority of individuals involved in journal editing and publication in Korea recognized the need for manuscript editors and showed support for a manuscript editor certification program. This clearly shows that certified manuscript editors are in demand. Detailed proposals regarding the implementation of such a program, training, and examinations are presented below.
Implementation of a certification program
Recently, international efforts have been made to establish manuscript editor certification programs in order to improve the quality of manuscript editors. AMWA has been running non-examination-based certificate program (AMWA Essential Skills Certificate) for a long time, and since 2015, AMWA has also been issuing certification based on an examination (MWC, Medical Writer Certified). CSE Publication Certificate Program implemented a similar non-examination-based certificate program in 2012. BELS and AMWA MWC have been issuing certification based on examinations, while the CSE Publication Certificate Program and AMWA Essential Skills Certificate have been running non-examination-based certificate programs requiring only a designated period of training.

Domestic certification programs include that of the Korean Medical Library Association, which has been issuing certification based on an examination since 2006, and that of the National Institute of Korean Language that has been issuing Korean Language Teacher certification involving a set period of training as well as an examination for those who have not received a standard college degree.

Our survey found that the most popular methods for certification were professional training courses (53.1% of responses), validation for previous experience (27.1%), and a certification examination (16.8%). These findings indicate that respondents preferred training and experience to an examination as a basis for issuing a manuscript editor certification.

Both Korean and international programs involve a distinction between examination-based certification programs, which are issued based on an examination as well as the candidate's previous background and/or training, and non-examination-based certificate programs, which do not require examinations. If a manuscript editor certification program is implemented in Korea, it should be implemented gradually, first starting as a non-examination-based certificate program, then advancing to an examination-based phase after two to three years. Because the need for manuscript editors is currently increasing, a certification system based on examination would be the most time- and labor-efficient method of quickly cultivating professional manuscript editors.

Eligibility for application and levels of certification
In order to apply for certification, the minimum requirements would be to have a bachelor’s degree or above and two years or more of full-time work experience. However, if an applicant does not have a college degree, full-time work experience of equivalent length should be substitutable for a degree and vice versa. With regard to certification levels, few individuals are expected to initially apply to the manuscript editor certification program, so a single level of certification would seem to be suitable. Thus, only one level should be adopted initially, and as the number of certified manuscript editors increases, a ranked levels of certification based on experience can be considered.

Training curriculum and examinations
When asked to identify the knowledge required of a manuscript editor, the responses from most to least frequent were as follows: comprehension of the subject (i.e., knowledge related to the subject area), the ability to document sources, journal publication knowledge, document editing ability, language skills, the highest level of education, and the ability to analyze and interpret statistics.

BELS started its certification program in 1991. Its examination tests English grammar skills (grammar, punctuation, mechanics, usage and diction, syntax, organization, internal consistency, and numbers), tables and figures, units of measure and scientific terms, publishing requirements, copyright/publication ethics, and other areas [1]. Over 70% of the exam questions is related to English grammar, and they are not simple grammatical error questions; rather, they require the examinee to read and understand biomedical texts and to find the most suitable expressions. In addition, the exam also requires skills in research paper writing, such as creating tables/figures, referencing, and understanding statistics and SI units, as well as knowledge of copyright and publication ethics.

In the case of the AMWA MWC program, the essential training curriculum is subdivided into gathering, evaluating, organizing, interpreting, and presenting [2]. In other words, AMWA requires knowledge related to researching, evaluating, organizing, interpreting and then publishing information in the form of a research paper or poster presentation. In comparison with BELS, which focuses on editing an article, the AMWA MWC demands an overall knowledge of the entire process of writing a research paper.

The AMWA Essential Skills Certificate program requires trainees to take eight different courses, including a mandatory publication ethics course, as well as core subjects such as English grammar, sentence structure, patterns, and punctuation; table and figure editing; statistics for medical writers and editors; and medical terminology. In contrast, the CSE Publication Certificate Program includes short courses for manuscript editors, including the technical aspects of manuscript editing, editing tables and figures, MS Word tips, communicating with authors, and publication ethics and legal issues [3].

According to our survey, a manuscript editor in Korea should not only be able to fulfill their own responsibilities, but should also be able to perform some of the work of a managing editor. In other words, a manuscript editor is expected to manage the editing process smoothly and to prepare journals to be indexed in databases abroad. If KCSE is to implement a
certification program based on examinations, the following should be tested: technical issues of manuscript editing (table and figure editing, searching and creating references, etc.), the units used in scientific papers, basic statistics, basic Korean and English grammar, publication ethics and copyright, understanding of international databases, and recent trends in journal publication.

KCSE is an organization including editors of journals dealing with all specialties within the fields of science and technology, making its subject range broader than that of BELS or AMWA. For this reason, the KCSE certification program may face difficulties in evaluating manuscript editors’ knowledge of different subject areas. After certification, manuscript editors may have to pursue an independent study of the terminology related to a subject area in order to fulfill their duties as experts in that field.

In conclusion, the demand for certified manuscript editors is rising, and a certification program is needed. In particular, an examination-based certification program would appear to be the most efficient and suitable method for administering such a program.

**Conflict of Interest**

No potential conflict of interest relevant to this article was reported.

**Acknowledgments**

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**References**

Increased citation of Korean scholarly journals during the years 2008 to 2013

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Department of Life Science, University of Seoul, Seoul, Korea

Abstract
Korean academic journals are registered in Korea Citation Index, a government-operated journal indexing system. There has been a constant increase in registry, but whether this change accompanies an increase in quality of the journals has not been determined. In this study, by using the index data of Korea Citation Index, status of journal citation in eight different research fields during the years 2008 to 2013 was analyzed. Impact factors of top 50% journals and the number of the journals with high impact factor increased in all the fields, while the number of journals with low impact factor decreased. The change varied in degree among the different fields, and that in social science and medicine was most positive. These changes appear not to be caused by an increase in self citation, although self citation itself is quite high. International citation of the journals also substantially increased in the fields of science, technology, and medicine. These results indicate a genuine increase in the quality of papers and an improvement in citability of the journals published in Korea. This positive change could be attributed to several factors that include the quality of the information in the papers and the environments that encourage the citation of domestic journals.

Keywords
Journal impact factor; Korea; Periodicals as topic; Publications; Registries

Introduction
Academic journals in Korea are rich in abundance. However, regardless of the field of research, their citation has been poor as compared to internationally indexed journals even though the restricted audience due to language barrier is considered. Although academic societies had been putting efforts for the survival of their own journals, an academy-wide effort to improve the quality of domestic journals has been negligible except some societies even though Korean government has continued their concern on this matter and tried to implement systemic device to improve the quality and usage of the domestic journals [1]. One of the systemic devices is the journal registration that is managed by National Research Foundation (NRF). According
to the data posted in Korea Citation Index (KCI), which is run by NRF, there are 5,051 journals published by academic societies, universities, and research institutes in Korea by December 26, 2015 [2]. Among them, 2,232 are selectively accredited and registered in NRF. The registered are qualified to apply for financial support from NRF or the Korea Federation of science and Technology Societies, and many of them indeed get varying levels of support for journal publication. However, more journals are published in Korea without meeting certain level of standard in criteria such as regularity of publication, number of peer reviewers, and breadth of submitted and published papers. Therefore, there has been worry in Korean academy on poor integrity of research and publication in substantial amount of papers. Even for the registered journals, consistently meeting the required standard and further increasing subscription and citation have not been an easy task due to couple of important reasons. First, the huge number of journals is in large part a product of academic self-righteousness and/or pursuit of advantage of limited peers, and therefore, the width of subscription and the number of sincere audience have not been big. And, a wide range citation did not actively happen among the journals of similar subject. Meanwhile, there are increasing number of authors who want to publish their papers to the journals which guarantee wider audience and higher citability, which is provided by international journals or a small number of domestic journals. In addition, grant funding bodies and universities have long been counting only the papers published in internationally indexed journals, and therefore the domestic journals especially in the field of science, technology, and medicine (STM) are not considered highly in paper submission. This causes poor paper submission, which, in turn, leads to the decrease in the number of cite-worthy papers and eventually to poor subscription or audience to the journal. This trend, if it is ongoing, would easily lead to deterioration in the quality of the domestic journals in general, and therefore, should be a matter of a great concern for Korean academic.

This work intends to determine how the domestic journals are doing as a source of research information among domestic and international papers through examining the status of citation in the different research fields. The citation of the domestic journals during the period of 2008 to 2013 has substantially improved in most of the research fields. Especially, social science journals have substantially grown in numbers with high impact factor (IF) without relying much on foreign citation and been established as a pool of active source of references. Furthermore, the number of journals which are internationally indexed has been increasing rapidly. The result of this study indicates that, despite the concern above, the Korean journals are improving in quality, and this is happening in two directions; an increase in the citation among domestic papers and an increase in the number of international citations. The reasons underlying these changes are worthy of further investigation and discussion and will be used to further promote the functionality as well as the integrity of the domestic journals.

**Methods**

The status of Korean academic journals was studied mostly by using raw data posted on the date of Dec. 26, 2015 in the KCI website (https://www.kci.go.kr). A total of 685 journals in the fields of STM (259 in medicine & pharmacology, 232 in engineering, 123 in natural sciences, and 71 in agriculture & maritime), and 1,545 titles in non-STM fields (553 journals in humanities, 787 in social science, 125 in arts & sports, and 80 in interdisciplinary fields) are registered and listed in statistics at the year 2015.

For the change in the status of citation, the statistics in the registry from 2008 to 2013 was used. Citation is noted by IF which is calculated means of the number of citation of the papers divided by the number of total papers published in the journal during previous two years. The number of citations by domestic journal papers plus that by Web of Science (WoS)-indexed journals are incorporated as IF. KCI statistics also provided percentage of self citation in the journals which is the number of citations made on the papers published in a particular journal in previous two years divided by the number of total citations in the journal published in previous two years.

**Results**

**Change of journal impact factors**

During the period of 2008 to 2013, the numbers of KCI-registered journals and the papers published in them both increased gradually. The journals increased by 12% (from 1,936 to 2,171) and the papers increased by 20.5% (from 85,005 to 102,446) [2]. This expansion of paper contents may have accompanied an increase in the quality of the papers or simply an outcome of the increase in the number of journals. Whether a qualitative change has taken place in the registered journals was determined by analyzing IF of the journals. First, the mean IF of top 50% journals was compared between the years 2008 (papers published in 2006 and 2007) and 2013 (papers published in 2011 and 2012). In all of the eight different fields of research, IF increased substantially with a minimum of 0.13 point and 21% increase in humanities, and a maximum of 0.56 point and 224% increase in medicine (Fig. 1). IF of social science was highest in both years (1.11 and 1.38), although the growth itself was not big. IF of medicine was the lowest
Increased scholarly journal citation during the years 2008 to 2013 in Korea Citation Index

(0.25) but had grown rapidly. Among the field of STM, engineering had grown to the lowest (0.72) followed by agriculture & maritime (0.77). After all, these results indicate that KCI-registered journals in general grew not only in quantity but also in quality in terms of the frequency of citation. Of note, the papers in the top 50% journals in social science were cited more than once a year, and the number was still growing. The high level citation may be due to high tendency of publication and audience in the domestic journals in this field. And, this trend may be attributed to at least two factors. First, there are only few international journals in the field of Korean social sciences, and second, the research may be more of local issues that are more apt to dissemination and discussion in domestic journals.

Change in the number of high impact factor journals
To determine whether the increase in IF is a general phenomenon or what is happening in some selective journals, the number of the journals with IF higher than 1.0 was followed through 2008 to 2013. During this period, the number increased generally in all the fields (Fig. 2), suggesting that the increase in the mean IF is due to the increase in IF of the majority of the journals. The biggest growth is in social science again where the number grew from 7.74% to 36.78% meaning that the papers in more than one third of the journals of this field became cited at least once in a year. In arts & sports and multidisciplinary studies, the number also grew rapidly. Meanwhile, the number grew least in engineering and agriculture & maritime, from 1.55% to 3.37% and from 6.5% to 9.19%, respectively. Especially, in engineering, there were quite few journals with IF higher than 1.0, and the number did not grow much either. Meanwhile, in the field of natural science, the numbers at 2013 was lower than that at 2011 and 2012 (both 9.17%). Although whether the decrease has some significance is not determined yet, there is a possibility that the citation in domestic journals of natural science might have stopped growing considering the rapid advancement in the level of Korean research in this field, and thereby a growing tendency of publication in internationally indexed journals rather than the domestic ones. Overall, these indicate that, during 2008 and 2013, KCI-registered journals expanded in paper numbers and also improved in IF. The quality of paper information and journals themselves might have been improved, but it is also possible that the environment might have changed to encourage communication between the domestic researchers. Maybe, systems such as journal open access promoted quality journal publication and paper access and helped the domestic papers being better recognized and assessed.

Change in the number of low impact factor journals
To further confirm the general improvement of journal citation and quality, the change in the number of journals that have IF lower than 0.2 was checked. In KCI statistics, there are number of journals that haven’t been cited once for a year or years (IF 0.0) [2]. The number decreased in all the fields except for agriculture & maritime, which showed an increase from 20.78% to 49.43% (Fig. 3). The biggest drop was found in engineering which showed a change from 73.36% to 32.49%. This is quite striking that engineering showed the least increase in the number of high IF. Together, this overall
suggests again an improvement of journals quality. The field of medicine showed a minimum decrease, 55.2% to 49.43%. This field also showed quite small increase in the number of high IF journals (Fig. 2). However, mean IF of top 50% journals in medicine had recorded the biggest increase (Fig. 1). This suggests that, in medicine, IF growth was limited to certain journals. Overall, this trend of the increase of highly cited journals and the decrease of poor IF journals suggests a significant improvement in the quality of the papers and the academic communication between them.

Change of self citation in impact factor in top 50 journals
Self citation affects IF; and therefore, the international citation index databases such as those of WoS and Scopus monitor the extent of self citation. Self citation indeed appears to substantially contribute to IF of the KCI journals in all the fields as shown in Fig. 1. IFs decreased substantially when self citation was subtracted in both the years 2008 and 2013. Especially, in the fields of social science, medicine, natural science, and engineering, the drop in 2013 was bigger than 50%. IF can be manipulated if a journal is run by a small academic society. Society members may be asked by the publishers to self-cite in their papers to increase IF in short period. Whether the positive change in IF in the KCI-registered journals was caused by an increase in self citation was determined. Percentage of self citation in IF-top 50% journals was compared between the years 2008 and 2013. In most fields, percentage of self citation decreased or did not change (Fig. 4). Especially, in the fields of agriculture & maritime and medicine, the decrease was substantial. These results over all suggest that the increase of IF is not due to an increase of self citation. It is also indicated that there probably was little society-wide cooperative effort to raise IF, and therefore IF increased not through some kind of manipulation.

The status of journals with international citation
Some KCI-journals are indexed in WoS or Scopus, and therefore can be read in international audience. In fact, the number of Korean journals in SCIE has increased gradually (Fig. 5). There was 77 SCIE indexed journals in 2009, but it increased to 119 by the end of 2015. Similar numbers of SCIE journals published in Korea are found in [3]. The number of KCI-registered journals with Journal Citation Ranking IF higher than 1 at either 2008 or 2013 was presented in Fig. 6. There was an increase after five years. And, the portion of Korean journals in total WoS database has also grown similarly. Whether the increase of the IF of the KCI-registered journals is accompanied by an increase in the international citation was determined by counting the journals with WoS citation. In humanities, social science, and arts & sports, there was no journal of
Increased scholarly journal citation during the years 2008 to 2013 in Korea Citation Index

which JCR impact factor was over 1. Therefore, these journals were exclusively cited by domestic papers. However, in natural science, medicine, engineering, and agriculture & maritime, journals had been cited frequently in WoS, and their numbers increased during the 5 year period. Especially, in medicine, the numbers of the journals that have been cited at least once and those cited more than 100 times a year both increased substantially (2.3 and 7.7 fold, respectively). And, in the field of engineering, the number of journals that cited more than 100 times a year increased to 18 in 2013 from 0 in 2008. In other fields, there was roughly a 50% increase overall (Fig. 7). These overall indicate that the Korean STM journals had grown not only in domestic citations but also prospered in international audience as well. Researches in humanities and social science are rather local in general, and the audience of the papers in these fields does not necessarily be international, therefore, they are not expected to have much increase in WoS citations.

Discussion

Overall, IF of Korean journals increased due to the increase of both domestic and international citation. The increase is rather substantial in most fields. The underlying reasons for this change may be multiple. First of all, the quality of the information in domestic journals has likely improved to be worthy of citation. This can be speculated from the fact that the papers of Korean authors published in high IF journals indexed in WoS has been constantly increasing (the number of papers published in SCI journals increase from 34,363 to 51,051 from 2008 to 2013), and the citation of these papers also increased albeit at slower rate (the 5 year cumulative number of citation increased from 3.61 to 4.55) [4]. Secondly, NRF has enforced open access policy in most of the KCI-registered journals [5]. Thereby, increasing number of papers in most Korean journals became freely accessible. This would certainly have helped dissipation and discussion of the information in these journals, and thereby, stimulated citation. Thirdly, grant funding authorities and universities incorporated the number of citation and IF of the journals in evaluation of papers as a product of research outcome. This would raise the concern of the researchers on the IF of domestic journals, and may explain the high IF of the journals in social science where papers are not frequently published in international journals. Forthly, systemic or organized efforts are being made for publishing journals with international standard. For example, Korean Council of Science Editors (http://kcse.org/) and Korean Association of Medical Journal Editors (http://kamje.or.kr/) have been established to help Korean STM journals in promoting their quality to international level. The governmental efforts to implement open assess journal policy in Korean academy would be another good example of systemic support for the improvement of citability of domestic journals.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

References


Analysis of journal attributes of 403 KoreaScience journals from the viewpoint of author

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Abstract
Korea is a country in which journal industry is rapidly increasing recently. KoreaScience is a typical Korean scientific and technical journal database that may be used to analyze Korean journals. A set of journal attributes reflecting the requirements in view of submitting authors was derived and some characteristics of KoreaScience journals such as subject distribution, launch year, publication frequency, publication language, and open access were quantitatively analyzed according to the journal attributes. As a result, it was found that Korean journals are published in almost all subject categories except some subject categories under Physics. The number of journal has been increased rapidly during the period between 1980s and 1990s. Journals published quarterly are 45%. Journals published in English are 31%. Open access journals are 26% while 72% free access.

Keywords
Science journals; Korea; Authors; Digital object identifier, Open access

Introduction
A scientific and technical journal is an important medium conveying new knowledge discovered by researchers in different disciplines. Researchers who live in the era of information flood want to get information, precisely and enough, on journals they are interested in. It is desirable to provide journal information for researchers who intend to submit manuscripts to journals. Therefore, it is required to develop a journal database appropriate to authors.

Number of Korean journal indexed by Web of Science is rapidly increasing, over 7 times during 14 years from 2000 to 2014 [1]. Accordingly, overseas publishers and libraries began to consider the Korean journal industry as an attractive emerging market. Recently, the more foreign scholars require information on Korean journals in order to publish their works. Therefore, it is required to provide meaningful data on Korean journals in view of authors as well as other types of user.
There were some studies on the status of Korean journals. Kim et al. [2] provided a macro bibliometric data on Korea Citation Index (KCI) journals while Seo et al. [3] analyzed a citation pattern of Korean scientific and technical digital object identifier (DOI) journals. Shin [4] studied on the publication characteristics of Korean SCIE journals while Joung [5] on the open access (OA) status of KCI journals. Those studies can provide good information on Korean journals especially for policy makers but not enough for foreign authors.

In this study, a set of journal attributes reflecting the requirements in view of authors was derived and some characteristics of KoreaScience journals such as subject distribution, launch year, publication frequency, publication language, and condition of use were investigated according to the journal attributes.

**Methods**

It is required to derive a set of journal attributes to design a journal information page for authors. Journal Article Tag Suits (JATS) includes a couple of journal attributes such as journal title, ISSN (international standard serial number), and publisher name [6]. However, more attributes of a journal should be required for providing users enough information. PubMed Central team of NLM has been developing a journal front matter document type definition (DTD) which includes more attributes other than journal metadata of JATS [7,8]. However, the journal front matter DTD should be also reinforced in view of authors.

In general, a journal may have a few attributes related to some attributes of a journal such as identifiers, editors, publishers, indexing, copyright, subjects, and other quantitative information. Fig. 1 shows a set of journal attributes which includes almost all possible attributes.

There can be several types of journal user such as author, library, publisher, aggregator and read-only user. Authors want more information about submission, editor, publisher, publication fee including article processing charge, etc. Other types of journal users such as library, publisher and aggregator may need more information than what reader and author need.

In this study, a journal information was designed using the journal attributes of Fig. 1. The data of KoreaScience journals were collected from several Korean journal databases and journal homepages and stored according to the journal attributes. Finally, a quantitative analysis for KoreaScience journals was performed. KoreaScience, a landing page for Korean scientific and technical journals, includes 403 journals as of 2014. It comes close to 467 journals published by the members of the Korean Federation of Science and Technology Societies and is about 65% of the total number of KCI journals registered with the National Research Foundation of Korea. Therefore, KoreaScience journal data can be utilized in estimation of Korean scientific and technical journals [9].

**Results**

**Journal information design**

Journal information can be designed as Fig. 2, which includes all attributes of Fig. 1 so that authors may obtain enough information required in submitting manuscripts. Some attributes such as scope and editors distribution can be visualized in order to increase information communication efficiency. Some attributes needed more information such as creative commons license (CCL), publisher, open researcher and contributor ID (ORCID) and so on can be linked to each related page for more information.

**Quantitative analysis**

**Subject distribution**

The classification scheme used in this study is three-tier classification system in which the lowest tier items are identical to those of Web of Science subject categories. Fig. 3 shows the subject distribution of 403 KoreaScience journals as of June 2014. Among the first tier subject categories, Biological Science & Engineering (110) and Environmental & Construc-
tion (103) are the most popular subject categories in KoreaScience journals. Fig. 4 shows the subject distributions of KoreaScience journals with absence information ('x' mark) at each subject category of Web of Science. The most lacking subject categories are Bioscience, Medicine & Health, and Physics while the categories without any lack are Agriculture, Construction & Transportation, and Mechanical Engineering.

Fig. 2. Draft design of journal information using the journal attributes for authors.

Fig. 3. Subject distribution of KoreaScience journals.
Fig. 4. Subject distribution of KoreaScience journals with marks of lacking subject category at the third tier.

Fig. 5. Top 20 SCI(E) and Scopus journals in KoreaScience as of 2013.
Indexed-in
KoreaScience includes 31 SCIE journals and 58 Scopus journals, which are about 30% of Korean journals indexed in SCIE or Scopus (Fig. 5).

Launch year
Fig. 6 shows the distribution of launch year of KoreaScience journals. The earliest journal among KoreaScience journals was launched in 1940s. The number of journals has been increased slowly until in the middle of 1980s, rapidly during the period between 1985 and 1998, and decreased during 2000s. After 2010 the number is increasing once again.

Publication frequency
Among KoreaScience journals, 182 journals (45%) are being published quarterly. The number of bi-monthly journals is 130 (32%) while 49 journals (12%) are published monthly.

Publication language
Among KoreaScience journals, 269 journals (67%) are being published in Korean while 124 journals (31%) in English. Ten journals are published in Korean or English.

Open access
Fig. 7 shows the share of open access in KoreaScience. Fig. 8 shows the comparison of open access (OA) and non-OA journals in KoreaScience by subject category.

http://www.escienceediting.org
toll access journals are also included in KoreaScience. In case of OA journals, only one journal adopts Creative Commons Attribution License (CC BY) of CCL licenses while 61 journals Creative Commons Attribution, Non-commercial (CC BY-NC). Among OA journals, 41 journals don’t declare any CCL license yet.

The subject category including the highest number of OA journals is Biological Science & Engineering and the next are Environmental Science & Engineering and Chemistry & Chemical Engineering (Fig. 8). The subject category including the lowest number of OA journals is Multidisciplinary & Social Science.

Table 1 shows the distribution of the amount of author fee such as submission fee and publication fee of KoreaScience journals. The amount of author fee of almost all KoreanScience journal is the range of 0 to $500. Thirty one journals (13.5%) do not ask authors any author fee.

### Discussion

#### Journal information

The journal information designed in this study can be used to provide authors more information than before. They can get information needed in submitting their manuscript to a Korean journal through the information, such as editor, publisher, author fee, and guideline for preparing a manuscript by clicking the submission URL link.

The journal attributes may provide useful information on Korean scientific and technical journals not only to authors but also to other types of user such as libraries, publishers, and aggregators which may seek much more information about journals they are interested in.

#### Quantitative analysis

First of all, it was found that Korean journals are being published in many subject categories except several categories including Bioscience, Medicine & Health, and Physics. Journals categorized in Bioscience and Medicine & Health are covered by other medical database such as Synapse (http://synapse.koreamed.org) operated by Korean Association of Medical Journal Editors. Therefore, it can be concluded that the most lacking subject category in Korea is Physics.

Secondly, even though the number of SCIE and Scopus journals in KoreaScience is about 30% of all SCIE and Scopus from Korea, it is considered as a meaningful number because KoreaScience includes only journals published by academic societies different from majority of Korean SCIE and Scopus journals published by big professional journal publishers.

Thirdly, the launch year trend of KoreaScience journals was investigated. It was found that many journals launched during the period between 1980s and 1990s. The number decreased during 2000s generally and is increasing again from 2010. It was also found, in KoreaScience journals, that quarterly published journal is dominant. Thirty three percent journals may accept manuscripts written in English.

Finally, 103 journals, 26% of KoreaScience journals, adopt OA policy. Among them, 62 journals (60%) are declaring CCL. CC BY-NC is dominant CCL in the OA journals. Thirty one journals don’t charge any author fee while the remains charge relatively low author fee.

### Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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4. Shin EJ. Activation of publishing domestic SCIE journals
CrossCheck usage in a journal publication

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Abstract

Since the inclusion of the Journal of Electrical Engineering and Technology (JEET) published by the Korean Institute of Electrical Engineers in the Science Citation Index Expanded on the Web of Science by Thomson Reuters, the journal has recorded a considerable increase in the number of submitted articles (i.e., from 400 articles in 2009 to 2,000 articles in 2015). This work explores the use of CrossCheck as a tool to prevent and provide protection against plagiarism in the JEET. Since 2011, the JEET has been using CrossCheck and has adopted implicit and latent review guidelines internally. In this study, we investigate the function of CrossCheck by considering two types of similarity levels for published and rejected articles, namely, integrated similarity index (ISI) and maximum similarity index (MSI). The Minitab tool is used for statistical analysis. The JEET employs a blind CrossCheck system, in which ISI and MSI information is supplied only to the associate editor and not to the reviewers. Positive results are obtained even under the blind CrossCheck system. An exception is the group of “red” articles with ISI and MSI scores of above 50%. The ISI and MSI information of such red articles is supplied to the editors and reviewers of the JEET. The results of this work could serve as a reference for establishing a guideline or criterion for rejecting suspicious plagiarized articles during the review process.

Keywords

Article; CrossCheck; Plagiarism; Similarity index; Plagiarism guideline

Introduction

In recent years, a similarity checking technology based on a large data linked web system has been created to find and cross-check plagiarism in articles (also called “papers” for convenience in this study) that are published or reviewed. CrossCheck is an available, useful, and valuable tool not only for checking plagiarism but also for preventing and protecting from attempts of plagiarism in advance. This study presents an actual experience of the CrossCheck tool for the Plagiarism Detection Service System.

CrossCheck was created on October 2008 by iParadigm [1,2]. The service has been provided to CrossRef members and the tool is called iThenticate since 2008. In recent, the CrossCheck
service system is developed into DB plus iThenticate tools. The main output of the system is the similarity index (SI), which consists of integrated SI (ISI) and maximum SI (MSI). The SI does not necessarily mean plagiarism index exactly. CrossCheck only helps to protect the original authors’ copyrights and to improve authors’ behavior by identifying instances of academic plagiarism. The CrossCheck tool can provide a reliable journal by comparing texts. However, this tool is unavailable for crosschecking figures, tables, and equations and is available only for checking text. Therefore, this tool is not perfect; nonetheless, it is very informative in terms of preventing and protecting from authors committing plagiarism.

This study presents the experiences of preventing and protecting against plagiarism using CrossCheck on articles submitted to Journal of Electrical Engineering and Technology (JEET) over the past three years. The first issue of JEET is published on March 1, 2006 by Korean Institute of Electrical Engineers (KIEE). Since the JEET has been registered as SCIE (Science Citation Index Expanded) on the Web of Science by Thomson Reuters in 2009, the number of submitted articles has increased considerably from 400 articles in 2009 to 1,600 articles in 2014 and 2,000 articles in 2015. In this study, two types of similarity levels, i.e., ISI and MSI, are used for published and rejected articles using CrossCheck.

Based on the CrossCheck statistical analysis on the relationship of similarity indices of articles submitted to JEET since late 2011, the JEET editorial board has made a basic and internal guideline and three categories (normal, warning, and red) depending on article similarity scores. The DB of similarity indices in two viewpoints of JEET has been upgraded annually since 2012. One is the SIs of the relationship of published and rejected papers, and another is the SIs of the relationship of domestic and overseas articles. The similarity analysis results using CrossCheck on JEET are used as a prior step before reviewers search for plagiarism suspicions. Articles were checked using CrossCheck in the submission site desk. The JEET Review Implicit Guideline has been used internally since late 2011. This is an internal guideline in latent and will be upgraded annually in the JEET.

**Methods**

As soon as a paper is submitted to JEET, JEET checks the paper’s similarity by using Crosscheck before reviewing the paper. Using CrossCheck, the JEET searches two indices (scores) of ISI and MSI. The ISI presents the total value (score) of the paper relative to the registered papers in the CrossCheck database, whereas the MSI describes the index (score) of the

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**Fig. 1.** Two examples: integrated similarity index and maximum similarity index on CrossCheck for two papers.
maximum similarity scored paper in the CrossCheck database. Fig. 1 shows two examples: ISI and MSI on CrossCheck for two papers. “Default” for setting option of CrossCheck is selected in this study.

Therefore, the ISI and MSI in CrossCheck can be formulated as equations (1) and (2).

\[ \text{ISI} = \sum_{k \in \Omega} \text{SI}_k \]  
\[ \text{MSI} = \text{maximum} \{ \text{SI}_k \} \]  
where \( \Omega_i \): set of articles checked by CrossCheck for \#i article

\( \text{SI}_k \): similarity index of \#k article

Minitab (Minitab Inc., State College, PA, USA) was used for statistical analysis.

### Results

**Probabilistic density function of ISI and MSI of papers published and rejected on JEET**

Fig. 2 shows the probabilistic density functions (pdfs) of ISI and MSI in published and rejected papers on JEET in 2014. Where, the y axis is the frequency (number of papers). The pdf approaches Weibull distribution function rather than normal.

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<tr>
<td>Total papers</td>
<td>147 (2)</td>
<td>285 (39)</td>
<td>147 (0)</td>
<td>285 (3)</td>
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<tr>
<td>Average of ISI or MSI</td>
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<td>30.667</td>
<td>7.011</td>
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<tr>
<td>SD of ISI or MSI</td>
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<td>14.571</td>
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<tr>
<td>Shape parameter (( \beta ))</td>
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<td>2.224</td>
<td>1.184</td>
<td>1.157</td>
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<tr>
<td>Scale parameter (( \lambda ))</td>
<td>25.425</td>
<td>34.626</td>
<td>7.428</td>
<td>10.503</td>
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| ISI, integrated similarity index; MSI, maximum similarity index; SD, standard deviation. Value in parenthesis denote the number of papers with ISI and MSI scores of over 50% (A) ISI of published papers, (B) ISI of rejected papers, (C) MSI of published papers, and (D) MSI of rejected papers. |

**Table 1. Summary of ISI and MSI probabilistic density function parameters of Journal of Electrical Engineering and Technology in 2014**

![Fig. 2. Integrated similarity index (ISI) probabilistic density function (pdf) and maximum similarity index (MSI) pdf of Journal of Electrical Engineering and Technology in 2014. (A) ISI of published papers, (B) ISI of rejected papers, (C) MSI of published papers, and (D) MSI of rejected papers. WDF, Weibull distribution function; NDF, normal distribution function.](image-url)
mal distribution function. The pdf parameters of CrossCheck indices (ISI and MSI) of JEET in 2014 are summarized in Table 1. In the Table, the numbers in parentheses in the row which is labeled as “total papers” denote the number of papers with ISI and MSI scores of over 50%. To avoid reviewer bias, the JEET employs a CrossChesk blind system, in which the information of ISI and MSI is not supplied to reviewers but supplied only to the associate editor. However, a similarity score of over 50% is announced to the associate editor, and the article is given to the reviewer with a plagiarism warning message. As shown in Table 1, the scale and shape parameters of published papers are lower than rejected papers. Thus, positive results have been obtained even if the ISI and MSI information was not given to reviewers (CrossCheck blind system). The same aspect is also obtained for 2012 and 2013.

Relationship between ISI and MSI in JEET

Relationship and comparison between ISI and MSI of domestic and overseas articles in viewpoint of published and rejected on JEET in 2014

First, the relationship between ISI and MSI of domestic and overseas articles published on JEET in 2014 is shown in Fig. 3A. The MSI of all articles is in a lower location than ISI because ISI is calculated as total similarity scores. MSI presents the similarity score of the highest similarity ranked paper in the CrossCheck list. Most articles published on JEET are located within 40% ISI similarity score and 10% MSI similarity score. Second, the relationship between ISI and MSI of domestic and overseas articles rejected on JEET in 2014 are shown in Fig. 3B. Most articles rejected on JEET are dispersed in 60% ISI similarity score and 20% MSI similarity score. The ISI and MSI scores of articles rejected by the JEET are dispersed widely and are relatively higher than the indices of published articles in Fig. 2. Additionally, the ISI and MSI of overseas rejected articles are dispersed more widely and are higher than domestic rejected articles. The similar aspect is also obtained for 2012 and 2013.

Grouping according to plagiarism level from the relationship and comparison between ISI and MSI of articles published and rejected on JEET

To investigate plagiarism levels and make a looking for a plagiarism basic guide line from the relationship and comparison the ISI and MSI of articles published and rejected on JEET, the ISI and MSI of the published and rejected articles on JEET in 2013 are presented together in Fig. 4. A group articles have lower MSI and higher ISI compared with other groups. The sentences of the A-group articles are cited many times in other articles but have no plagiarism suspicions because of low MSI. On the other hand, B-group articles not only have higher ISI but also have higher MSI. In addition, the MSI of this group is almost the same as its ISI. Therefore, the articles are prone to plagiarism suspicions. The B group articles thus come with a plagiarism suspicious domain. The JEET editorial board has decided to set the similarity score of the B-group to 50%. The B group is called “red group” (domain). Finally, C

Fig. 3. Relationship between integrated similarity index (ISI) and maximum similarity index (MSI) of domestic and overseas papers on Journal of Electrical Engineering and Technology (JEET) in 2014. (A) Papers published on JEET and (B) papers rejected on JEET.
group articles are prone to use a few similar sentences, but the similarity level of plagiarism is low. Therefore, the difficulty and ambiguity of plagiarism level guideline will be used for C group. The JEET editorial board has decided to set the similarity score of the C group to 30%. The C group is called “warning group” (domain). These scores are included in the latent guideline of the JEET. The aspects are also obtained similarly for 2012 and 2014.

Fig. 5 shows three domains (normal, warning, and red) defined internally in latent from the relationship between ISI and MSI on Journal of Electrical Engineering and Technology. Newly in 2012. In Fig. 5, highly cited papers (i.e., A domain) means excellent articles as the articles have low MSI and high ISI. The definition of the scores should be upgraded annually as it is not absolute and depends on submission number, acceptance rate, and quality level of articles in JEET. This definition is only an internal guideline in JEET.

**Relationship comparison between review period (days) and MSI of papers published and rejected on JEET**

Fig. 6 shows the relationship comparison between review period and MSI on all papers published and rejected in 2013 and 2014. Although the review period (days) is dispersed very widely (20 to 400 days), as shown in the figures, the review period has slowly decreased annually. Therefore, positive results have been obtained even if the ISI and MSI information was not given to reviewers (CrossCheck blind system). A similar aspect is also obtained for ISI. Additionally, the review days for published papers are higher than those of rejected papers.

**Summary of statistical parameters of ISI and MSI of JEET in 2012, 2013, and 2014**

Table 2 shows the average and standard deviation of ISI and MSI of JEET in 2012, 2013, and 2014. From Table 2, the ISI and MSI indices of JEET in view point of total, domestic, and overseas articles have slowly decreased annually. Therefore, positive results have been obtained even if the ISI and MSI information was not given to reviewers (CrossCheck blind system). The quality of the JEET also increased annually because the CrossCheck similarity levels (ISI and MSI) of papers sub-
Fig. 6. Relationship comparison between review period and maximum similarity index (MSI) on all papers published and rejected on Journal of Electrical Engineering and Technology in (A) 2013 and (B) 2014.

Table 2. Summary of average and standard deviation of ISI and MSI of Journal of Electrical Engineering and Technology in 2012, 2013, and 2014

<table>
<thead>
<tr>
<th></th>
<th>ISI (%)</th>
<th>MSI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Published</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td>Total</td>
<td>26.85 (14.21)</td>
<td>26.09 (13.96)</td>
</tr>
<tr>
<td>Domestic</td>
<td>23.2 (10.09)</td>
<td>23.16 (13.21)</td>
</tr>
<tr>
<td>Overseas</td>
<td>31.94 (17.41)</td>
<td>30.14 (14.03)</td>
</tr>
<tr>
<td>Total</td>
<td>36.85 (15.26)</td>
<td>33.02 (16.76)</td>
</tr>
<tr>
<td>Domestic</td>
<td>32.63 (17.13)</td>
<td>20.86 (12.62)</td>
</tr>
<tr>
<td>Overseas</td>
<td>37.92 (14.65)</td>
<td>34.75 (15.23)</td>
</tr>
</tbody>
</table>

ISI, integrated similarity index; MSI, maximum similarity index.
mitted to JEET decreased in the last years.

Discussion

This study presents the experiences and effects of using CrossCheck in the prevention and protection of plagiarism in articles submitted to JEET, in the past three years. This study proposes three domains (normal, warning, and red) defined internally from the relationship between ISI and MSI on JEET. This concept in JEET has been developed newly in 2012. Results from similarity indices supplied by CrossCheck on JEET are summarized as follows.

The ISIs of published papers on JEET in 2012, 2013, and 2014 are 26.85%, 26.09%, and 22.53%, respectively, whereas the ISIs of rejected papers on JEET in 2012, 2013, and 2014 are 36.85%, 33.02%, and 30.667%, respectively. The ISI of not only published but also rejected papers in JEET has decreased slowly in the last three years.

The ISIs of rejected papers on JEET in 2012, 2013, and 2014 are higher than those of published papers. The ISIs of domestic papers are lower relatively than those of overseas papers for both published and rejected papers in the last three years. The MSI has a generally positive monotonic relationship with the ISI. A higher SI (ISI or MSI) not only means higher rejection probability but also shorter review time (days).

Positive results have been obtained even if the ISI and MSI scores were not given to reviewers, except for the “red” papers with over 50% of ISI and MSI. The ISI and MSI scores have been used by editors and reviewers since late 2011 in JEET.

CrossCheck is a useful tool even if the tool is limited only to checking sentences and determining language similarities. In addition, this tool is still unable to check similarity (plagiarism) of equations and figures and similarity between different languages. However, it is expected that the CrossCheck also helps to protect the original authors’ copyrights and to improve authors’ behavior by identifying instances of academic plagiarism.

JEET plagiarism similarity guidelines

The Editorial Board of JEET has established a guideline policy for peer review process. This latent guideline has been in place since 2011.

Guideline 1. JEET First Previous Review Plagiarism Detection Service System guideline: As soon as papers are submitted, they are checked by CrossCheck on the office reception desk. A paper with over 50% ISI and MSI should be marked as “red” paper. While the “red” paper may still be permitted to have a review process, the ISI and MSI scores of the “red” paper are informed and announced to editor in chief, editors, associate editor, and reviewers.

Guideline 2. JEET defers the definition of score for handling the warning group until ISI and MSI data are determined and accumulated sufficiently. Nonetheless, the warning group’s relative data should be stored and informed to the editor in chief and corresponding editor only if necessary.

Given that the SI does not necessarily mean plagiarism index and CrossCheck does not check figures, tables, and equations but check only texts as previously commented, the policy would be only an internal guideline in JEET and should be upgraded annually by the JEET editorial board. This study will provide useful and relevant information when making a reasonable guideline or criterion of returning papers that are suspicious of plagiarism before having a normal peer review process.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Acknowledgments

The authors would like to acknowledge the editors and reviewers of JEET publication and members of InfoLumi.

References

Trends in document delivery system in the Medical Library Information System of the Korean Medical Library Association

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Abstract
This case study aimed at disclosing the changing trends of amount of document delivery services (DDSs) in the Medical Library Information System (MEDLIS) of the Korean Medical Library Association (KMLA). The data from 2001 to 2014 in the MEDLIS were searched and analyzed according to year. To know outside environment of DDS, The trend in use of DDS of the Research Information Sharing Service and the journals listed in the Directory of Open Access Journal were presented. The DDS request in MEDLIS decreased year by year from 214,304 in 2001 to 50,352 in 2014 (23.4%). There was an increased number of requests a monthly average from 4,799 in 2009 to 8,157 in 2014 (170.0%) through Research Information Sharing Service. As of 2015, 10,702 journals were listed in the Directory of Open Access Journal. I can find that the continuous decreased request of DDS in MEDLIS which might be originated from the increased number of DDS service through RISS and the increased number of open access journals.

Keywords
Access to information; Information dissemination; Information services; Korea; Medical libraries

Introduction
Researchers look for academic journals at the libraries of the institutions they belong to. Libraries select journals that suit the research topics of the researchers of their institutions under their unique management policies. They try to expand the number of journals they subscribe to, but cannot subscribe to all relevant journals due to budget limitations. Unsubscribed journals are provided by request through a document delivery service (DDS). A DDS refers to a service offering a copy of the full text of print or electronic documents possessed by other institutions to users via mail, fax, or an electronic transmission system. A DDS is a type of resource sharing service and one of the core functions of today's libraries. In Korea, the service is
Trends in Document Delivery Services in Medical Libraries

Among major DDS providers in Korea, MEDLIS was the first to provide the service by establishing an information sharing agreement in November 1968, and issued the first edition of the National Catalog of Medical Journals. Today, MEDLIS is actively used among members of the KMLA, an association of medical libraries that belong to universities and hospitals, to share academic journals. However, it is obvious that the total number of requests for copies of materials has recently been declining. As seen in Fig. 1, the number was 214,304 in 2001, but sharply decreased to 50,352 in 2014. The figure of 2014 is only 23.4% of that of 2001. It is worth considering potential reasons for this trend: whether the number of journals each library subscribes to is increasing; whether users are increasingly turning to other systems rather than MEDLIS; whether there is an increased number of open access journals, which would be available without subscribing to electronic resources or using a DDS.

The Trend in Use of the Document Delivery Service of the Research Information Sharing Service

According to research by Williams and Woolwine [1], expanded subscriptions to databases or electronic resources by academic libraries actually lead to an increased use of DDSs. The 2014 white paper on ICT in Education Korea released by Korea Education and Research Information Service reported that almost all Korean university libraries, but not public libraries, are joining the RISS service, and the number of requests increased to a monthly average of 8,157 in 2014 from 4,799 in 2009 [2]. The RISS service attracted more non-academic users after expanding its lending service and providing free copies of foreign materials through its Foreign Research Information Center. One of the factors behind the success was delivering requested materials to users faster by adding a digital transmission service in addition to the traditional mailing services. However, this does not completely explain why only the RISS saw an increase and not MEDLIS, as MEDLIS also provides a similar digital delivery service.

The Trend in Library Subscriptions to Electronic Resources

The overall number of subscriptions to periodical publications and electronic resources seems to be on the rise in Korea. The statistics from the National Library Statistics Agency during the period of 2008 to 2013 shows that 316,117 domestic journals and 1,465,825 journals published outside Korea were registered in 2008, but the numbers had risen to 707,384 and 3,137,621 respectively by 2013 (Fig. 2). On the other hand, annual budgets for libraries for purchasing new materials are not catching up with the overall inflation or markups by publishers. Libraries still find it difficult to select and set up plans for electronic journal subscriptions every year. Therefore, the decreased number of requests for DDS or MEDLIS services might not be a result of an increased number of subscriptions to electronic journals by each library.

The Trend in Document Delivery Services in Medical Libraries

mostly provided by either the Research Information Sharing Service (RISS) of the Korea Education and Research Information Service, the National Digital Science Library of the Korea Institute of Science and Technology, or the Medical Library Information System (MEDLIS) of the Korean Medical Library Association (KMLA). This case study aimed at disclosing the current status of changing pattern of DDS in the KMLA. The background of the changing pattern was also discussed.
Increase in the Number of Open Access Journals

Meanwhile, open access journals are becoming increasingly available. Open access journals serve as an alternative to conventional journals currently fraught with many issues including: major journals dominating official academic communications; soaring subscription costs; complex review procedures; the monopoly of commercial publishers on academic journals; abuse of copyright, etc. Open access journals aim at providing research results to anyone for free online. The Directory of Open Access Journals report shows a sharp climb in the number of open access journals during 2002 to 2015, as seen in Fig. 3. In 2002, 32 of them first appeared in the directory, and as of 2015, 10,702 are in operation. The biomedical field has the highest number of open access journals worldwide [3]. According to Universities UK, 20% of articles published by UK researchers over a recent 2-year period are accessible for free. The ratio rises to 24% and 32%, 6 months and 12 months, respectively, after publication [4]. Many journals still stick to the traditional channels of academic information sharing, but movements to fundamentally address the existing problems with the channels, represented by promoting open access resources, are becoming more popular in Korea and worldwide.

Conclusion

The request of DDS through MEDLIS has decreased year by year from 2004 to 2015 up to less than one fourths. It may be a originated from the increase of online journals accessible through researchers’ institute and increase of open access journal. It is reported that many major full text providers outside Korea, including the British Library Document Supply Centre of the British Library, are facing a decline in users [5]. There is a need to develop a more prompt and efficient electronic full text copy service to meet the increased preference for electronic resources while not violating copyright law. At the same time, efforts to promote open access journal publication should involve more researchers by teaching them its social benefits.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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References

Peer review golden rules and good practice checklist

Irene Hames
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Abstract

Keywords
Authors; Editors; Journals; Peer review; Peer reviewers

Introduction
In my book, Peer Review and Manuscript Management in Scientific Journals: guidelines for good practice, I included an appendix that listed the basic general principles of peer review and summarized the information presented in the book in a series of key points [1]. That appendix is republished below. It is nearly nine years since the book was published, but the information is still relevant today, even though scholarly publishing is going through a period of considerable change and innovation, and publication venues now extend beyond conventional 'journals'.

Readers will find additional relevant information in the following guidelines from COPE (the Committee on Publication Ethics) that have appeared since 2007 [2-5]:
- Ethical guidelines for peer reviewers, 2013 http://publicationethics.org/files/Peer%20review%20guidelines_0.pdf
- Sharing of information among editors-in-chief regarding possible misconduct, 2015 http://publicationethics.org/files/Sharing%20of%20Information_Among_EiCs_guidelines_web_version_0.pdf

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Appendix 1. The Golden Rules and the Peer-Review Good Practice Checklist

This appendix is made up of two parts: (i) the Golden Rules and (ii) the Peer-Review Good Practice Checklist, which contains the Key Points. The Golden Rules are the most basic and important general principles of peer review, and have been highlighted in the main text: the Key Points have not, but represent a summary of important information that has appeared throughout the book and they form the basis for achieving good practice in peer review. They are grouped under various headings and, in each grouping, guidance is given on what should and what should not be done. The order of the sections follows, roughly, the sequence of considerations and events in peer review.

Not everyone will agree with everything that is in these two sections; and not everyone will agree with the way the information has been divided. Those who are more experienced may think that some of the information in the Key Points is a bit trivial. It may be, but it will very likely be unfamiliar to newcomers to journal editorial work and peer review. As these individuals form a significant proportion of the intended readership, this information is there for their benefit. It may also serve as a refresher for ‘old hands’; and perhaps act as a catalyst for evaluation and change.

The Golden Rules are not listed in any particular order of importance: they are all important. For that reason, it proved difficult to try to list them that way. So the final order was dictated by the order of appearance in the book.

The golden rules
1. Editors are responsible for ensuring the quality of their journals and that what is reported is ethical, accurate and relevant to their readership.
2. Peer review must involve assessment by external reviewers.
3. The submission of a manuscript and all the details associated with it must be kept confidential by the editorial office and all the people involved in the peer-review process.
4. The identity of the reviewers must be kept confidential unless open peer review is used.
5. Reviewers advise and make recommendations; editors make the decisions.
6. Reviewers must assess manuscripts objectively and review the work, not the authors.
7. Editors-in-chief must have full editorial independence.
8. Editorial decisions must be based on the merits of the work submitted and its suitability for the journal; they should not be dictated by commercial reasons, be influenced by the origins of a manuscript, or be determined by the policies of outside agencies.
9. Everyone involved in the peer-review process must always act according to the highest ethical standards.
10. Information received during the submission and peer-review process must not be used by anyone involved for their own or others’ advantage or to disadvantage or discredit others.
11. All the parties in the peer-review process must declare any potential conflicts of interest and excuse themselves from involvement with any manuscript they feel they would not be able to handle or review objectively or fairly.
12. No conflict of interest or prejudice must be allowed to influence the submission of a manuscript, its review, or the decision on whether it should be published.
13. Suspected or alleged misconduct must not be ignored.
14. Editors and journals have a duty to keep the scholarly record sound and free from fraudulent or incorrect data.

The peer-review good practice checklist

The key points

Journal obligations
Journals should:
- make clear their scope, editorial policies, and manuscript presentation and submission requirements
- acknowledge manuscript receipt, record the date of submission, and issue a reference number
- ensure the timely handling and publication of manuscripts submitted to them
- check newly submitted manuscripts to make sure that their content falls within the scope of the journal and that they follow its editorial policy guidelines
- obtain reasons for any requests from authors for changes in authorship or for manuscript withdrawal after submission and ensure these are legitimate and justified
- in optional author-side-pays Open Access models (where authors can pay to make their articles available free online from day of publication), ensure that the peer-review process and editorial decisions are not influenced by whether or not an author is intending to take up that option.

Journals should not:
- accept a first submission without external review
- compromise reviewer anonymity if closed peer review is used
- get involved in authorship disputes
- get involved in departmental or institutional politics
- allow authors to play off one editor against another in an attempt to force a favourable decision
- make moral or character judgements about authors; actions and decisions on manuscripts should be based solely on the work reported and ethical issues related to it and its submission.

Responsibilities of editors
Editors should:
- ensure their behaviour is transparent and beyond reproach
- develop a written editorial policy and amend and update this regularly to take account of changes in their field and in publishing in general
- ensure manuscripts comply with recognized ethical guidelines and that all procedures at their journals are ethical and in accordance with recommended best practice
- keep manuscript submissions confidential
- ensure that everyone involved in the handling and review of manuscripts understands that they are dealing with privileged information that must not be used for private benefit or gain
- disqualify themselves from handling manuscripts for which a conflict of any kind exists
- ensure the efficient, fair and thorough review of all manuscripts submitted to them and have the appropriate systems in place to achieve this
- request more data or clarification from authors if they come across anything that is unclear or suspicious
- ensure decision making is fair and consistent in their journals
- ensure compliance by authors with their journals’ policies, both on submission and after publication; pursue non-compliance and implement appropriate sanctions if it persists
- ensure that peer-reviewed and non-peer-reviewed material is clearly distinguished in their journals
- ensure that any sponsorship of articles is made clear
- keep abreast of developments concerning the publication of research with potentially harmful applications (dual-use research) and introduce appropriate measures and procedures into their journals
- identify manuscripts that report potentially harmful research and ensure that their review is especially rigorous and takes into account the special circumstances
- put in place procedures for dealing with suspected misconduct
- investigate all cases of suspected misconduct at journal level and decide whether there is any substance to the suspicion or claim of misconduct, and then either deal with it themselves or alert the appropriate agency for further investigation and action.

Editors should not:
- abuse the trust of the parties involved in the peer-review process
- personally handle manuscripts from their own institutions or their own research groups
- deliberately choose reviewers who will provide either a favourable or an unfavourable review, or who will hold up the review of a manuscript because they are known to be slow
- use privileged information for personal gain or to disadvantage or discredit others
- attempt to increase the Impact Factors of their journals by unethical means during the peer-review process, for example by inappropriately requesting additional citations to their own journals or deleting citations to competing journals.

Author submission
Authors should:
- choose the most appropriate journal to which to submit their work
- decide which individual will act as corresponding author and give that person responsibility for co-ordinating all issues related to submission and review, including ensuring that all authorship disagreements are resolved appropriately
- submit original work that has been honestly carried out according to rigorous experimental standards
- always give credit to the work and ideas of others that led to their work or influenced it in some way
- declare all sources of research funding and support
- submit manuscripts that are within the scope of journals, ensure that they abide by all those journals' policies and follow all their presentation and submission requirements
- explain in a cover letter if there are any special circumstances, if their manuscript deviates in any way from a journal's requirements or if anything is missing
- ensure that their manuscripts do not contain plagiarized material or anything that is libellous, defamatory, indecent, obscene or otherwise unlawful, and that nothing infringes the rights of others
- ensure they have permission from others to cite personal communications from them and that the extent, content and context have been approved by those individuals
- provide details of related manuscripts they have submitted or have in press elsewhere
- check the references they cite carefully to ensure the details are correct
- notify a journal if work done subsequent to the submission of their manuscript casts doubt on the work submitted or alters its interpretation
- if they decide to submit to another journal after an unsuccessful submission, reformat the manuscript to meet the requirements of the new journal and redraft the cover letter before re-submitting the manuscript.

Authors should not:
- be influenced by the sponsors of their research regarding the analysis and interpretation of their data or in their decision on what to, or not to, publish and when to publish
- divide up their papers inappropriately into smaller ones (minimum publishable units or MPUs) in an attempt to increase their list of publications
- be involved in 'ghost' or 'gift' authorship
- submit the same or a very similar manuscript to more than
one journal at the same time
- present their work, or use language, in a way that detracts from the work or ideas of others
- use information obtained privately without direct permission from the individuals from whom it has been obtained
- make exaggerated claims about the novelty or significance of their findings
- misrepresent or inappropriately enhance their results by any means
- make significant changes to their manuscript after acceptance without the approval of the editor or journal editorial office
- submit a manuscript that has been rejected by one journal to another journal without the reviewers’ comments being considered and appropriate revisions being made and presentation errors corrected.

Managing the review process
Journals should:
- always treat reviewers with courtesy and respect
- send manuscripts to reviewers, or give instructions on how to access them, as soon as possible after they have agreed to review them
- send reviewers manuscripts that are correctly formatted, well presented and complete, with all ancillary materials included
- provide reviewers with clear instructions and guidance on the journal’s aims and scope and what is expected of them in the review process
- instruct reviewers that their narrative reports for authors must correspond to what they have indicated in their confidential reviewing forms and checklists
- give reviewers access to any closely related manuscripts by the authors that are in press or submitted elsewhere for publication
- also have supplementary material that is to be published with a paper peer reviewed as it is an integral part of the publication
- alert reviewers to the possibility that they may be identified if they access material directly on an author’s website; they should make alternative arrangements for reviewers to access or receive that material if it is important for the review of a manuscript
- provide reviewers with contact details they can use if they have problems or need assistance during the review of a manuscript
- answer reviewers’ queries promptly and sort out any problems as quickly as possible
- ensure that reminder messages sent to reviewers are always courteous and never aggressive or threatening
- thank reviewers for their efforts and give them feedback on the outcome of the review process
- halt the review process if misconduct by the authors is suspected
- remove from the review of manuscripts any reviewers or editors who have acted inappropriately.

Journals should not:
- send to external reviewers manuscripts that are out of scope or do not follow essential journal editorial policy
- send out for review manuscripts in which the standard of language is very poor
- compromise reviewer anonymity in closed peer-review systems
- bombard reviewers with inappropriate review reminders
- automatically send manuscripts that receive opposing opinions or recommendations out for further review.

Reviewer selection
Journals should:
- have a database of reviewers and ensure this is kept up to date
- recognize that reviewer selection is the most critical aspect of peer review
- advise authors on who it is not permissible for them to suggest as potential reviewers for their manuscripts
- ask authors to provide reasons for any requests for exclusion of particular reviewers for their manuscripts
- monitor reviewers’ workloads to ensure they are not overloaded or taken advantage of
- have reviewer-selection procedures that involve active decision making
- keep a record, or audit trail, of where various reviewer suggestions have come from
- contact potential reviewers and obtain their agreement to review before they are sent a manuscript
- ensure reviewers are sent manuscripts that are appropriate to their areas of interest and expertise.

Journals should not:
- send manuscripts to more reviewers than are needed with the intention of using only the first reviews returned
- put pressure on any reviewer who feels uncomfortable about reviewing a manuscript to do so
- send manuscripts to reviewers who regularly fail to return reviews, or who do so only after unacceptably long times, or who provide superficial or inadequate reviews.

Reviewer behaviour
Reviewers should:
- provide timely reviews that are both relevant and constructive
- declare any conflicts of interest, either real or potential
- disqualify themselves from review if they feel unable, for any reason, to provide an honest and unbiased assessment
- notify journals of any limitations to their ability to review a
manuscript
- declare if they have reviewed a manuscript previously for another journal; if both the editor and reviewer agree that the reviewer can be involved in a second review, he or she should review the manuscript afresh and submit a review based on that assessment
- declare a conflict if asked to review a manuscript that is very similar to one they have submitted elsewhere or have in preparation
- keep confidential the submission and contents of manuscripts sent to them for review
- alert the editor or journal if any circumstances arise that will delay their review
- provide comments that can be forwarded to the author separately from any confidential comments for the editor
- make sure that their comments for authors correspond to their assessment on the confidential review forms and checklists
- report to journals any suspicions of misconduct and ask for advice on how to proceed.

Reviewers should not:
- agree to review a manuscript just to gain sight of it for personal benefit with no intention of providing a genuine review
- contact anyone else about reviewing a manuscript without the knowledge and permission of the journal from which it was received
- use information in manuscripts they review for their own or others’ benefit or gain, or plagiarize any of the material within those manuscripts
- intentionally delay return of their reports
- make personal or derogatory comments about authors in their reviews
- request that authors include citations to their own work in order to receive additional citations for themselves
- contact the authors directly about any manuscript they review.

Handling reviews
Journals should:
- check reviews as they are submitted rather than when all the reviews are in, so that errors can be corrected, clarification obtained, and additional action taken if necessary
- ensure that reviewers’ reports for authors do not contain anything that is defamatory, libellous or likely to confuse the authors
- check before editorial decisions are made that the correct reviews have been assessed and that all the reviews submitted have been considered
- recognize that the most important part of a review is that which contains the detailed comments, not the recommendation.

Journals should not:
- selectively edit reviewers’ reports so that they better reflect an editorial decision.

Editorial decision-making
Editorial decisions should:
- be made or approved by an editor, and should not default to someone who does not have appropriate specialist training or knowledge
- be based on the merits of the work submitted and its suitability for the journal
- give more weight to reports of flaws or technical criticisms than to subjective opinions on suitability for a journal
- be consistent across all manuscripts submitted to a journal
- be as transparent as possible; editors should be able to substantiate their decisions if challenged
- provide reasons for any comments and opinions in reviewers’ reports that have been overridden by the editor.

Editorial decisions should not:
- be influenced by the origins of manuscripts or determined by the policies of outside agencies
- except in exceptional circumstances (for example, misconduct or if a serious flaw comes to light), override all the reviewers’ recommendations and opinions
- allow papers to be published with overstated claims or interpretations.

Feedback to authors
Journals should:
- notify authors if the review process is unduly extended or additional review is required
- if a manuscript is withdrawn from review by the journal, give the authors clear reasons why this is being done and provide them with the opportunity to respond if appropriate
- check decision letters before these are communicated to authors to ensure that editorial notes, instructions, and inappropriate words or phrases have been removed
- make clear to authors exactly what the decision is on their manuscript, the reasons for it and, if appropriate, what conditions need to be met for the journal to consider the manuscript again
- let authors know what the procedures will be for handling a resubmission of their manuscript
- answer authors’ queries promptly and informatively
- keep a full record of all manuscript status enquiries to ensure accuracy and consistency in responses.

Journals should not:
- misinform authors about the review status of their manuscript
- allow editorial staff to tell authors informally the decisions on
their manuscripts based on editors’ initial recommendations; this should not be done until decisions have been finalized.

**Revised manuscripts**

Journals should:
- remind authors of revision deadlines
- accept a manuscript if an author has fulfilled all the revision and journal policy requirements within the stipulated time
- send authors official, dated acceptance letters.

Journals should not:
- issue a blanket instruction that all revised manuscripts are to be sent to the original reviewers for assessment; decisions on review procedure should be made on a case-by-case basis.

**Accepted manuscripts**

Journals should:
- check manuscripts before moving them on for preparation for publication to ensure they are complete and all the required information and enclosures have been received
- refer for editorial approval requests from authors both for non-trivial changes to a manuscript after it has been accepted and for notes to be added in proof
- publish papers in a timely and efficient manner, with dates of receipt and acceptance.

Journals should not:
- reverse the decision to accept a paper for publication unless a serious problem is subsequently found, for example fraud or an ethical issue; such decisions should not be reversed because a journal has misjudged the availability of space.

Authors should:
- supply any missing items or information promptly when requested
- abide by all the post-publication policy requirements of journals
- notify a journal immediately if errors are found in a paper after publication so that an appropriate correction note can be published if necessary.

Authors should not:
- include in notes added in proof information they were aware of and should have either included or referenced in their manuscript because it was already published at the time of submission.

**Dealing with misconduct**

Journals should:
- have procedures in place for investigating allegations of misconduct at journal level
- look into all cases of suspected misconduct
- take extra care to keep complete and accurate records when suspicions or allegations of misconduct arise
- give the person(s) against whom allegations have been made the opportunity to respond to the allegations and to provide an explanation
- obtain written evidence from all the parties involved
- refer to individuals’ institutions or funding bodies cases that warrant further investigation
- ensure that referral to an individual’s institution or funding body is warranted as this is a serious step with potentially very serious implications for the individual and his or her reputation
- reprimand individuals found guilty of misconduct or inappropriate behaviour and implement appropriate sanctions
- publish appropriate correction notes for papers they have published in which errors, fraudulent data or misconduct have been found
- ensure that when correcting the literature any conclusion that a paper is problematical or fraudulent and the attribution of blame are based on rigorous and thorough investigation and expressed appropriately and within legal restrictions.

Journals should not:
- mistake genuine errors for misconduct
- launch full-scale external investigations into allegations of research misconduct to determine if they are substantiated and that misconduct has occurred; this is the responsibility of employers and funding agencies
- release information about allegations or suspicions of suspected misconduct until they have been substantiated
- pressure reviewers into revealing their identities to investigating bodies in misconduct cases
- alter papers or remove them from the scholarly literature once they have been published except in very exceptional and restricted circumstances.

**Conclusion**

The role of journal editor is a very important one. Editors play a central role in bringing research to publication and curating the scholarly record. Because editors determine what is published and where, they have great influence on the careers, grant prospects and reputations of researchers. Many, however, come to the role without much, if any, training in peer review or the associated responsibilities. My book [1] was written as a manual to provide editors and editorial office staff with practical guidance on all aspects of peer review. The above republished Appendix 1 is a summary of the informa-
tion in the book, and represents the crystallisation of 30 years’ experience in scholarly journal publishing, particularly the 16 years spent (at the time of writing the book) as the managing editor of an international scientific journal.

**Conflict of Interest**

Irene Hames was a Council Member of the Committee on Publication Ethics (COPE) 2010-2013, and produced the COPE Ethical guidelines for peer reviewers.

**References**

Scientific, technical, and medical podcasting in Korea

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Abstract
Korean produced scientific, technical and medical (STM) podcasts represent an opportunity for Korean STM publications to further promote themselves as an important center for scientific research. STM Publishing makes results and data available to the greater scientific community as well as the rigors of metadata research. Publishing costs should be considered part of research costs since research results are only of value if published in reputable peer-reviewed journals. Korean journals indexed in the Korean Citation Index (KCI) continue to evolve in quality and as important communities for scientists. Universities, tertiary hospitals, and research institutes throughout Europe and America feature podcasts as an integral part of Web 2.0 and the evolution of e-publishing. However, unlike their Western counterparts, Korean (as well as Chinese and Japanese) STM publications and related organizations have not established hosted STM podcast programs to help propagate and create discussion on important science results. The opportunity of Korean produced STM podcasts to highlight important research and discovery is a cost efficient opportunity that Korean journals, universities, tertiary hospitals, research institutes and industry/academic collaborations should consider. This paper outlines roles, reasons and rational for KCI publications to be featured in a Korean hosted STM podcast.

Keywords
Podcast; Korean Citation Index; Journals; e-publishing; Publications

Introduction
“Why is it so?”, hosted by Julius Sumner Miller in 1959, was one of the first TV programs to feature science as a means to promote public interest and involvement in science education. Mainstream media has continued to address the human interest and fascination with science. Early science programs, such as those by Miller, have now evolved into TV programs such as NOVA and The Nature of Things. In addition, Miller also pioneered the celebrity status of scientists through unbounded enthusiasm for quality publishing, academic honesty, research integrity and intellectual rigor. The promotion of evidence-based discovery and the excitement
that science offers will always have a significant public audience. The e-publishing medium is a new form of media that offers additional opportunities for a greater involvement by science and media to present new research to the public.

Part of the evolution in e-publishing has been the additional opportunities that Web 2.0 offers where “Scientific discussions are also increasingly being held in various Web 2.0 environments such as blogs, forums, and Twitter” [1]. Science does not exist in a vacuum and it is important to scrutinize discovery in discussions that show validity and benefit to humanity. However, the intricacies of science that require detailed scrutiny are sometimes lost in complex issues that can quickly become tainted by emotion instead of reason. The role of science journalism in the propagation of discovery is to take the complex and make it accessible to the widest audience possible. Podcasts represent an important part of Web 2.0 for Western academia to take new discoveries and provide an initial introduction to the public by the scientists themselves. In this training material, I would like to introduce how to adopt podcast for scholarly journal editors in Korea as well as Asia.

Podcasts

The word podcast entered use in 2004 and has remained closely associated with the format offered by Apple iTunes. However, all operating systems can access media content offered by podcasts. The content on-demand ‘push-pull’ function of podcasts and RSS feeds allows users to access information and media content on smartphones and other devices when it is most convenient for them to listen, such as on subways, driving, or doing daily activities. Scientific, technical and medical (STM) podcasts are now a standard offering for North American and European universities, tertiary hospitals, research institutions and academic publications. Renowned academic and science institutions all have a podcast feature, such as Nature (Nature Podcast) (Fig. 1), Harvard Medical School (Podcast Library), Johns Hopkins Hospital (Johns Hopkins Medicine Podcasts), Science (Science Magazine Podcast), and The Lancet (Audio Archive), that help in “facilitating dialogue between lay listeners and those with a range of expertise, including both formal and informal knowledge” [2].

Korea’s research output and quality have rapidly evolved.

Fig. 1. Screenshot of current Nature Medicine Podcast as featured on iTunes [cited 2016 Jan 6]. Available from: http://www.nature.com/nm/podcast/index.html
However, the paper by Park and Leydesdorff, “Korean journals in the Science Citation Index: What do they reveal about the intellectual structure of S&T in Korea?” argues that Korean citation performances are not as competitive as their publication performance [3]. Korean STM journals indexed in the KCI have an immense potential to be internationally competitive and are quickly attracting significant, relevant, and important papers from researchers both in and out of Asia. Park and Leydesdorff offer direction and advice that, “Given the international aspirations of the Korean journals, they may be well-advised to integrate more in the international publication structure, for example, via mergers or acquisitions” [3].

Podcasts represent an excellent opportunity to improve the international publication structure of Korean STM journals via a merger and synthesis of the best of Korean STM research in KCI listed publications. Korean publications and research are internationally competitive on every metric; podcasts represent an excellent low cost resource to feature the best and brightest publications of Korea, as well as Asia, to a larger international community. There are unique podcasting opportunities for Korea that have not yet been done in China or Japan. Table 1 shows that top-ranked Western medical journals all utilize and STM podcasts to help promote their publications; however, no journals found in the top 15 Asian medical journal publications from Japan, India, Korea, and China have a hosted podcast.

**Nomination of Papers by Korean STM Editors**

Nominations of outstanding STM papers listed in the KCI for a podcast interview offer the opportunity for Korean STM journal editors to facilitate, highlight, and promote quality research. The opportunity for Korean STM editors to select papers from publications suitable for a podcast would be a special opportunity for editors to personally increase the relevance of their journals. This is an excellent opportunity to promote collaboration amongst related journals in fields such as engineering, the natural sciences or medical research.

Grouping related journals allows a podcast to select notable publications to produce quality content for a regularly scheduled show. The Nature Publishing Group successfully brings together the best publications from its various medical publications to create Nature Podcast, one of the top-ranked STM podcasts in the world. Similarly, KoreaMed Synapse offers an indexed pool of various publications on its website. It has 137 publications as of January 2016 with varying publishing schedules that would easily allow for 10 articles a month to be selected for an hour-long Korean science/medical podcast that features the best KoreaMed Synapse indexed papers of the month.

The opportunity for the author of a nominated publication would be the initial chance to make a presentation of their findings and research to the larger global scientific community. Presentations by authors are a great benefit to everyone involved in e-publishing in Korea. Podcasts are an initial chance to find and research to the larger global scientific community. Presentations by authors are a great benefit to everyone involved in e-publishing in Korea. Podcasts are an initial chance to find and promote their publications; however, no journal found in the top 15 Asian medical journal publications from Japan, India, Korea, and China have a hosted podcast.

**Table 1. SCImago Journal Rank (SJR) top ranking (2014) of international medical journals from all regions and countries and hosted podcasts**

<table>
<thead>
<tr>
<th>SJR rank</th>
<th>Journal title</th>
<th>Publisher</th>
<th>Country</th>
<th>Hosted podcast</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ca-A Cancer Journal forClinicians</td>
<td>Wiley-Blackwell</td>
<td>United States</td>
<td>American Cancer Society</td>
</tr>
<tr>
<td>2</td>
<td>Annual Review of Immunology</td>
<td>Annual Reviews</td>
<td>United States</td>
<td>Annual Reviews Conversations</td>
</tr>
<tr>
<td>3</td>
<td>Nature Reviews Genetics</td>
<td>Nature Publishing Group</td>
<td>United Kingdom</td>
<td>Nature Reviews Genetics</td>
</tr>
<tr>
<td>4</td>
<td>Nature Reviews Immunology</td>
<td>Nature Publishing Group</td>
<td>United Kingdom</td>
<td>Nature Podcasts</td>
</tr>
<tr>
<td>5</td>
<td>Nature Reviews Cancer</td>
<td>Nature Publishing Group</td>
<td>United Kingdom</td>
<td>Nature Podcasts</td>
</tr>
<tr>
<td>6</td>
<td>Physiological Reviews</td>
<td>American Physiological Society</td>
<td>United States</td>
<td>American Physiological Society</td>
</tr>
<tr>
<td>7</td>
<td>Immunity</td>
<td>Cell Press</td>
<td>United States</td>
<td>Cell Press Podcast</td>
</tr>
<tr>
<td>8</td>
<td>Genome Research</td>
<td>Cold Spring Harbor Laboratory Press</td>
<td>United States</td>
<td>Podcast - Genome Research</td>
</tr>
<tr>
<td>9</td>
<td>Cancer Cell</td>
<td>Cell Press</td>
<td>United States</td>
<td>Podcast - Cell Press</td>
</tr>
<tr>
<td>10</td>
<td>New England Journal of Medicine</td>
<td>Massachusetts Medical Society</td>
<td>United States</td>
<td>NEJM Podcasts</td>
</tr>
<tr>
<td>11</td>
<td>Annual Review of Pathology: Mechanisms of Disease</td>
<td>Annual Reviews Inc.</td>
<td>United States</td>
<td>Annual Reviews Conversations</td>
</tr>
<tr>
<td>12</td>
<td>The Lancet Oncology</td>
<td>Lancet Publishing Group</td>
<td>United Kingdom</td>
<td>Audio from The Lancet Oncology</td>
</tr>
<tr>
<td>13</td>
<td>The Lancet</td>
<td>Elsevier Limited</td>
<td>United Kingdom</td>
<td>The Lancet Audio</td>
</tr>
<tr>
<td>15</td>
<td>The Lancet Infectious Diseases</td>
<td>Lancet Publishing Group</td>
<td>United Kingdom</td>
<td>The Lancet Infectious Diseases Audio</td>
</tr>
</tbody>
</table>
Podcast Platform Host for Apple iTunes and Android

Podcasts create and provide current content for SNS services such as Facebook and Twitter that can help promote the recognition of research done in Korea. Podcasts only require a quality microphone, a routine understanding of software such as Audacity and an Internet host from an affiliated website such as the Korean Federation of Science and Technology Societies, KoreaMed Synapse, or the National Research Foundation of Korea to produce. The Apple iTunes platform then provides a free platform to push the hosted information provided by a Korean SMT publisher to an international audience. iTunes can be accessed by all Android and desktop operating systems and is not limited to Apple devices. iTunes is a free international gateway that offers the most professional experience to anyone interested in science publications and podcasts.

Graduate Students from Korean Universities

Western STM podcasts often utilize graduate students. The publications of KCI represent an excellent opportunity for graduate students from Korean universities to add an additional student/mentor process that helps young researchers further understand complex research and introduce participants to a wider audience. The actual work required by a student to conduct an interview is not an additional burden as it reinforces current introductions to STM focused writing courses on the importance of clarity in the writing format used by STM publications.

The responsibility of the interviewer is to fill in information gaps when required and facilitate an interview that allows the manuscript author to present their publication to a wider audience. Students are quite eager to participate in these types of events as the learning experience is immensely beneficial to their academic careers. The opportunity for students to participate as interviewers in a podcast is the most practical application and instruction of presentation skills that can be offered. Students receive an initial introduction to the scientific community and facilitate the process of science education in a social structure. Learning a means to conceptualize medical discovery to the widest audience possible is an important skill that will benefit students throughout a future research career.

Opportunities for podcast content creation and promotion are not just limited to Korea. Korean universities often face a student exchange imbalance. Due to certain language obstacles, more students from Korea study overseas at sister schools than students from sister schools who study in Korea. The opportunity for science collaboration through the hands-on experience of student exchanges or through Skype is an excellent opportunity to build long-lasting international collaborations between young student researchers. The opportunity to interview and interact other Asian researchers from other Asian publications in China or Japan vis-à-vis Skype has no extra cost requirements.

Audience

Podcasting is focused on a narrowcast as opposed to a broadcast audience; a specialized spectrum of the public subscribes to this type of podcast media. This narrowcast focus is a distinct advantage of podcasting as it promotes itself to an easily identifiable target for industry and academia. Sponsorship opportunities for industry and academia transcend marketing into valuable corporate social responsibilities opportunities. The multitude of pre-existing podcasts in Europe and North America are testimony to the value of this type of podcast media and content to sponsorship/funding opportunities.

Research (invention) requires technology transfer (innovation) in that “Inventions are generated by scientists in laboratories. Innovation is an invention that is accepted, adopted, and fully implemented by markets and society” [4]. Podcasts can help create a greater visibility for the economic value of research in Korea; consequently, visibility can lead to increased opportunities for funding and industry-academic cooperation. New opportunities exist to communicate research as part of the ongoing evolution of technology advancement in Korea.

Korean Government Initiatives and Policy

Information and skilled human resources are required by domestic and international research organizations. STM podcasts present unique opportunities for both young and veteran researchers to address the widest audience possible in both academia and industry. The dissemination of valuable journal publications and facilitation of professional education opportunities is a key reason for the 2009 implementation of the Promotion of Industrial Education and Industry-Academic Cooperation Act [5]. The Korean government has a significant interest to promote quality education in an economy that depends heavily on skilled human resources for growth.

Numerous other Korean government initiatives exist that offer additional opportunities to support increased industry and academic collaboration. The government is currently undertaking important initiatives in the biotech industry, such as the Special Act on Fostering and Support of Pharmaceutical Industry [6]. Forty-three companies have now been designated to receive special government support as innovative pharmaceutical companies.
Government policies to help support new ideas such as podcasts are already in place such as the Enforcement Decree for the Special Act on Support of Science and Engineering Manpower for Strengthening National Science and Technology Competitiveness [7]:

Article 9 (Program Support for Strengthening the Connection of Industry-University-Research Institutes)

(2) 4. Matters concerning the promotion of interchange and cooperation with science and engineering universities, such as the cooperative use of research and development facilities/devices and interchanges of research and development information, etc.

Article 26 (Support for Science Technology Related Broadcasting Programs)

(2) The Minister of Education, Science, and Technology may execute the science and technology specialized broadcasting under Article 23, Paragraph (2) of the Act. In this case, the Broadcasting and Communications Commission may support any part of the expenses for finding and producing science and technology broadcasting programs with the Broadcasting Development Fund under Article 36 of the Broadcasting Act. <Amended on May. 25, 2007, Feb. 29, 2008, Dec. 31, 2008>

Limitations and Suggestions for Further Research

This material represents a preliminary introduction of podcasting ideas and opportunities to Korea. Publishing is a quickly evolving industry and the introduction of new mediums is ongoing. A larger study should quantify related discussions on SNS services to measure geographical or regional interest and conduct surveys that identify the expertise and desires of podcast listeners.

Conclusion

Korea is a preferred and an economically competitive center for full-scale biotech Research and Development activities. Per capita, “South Korea has the highest ratio of Research and Development researchers per million people” [8]. The establishment of the Institut Pasteur Korea, Max Planck Gesellschaft Korea/POSTECH Research Institute, and Fraunhofer Representative Offices indicate international interest in further collaboration with expert Korean researchers at university and government funded research institutes. Podcasts are an innovative and unique opportunity for Korea to highlight invention and quality resources that the Korean education system produces and provides to the global community.

Opportunities, content, and material already exist for a quality STM podcast based on the STM publications indexed in the KCI; however, further initiative and innovation by Korean academia is required to promote invention and obtain better international publishing results for researchers and journals. The greatest relevance of a Korean produced podcasts exists outside of Korea as Asia deserves more international recognition for the contributions it makes towards science. America and Europe have established science podcasts, yet there are no similar science podcasts programs offered anywhere in Asia; Korea should be the leader to change this.

Conflict of Interest

The author is a co-founder of AsiaMed (https://twitter.com/asiamedpodcast), a sample/pilot podcast created as a demonstration that was sponsored by ResearchPaper Korea. No other potential conflict of interest relevant to this article is reported.

Acknowledgments

The author would like to mention the invaluable support, enthusiasm and initiative of Gyeong-ji Yoo who co-founded and pioneered an initial medical podcast ‘AsiaMed’ that represents the catalyst for this paper.

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kWj9mwqI1ChJzESIIfswVJhhjzCejn3n8geoM9fvYIf.

Raising the quality of local journals: some insights and observations

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Introduction

The rapid pace at which developments in science and technology are occurring as well as the need to disseminate such findings in respectable scholarly platforms is putting tremendous pressure on academic institutions (including academic staff) to rise to the challenges. The journal is the most prized platform for publishing scholarly work. Among journals in a field, there is also a ranking order—the higher its ranking, the more highly regarded it is. Naturally, academics who are able to publish in top journals are highly regarded. However, not all manuscripts submitted to journals get accepted. In fact, for prestigious journals, the acceptance rate can be as low as about 10% to 20%. This is one of the reasons for the proliferation of journals within a discipline. If only well-established journals in a discipline are considered to be the platforms for publication, then very little will ever get published, and scholarly pursuits will be severely affected—and this will be a setback for the human and scientific enterprise. It is in this context that local journals do have a role to play in the dissemination of scientific research.

The principal objectives of this paper are to share some insights and observations on how to raise the quality of local journals—it could mean either existing journals or new journals about to be launched. These insights and observations are drawn from my own experience in editorial work as well as observations of a number of scientific and education journals over the years. As regards my experience in editing, I wish to cite the following:

I was one of the managing editors of COSMOS (flagship journal of the Singapore National Academy of Science), published by World Scientific Publishing, for a few years since its first publication; I was guest editor of the International Journal of Technology Management (UK) for their special issue on science & technology centers; I was guest co-editor of the International Journal of Technology Management (UK) for their special issue on scientific academies & scientific societies; And, I was guest co-editor of COSMOS for their special issue on science education. In addition, I have co-edited 4 books for international publishers.

Current Status of Journals Published from Asia

In the current publication landscape, journals published from Asia are generally lagging behind other journals published from the developed world when it comes to various metrics.
such as impact factors and citations. Many journals published from Asia have not yet been featured in the Web of Science. There seems to be some skepticism even among Asian authors in wanting to submit to local journals even if one were available in their specialty. Academics would naturally want to submit their best work to international journals in the United States of America and Europe as these are well established. It is unlikely that academics would want to submit their best work to a local journal. Publications in leading international journals count more during annual appraisal of academics. The influence of impact factors of journals and emphasis on citations of papers are very high in many universities–thus, it is understandable if academics’ preference is for submissions to international journals.

What we have to note, however, is that many established journals started off by catering mainly to the local scientific community. In due course, they were able to attain international recognition through sheer hard work by the editors and also from the high quality of submissions published. This means journals published from Asia can improve their international ranking if strategic thinking is employed by the journals’ editorial boards.

On the Need for Local Journals

There are currently about 20,000 universities in the world, and new ones are being established regularly. While universities serve the primary role of providing tertiary education in various fields to students, research is also an important aspect of their mission. Publications are the primary currency by which the research work of academics are judged. Clearly, the research output emerging from all these institutions cannot be fulfilled if recourse is placed only on publishing in well-established journals. International journals have low acceptance rates and can only publish a limited number of papers annually. Local journals have thus a role to play in supporting capacity building in developing countries [1]. Such journals are still needed to support scholarly pursuits in a discipline, especially in the developing world.

Many universities in the developing world face funding constraints with regards to research, which means that they will have difficulties doing cutting edge research and publishing such work. It would not be surprising if a number of academics in many of these universities engage in basic research or on research that can be supported by limited funds. For example, study of the local flora and fauna can be an important area of fundamental research, and such research does not generally require large funding. Fundamental research on the local flora and fauna is less likely to be of interest to major international journals–and this is where local journals still have a role to play in supporting such research. Science education research, especially those related to certain aspects of teaching and learning in classrooms, is another area for such research and one that can be done with limited or modest funding.

Local journals in the various disciplines play an important role in ensuring that universities in the countries they originate from have additional outlets to support academic research in these areas as well as publishing graduate students’ work. With the pronounced emphasis placed on science and technology in today’s society and their role in economic development [2], building competencies in the various sciences in a country is very important. At the tertiary level, scholarship in these sciences is also important, and local journals have an important role to play in this regard, especially in developing countries in Asia.

Some Tips for Raising Quality of Local Journals

In this section, some tips are provided for raising the quality of local journals. The local journals could either be existing ones or those that are about to be started. The tips are based on my observations of the international journal scene as well as my own experiences in editing journals. The tips are enumerated as follows:

1. A core group of people with the vision and passion to drive local scientific output in a particular discipline must come forward to realize the mission–either to revitalize an existing journal or to start a new journal in a discipline. There needs to be journals catering to a number of scientific disciplines in a developing country.

2. A leading researcher in the country with international connections needs to helm the discipline-specific scientific journal. Others can come in as associate editors or as members of the editorial board.

3. It is necessary for the journal to be linked to a leading scientific society in the country. This gives credibility to the journal and allows it to be differentiated from others. In fact, many of the major scientific journals are published by scientific societies.

4. The journal needs to be published in the English language, which is generally regarded as the language of science and technology. This does not mean the sideling of the local language but instead is recognition of the realities of today’s academic publishing landscape. Scientific publications in the English language can garner an international readership. If need be, the abstract can be presented in two languages–English and the local language. The latter has the advantage also of ensuring wider dissemination of the findings locally.
5. It is necessary to have an international editorial board as well as reviewers. This may not be that easy for those journals that are new or are about to be started but it is a goal worth aspiring for. The network connections of local academics can be tapped on for this purpose. Not to be overlooked in this regard are the academic diaspora settled in the developed world.

6. Open access, online format for the journal is to be preferred rather than the print version as the latter is expensive and incurs mailing charges as well as problems related to storage and handling, which can also incur additional costs and/or inconveniences. The open access, online format can help to enhance the impact factor of the journal in the long run. It also provides free access to others. Quite a number of online journals are now included in the Web of Science, so this format is a viable option.

7. Regular frequency of publication is important—at least three or four issues a year, with each issue of about 5-7 papers, would be a useful goal. This may not be that easy in the early years, so the frequency of publication can be moderated somewhat in these years. In due course of time, once the reputation of the journal is established, the publication frequency can be increased.

8. It is important for the journal to have a good mix of local and international authors—the need to give upcoming local researchers an additional platform to submit their scholarly work and help them build up a portfolio cannot be underestimated. Opening outlets to academics from other countries, even those in other developing countries, can also help the journal to take off sooner and ensure a regular publication frequency.

9. After a few years when the journal has been reasonably well established, an overseas academic can be invited to be the guest editor for a special issue of the journal on a suitable topic. Academics see merit in editing a special issue of a journal focusing on a topic of their specialty—they also see it as a kind of recognition to be invited to edit a special issue. By its very nature, special issues garner wider readership.

10. Peer review of manuscripts must not be compromised. Scientific rigor and scholarship are key factors in this regard. There should be at least two reviewers for each article. Acceptance rates should not be too high. Where possible, encouragement can be rendered to deserving authors in the process of revisions, even if this means taking a few rounds.

11. It will be great if internationally established academics in the country can contribute to the journal. They may not send their best work to local journals—even their second best may be good enough! Visiting academics can also be encouraged to contribute a suitable paper to the journal. All these are some ways to raise the profile of the journal. It is essential to keep in mind the goal of getting the journal listed in the Web of Science within a reasonable period of time.

While funding is often an issue for journals, it can be circumvented to a good extent with some creative thinking—for example, going for web-based journals addresses problems related to printing, storage and handling of hard copies of journals. Hosting a journal on a website usually does not incur much expenses if it is kept as simple as possible. Funding can also be in kind. However, some funding would definitely be useful and needs to be raised—this can come through donations from well-wishers as well as through revenue from the organizing of suitable workshops by those who have a stake in the success of the journal.

It is essential to note that running a journal means a lot of work for editors as this is on top of their regular work and other commitments. They thus need good support so that they can focus more on the strategic positioning of the journal—otherwise they may be overwhelmed by journal work. This could be explored in the following ways:

1. Providing internship opportunities in editorial office work for graduate students on a part-time basis would be an option worth exploring. This can greatly help to relieve editors’ workload. To dignify the nature of such work, titles such as editorial assistant or webmaster can be offered to the graduate students for the period of their stint. Editorial assistance can be in areas such as tracking manuscripts, correspondence with authors, and follow-up with reviewers—all these usually take quite some time. Also, graduate students with proficiency in web-based publishing can help in design & artwork as well as layout of the proof copy of the paper. An advantage of such titles is that the graduate students can acquire useful experience in the process and get to list this in their curriculum vitae—this can come in useful when they go for job interviews. It is necessary to give a good number of graduate students opportunities and experiences in such internships.

2. Involving graduate students from the English Language department in the local universities to help in copy-editing, if necessary, of accepted manuscripts of local authors can be explored if funding is hard to come by for professional copy-editing. In the long run, it is possible to build a good pool of copy editors from among these graduate students and whose services—especially those who excel in such work, can be sought after graduation for a nominal fee.

**Summarizing Comments**

With the proliferation of journals and the competition from
other established journals in the field, it is a challenge to publish a local journal or to continue an existing local journal. Local journals, however, do serve an important role in promoting scholarly publishing in developing countries, and it is necessary to continue this tradition. With established journals being able to publish only a fraction of the research that is being carried out, local journals have a role to play in providing further outlets for scholarly publishing in a country.

It has to be reiterated that this paper does not make a call for academics in developing countries to publish their work only in local journals. Submissions to international journals are still to be encouraged and are preferred. Given the voluminous output in research emerging from across the world; and the fact that only a limited amount of work can be published in international journals, it is clear that local journals do have a role to play in this regard in providing additional publication platforms for authors in developing countries. Good work done in a field by local academics and that are not accepted in established international journals still need an outlet—local journals can come in useful in this regard, provided, of course, the manuscripts pass the reviewers’ scrutiny. All these efforts also contribute towards endogenous capacity building in developing countries. Getting the journal recognized internationally within a period of time and having it included in the Web of Science should be a goal worth aspiring for.

Conclusion
It is suggested in this article that there is a role for local journals to play in developing countries, including those in Asia, and that it is possible to raise the profile of these journals to an international level if stakeholders can work harder and strategically to help realize this vision. Some observations and perspectives have been shared in this paper.

Conflict of Interest
No potential conflict of interest relevant to this article was reported.

References
Postscript on the indexing of the journal *New Physics: Sae Mulli* in Scopus

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Introduction

The Korean Physical Society has worked hard to get its journal *New Physics: Sae Mulli* indexed in Scopus. First published in 1961, the journal has gone through repeated changes and constant development. Such changes include the merging with the journal of *Physics Education: Mulli Kyoyuk* in 1999, the switch to monthly issues in 2000, the revision of its English name in 2010, the continuous effort of the Korean Physical Society’s various regional branches, the committed effort of the editorial board, the creation in 2013 of the English homepage for *New Physics: Sae Mulli* (http://www.npsm-kps.org), the recruitment of foreign editors, and the introduction of a cover and highlight papers.

Finally, on August 22, 2015, a representative from Elsevier notified us that *New Physics: Sae Mulli* had been indexed in Scopus, the world’s largest citation index database. At present, with over 180 academic and review papers published in twelve monthly issues on the last day of every month, our journal is contributing to the development of the physics community in South Korea.

The Oldest Journal of Korean Physical Society

First published in May of 1961, *New Physics: Sae Mulli* (ISO abbreviation, *New Phys.: Sae Mulli*) has been the voice of the Korean Physical Society for half a century. In the future as well, the journal should serve as the door through which the Korean Physical Society enters the global stage. One of the oldest journals in Korean science, it has continuously developed over the past 54 years, despite the limitations of being a Korean-language journal.

Let’s examine some of the reasons for *New Physics: Sae Mulli*’s steady development. First, after its publication, *New Physics* was successful at drawing in a broad scope of readers. As the articles were written in Korean, they were easy for people to read and were disseminated widely. Physicists, scientists and engineers doing work related to physics, and physics professors as well as students became regular readers of *New Physics: Sae Mulli*. For these reasons, the journal has been the driving force for the Korean Physical Society’s development, and that tradition
Fig. 1. New Physics: Sae Mulli homepage (http://www.npsm-kps.org).

Fig. 2. Improvements in the cover page of New Physics: Sae Mulli. (A) 2010 December issue and (B) 2015 July issue.
continues up to this day.

Such a broad readership is the primary advantage that New Physics has when compared with other English-medium journals. Second, in order to inform other countries about the results of Korean physics research, New Physics does not merely publish Korean language articles, but has, even since its first issue, included abstracts written in English. For reasons such as these, New Physics was eligible to be indexed in Physics Abstracts (now INSPEC) from the time of its inception in 1961.

**Recent Efforts toward International Journal**

In 2010, New Physics went beyond publishing only articles written in Korean and began publishing English-language articles as well, and taking into consideration its international audience, its title was changed from Sae Mulli, which is “New Physics” in Korean, to New Physics: Sae Mulli.

The independent homepage for the journal New Physics: Sae Mulli was revamped (Fig. 1) in 2013, to allow online submission and review of papers. This also made it possible to find all information related to New Physics articles at a glance, including features such as Online First, Most Read Articles, Highlight Papers, Archives (1961 to present day), and Search functions. By including with this the editorial board member list, aims and scope, and a short description of the journal’s history through which the reader can see information about New Physics: Sae Mulli, we are raising the prominence of the journal’s excellent image.

A list of articles accepted for publication can be seen on the Online First section of the new homepage, and on the Most Read Articles section appears a list of the 15 most-read articles from among articles published within the past two years.

In addition, in the Highlight Papers section is listed all the top-quality research articles selected each month. In particular, in the case of cover articles, a representative picture is published every month on the journal’s cover (Fig. 2), and a letter is sent notifying the author that the article will be published as a cover article.

In the Archives section, all articles from 1961 to the present are available. Here, the reader can find many articles written by scientists from earlier generations, and at the same time, can gain an understanding of the passion and hard work of these earlier generations of authors and their dedication to New Physics: Sae Mulli.

In addition, New Physics: Sae Mulli has joined CrossCheck, CrossRef, and CrossMark and has become an open-access journal. The words ‘open access’ appear at the bottom of the first page of every article printed, officially noting that the article is open access. Recently, the journal has revised its ethics rules, and its article submission and review regulations. In addition, the English abbreviated name of New Physics: Sae Mulli was selected (New Phys.: Sae Mulli), an eISSN (2289-0041) was obtained, an Errata section was introduced, and an author checklist was established.

Along with this, the Aims & Scope of New Physics: Sae Mulli has been revised and improved. In the spring of 2014, the Aims & Scope was amended to include the following: "1. Review of Current Physics Topics, 2. Applied Physics, 3. Other Areas of Physics". The results these changes appear on the cover page of New Physics: Sae Mulli’s, clearly improved as shown in Fig. 2.

There are currently eleven foreign editors participating in the editorial board of New Physics. They are Charles M. Falco (USA), Marco Grioni (Switzerland), Karsten Horn (Germany), Hideomi Koinuma (Japan), Antonello Tebano (Italy), Alexey Yamilov (USA), Sung Seok Ambrose Seo (USA), Masayuki Igashira (Japan), Valery Shvetsov (Russia), Nguyen Van Do (Vietnam), and Haladhara Naik (India).

Additionally, there is a native speaking-editor (E. J. Button, USA) whose job is to proofread and edit the English articles. Through such efforts, New Physics: Sae Mulli is continuing to advance with new developments. We look forward to the on-

**Fig. 3. Promotional material for New Physics: Sae Mulli posted in the Association of Asia Pacific Physical Societies Bulletin.**
going elevation in status of *New Physics: Sae Mulli*.

The journal *New Physics: Sae Mulli* publishes about fifteen articles on the last day of the month. Review papers make up 5%; condensed matter physics and applied physics papers make up 37%; atomic physics, molecular physics and optical science, 14%; general theory, mathematics, and statistical physics, 12%; particle and nuclear physics, 9%; fluid mechanics, geophysics and astrophysics, 4%; and plasma and chaos theory account for 3% of the papers published in the journal.

Looking at the types of articles published the most, articles on condensed matter and applied physics were the most frequently published, followed by physics education, atomic physics, particle physics, and optical science. While publishing a fixed number of articles in each monthly issue, the *New Physics: Sae Mulli* editorial staff strives to maintain a balance in the number of articles from each field.

In addition, we are working hard to promote the journal. Every year, prizes are awarded, including an opening prize, article prize (reflecting its impact factor), and a participation prize (the author who has published the most articles, for members aged 35 or under). In addition, a promotional pamphlet is made and distributed to members at the general academic conference convened every year. Through efforts such as the publishing of advertisements (Fig. 3) in the Association of Asia Pacific Physical Societies bulletin for international publicity, we continue to work towards bringing *New Physics: Sae Mulli* to an even greater level of development.

**Conclusion**

Using this development as a stepping stone, we will devote ourselves with even greater effort to turning *New Physics: Sae Mulli* into a leading global journal in both name and reality. Looking forward, we will aim to continue developing, through activities such as working towards getting indexed in SCI(E), simultaneous publishing of outstanding articles in Korean and English, establishing thematic special issues, and publishing tutorials as well as review articles.

**Conflict of Interest**

No potential conflict of interest relevant to this article was reported.

**Acknowledgments**

With respect to the indexing of the journal *New Physics: Sae Mulli* in Scopus, I would like to express my eternal gratitude to the generations of editors-in-chief and editors who have worked so hard over the years.
Asian Science Editors’ Conference and Workshop 2015

Jae Hwa Chang
Infolumi, Seongnam, Korea

The second Asian Science Editors’ Conference and Workshop or CASE2015 was held on August 20 to 22, 2015, at the Hanoi University of Science and Technology (HUST), Hanoi, Vietnam. The event was co-hosted by HUST, the Council of Asian Science Editors (CASE), the Korean Federation of Science and Technology Societies (KOFST), and the Association of Academies and Societies of Sciences in Asia. It provided a platform for editors across Asia to gather and discuss ways in which scientific journals of Asia could be advanced to those of international standards. A total of 252 participants from six countries such as India, Japan, Korea, Singapore, UK, and Vietnam convened, and a wide-range of issues were discussed broadly in some areas and in greater depth in others but for the same purpose of striving to improve the quality of scientific publication (Fig. 1). The CASE2015 marked a new milestone within the Vietnamese scientific community with the launch of a national association, the Vietnamese Council of Science Editors (VCSE).

A pre-conference workshop was held on the 20th of August. It consisted of the following 4 parallel sessions: “Journal article tag suite (JATS) XML, CrossRef XML, and Science Central”; “Bridging the gap between your journal and your authors”; “Assessing a manuscript in house before sending for peer review”; and “Working with peer reviewers and publication ethics”. The presentation files for all the sessions of the event can be downloaded from http://asianeditor.org/event/2015/index.php. I presented the first of these sessions and aided the practical section of it. The session introduced JATS XML, which may still be an unfamiliar concept to editors in Vietnam, and facilitated their understanding by going through its working application on an actual journal homepage. The session also looked at ScienceCentral created by KOFST, a database of free or open access full text from scientific journals. The concept of CrossRef XML and the diverse services of CrossRef such as CrossMark, FundRef, Text and Data Mining were also highlighted. What was most distinctive of this workshop was that a one-to-one sitting with the speaker was provided for each participant so that each had a hands-on experience on a computer. This aimed to give participants confidence in the use and first-hand experience of techniques, such as such as XML coding and rendering, used by the journal editors at the forefront of scientific publishing and, thereby, increase the awareness of a need to invest in and employ such technologies.

On 21st of August, scheduled were the inaugural assembly of the VCSE, the opening ceremony of CASE2015, three plenary sessions, and one poster session. Prominence to the inaug-
ration of VCSE was augmented by the attendance and by a congratulatory address by Nguyen Quan the minister for the Ministry of Science and Technology of Vietnam. Other notable speeches included those by Jong Kyu Ha (president of CASE), Bahn Tien Long (vice-president of CASE), Hoang Minh Son (president of HUST), and Joan Marsh (president of European Association of Science Editors [EASE]) who encouraged and urged participants to aim for even higher standards of practice by CASE. All speakers gave their warm wishes for a successful conference.

The plenary sessions showcased the experiences and expertise of many eminent editors in the scientific publication profession. The first of the plenary sessions, the “Editor’s role” session was kick-started by the past-president of the Korean Council of Science Editors (KCSE) Jung-Il Jin who through his talk on the “Creation and activities of KCSE” overviewed the foundation, objective and organization, members, and activities of KCSE. Similarly, Joan Marsh of EASE introduced comprehensively the organization, operations, finances, activities, and membership structure of EASE and not to forget its official journal, the European Science Editing, along with its other affiliated publications.

At the “Open access” session, the presentation by Jeong Wook Seo from Seoul National University, Korea, relating to the open access for locally produced scholarly articles reignited interest for and attention to the topic of open access. Whilst that by Mikiko Tanifuji of National Institute for Materials Science, Japan, who approached the issue of registering local journals in international databases from the perspective of open access, increased the awareness of issues of global standards such as Creative Commons License that are of particular concern to local journals.

Participants were given time for interaction during a poster session, as well as listening in informative sessions by speakers. Posters ranged from those highlighting the activities of KCSE and CASE, such as posters titled “Introduction to KCSE and its activities”, “KCSE editors training programs”, “KCSE Committee on Manuscript Editing”, “Science Editing”, and “Council of Asian Science Editors”, to those presenting the topics of interest of Korean journal editors: “Opinions of Korean science editors on open access policies and on editorial difficulties for publishing”, “Surveys on research and publication ethics in Korean research institutes and journals”, “The status of Korean scientific and technical journals based on CrossRef DOI journals”, and “An experience of using CrossCheck” (Fig. 2).

The last plenary session “CrossRef: development of journal standard” was initiated by Rachael Lammey, a representative from CrossRef, UK, a leading organization for the adoption of information technology for scholarly journals. She described the various services provided by CrossRef and briefly covered its future directions. Eun Seong Hwang from University of Seoul, Korea, presented a talk that introduced CrossCheck, gave specific examples of how to use CrossCheck, and advised how effectively to protect against plagiarism. Yukari Matsuo from Hosei University, Japan, discussed the issues of publication ethics in Japanese scholarly journals. Derrick Duncombe of Elsevier, Singapore, in his speech entitled “How to add local journals to international databases” shared his thoughts on what the significance of being enlisted on international database such as the Scopus are, what the journal selection criteria of Scopus are, and what an editor workflow tool of Scopus is. Lastly, Ramanatha Subramaniam from Nanyang Technological University, Singapore gave his insight into what the attitudes of local journals striving to step up their game should be like and what room there is for improvement.

CASE2015 came to an end on the 22nd of August with the half day scheduled with post-conference workshops in three parallel sessions. One of the parallel sessions titled “How to write papers in English” was given in Vietnamese and was opened to graduate students. The workshop room bustled with more than 60 to-be and aspiring science editors, making this session one of the most popular sessions of the conference.

Another session titled “How to construct a local-language literature database and evaluate journals” highlighted interesting topics such as “Korean scientific and technical journal databases constructed by KISTI” and the “peer-review systems used in Korean journals” and posed challenging questions: What are the merits of XML production of journal for literature databases? What is the minimum structure for literature databases? Can pre-submission editing services help expedite peer review of manuscripts?
Lastly, the parallel session “What should be prepared to convert a local language journal to an international English journal” comprised four areas of interest: Why should science journals be published in English?, SWOT analysis of the merits and shortcomings of publications by commercial and local publishing companies; stepwise process of publishing an English language journal; and how to add your journal to Scopus and Web of Science (Fig. 3).

As the largest event organized since its establishment in 2014, CASE2015 represents the commitment of journals of Asia to grow from local journals into internationally renowned ones. Of special significance, the national association of the science editors in Vietnam was established during the event and celebrated its inauguration; the future work of which is anticipated to promote the quality of scientific research in Vietnam. In the future, CASE will endeavor to work in line with the directions of and be acute to the issues and trends of the international journals and will take greater effort for the development of Asian journals.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Acknowledgments

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SCI article = PhD degree

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I guess graduate students’ doctoral dissertations are being judged too formally these days. Back in our days, the relationship between student, dissertation advisor, and dissertation committee was quite eccentric. We also used to take into account of the student’s character and expenditure while drinking together. Now things have become rational yet inhumane.
Grad students can be crestfallen when their papers are rejected for publication. When this happens, I encourage the student by saying that a 30% success rate is satisfactory, just as it is in baseball. Later, the student starts to make more hits, and has become sophisticated enough to begin thinking about the runs batted in and homeruns. When junior scientists reach this point, we can say they are successful. But I still have a hard time making just a mere hit! Maybe I’m still not a good scientist.

To do experimental research, it is necessary to alternate between working collaboratively and spending time alone. I compared this with a zoo and a botanical garden. For students, the lecture room and lab are like a zoo, while the library is like a botanical garden. And for travelers, a group tour is like a zoo, whereas traveling alone is like a botanical garden. Some people like the zoo; others might like the botanical garden more.
An academic research paper typically consists of four sections. Introduction: What is the question we're dealing with? Methods: What did we do to answer the question? Results: What data did we get to answer the question? Discussion: What is the answer to the question? Since every chapter has the word “question,” we can see that the research question is the most important part of the paper. We should keep in mind the research question, which is the same as the research purpose.

Acknowledgments

This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korean Government (MSIP) (no. 2015R1A5A7037630).
Events in 2016

The Korean Council of Science Editors announces the schedule of the events in 2016. Out of them, the 3rd Asian Science Editors’ Conference and Workshop (July 20-22, 2016) will be held in The Korean Science and Technology Center, Seoul, Korea. Theme of the conference and workshop is ‘Development of Asian STM journals to international level.’ There will be preconference workshop in July 20, 2016. One and half day is allocated for the conference. The precise schedule and the call for papers will be propagated up to end of February 2016 through homepage of the Council of Asian Science Editors available from: http://asianeditor.org/.

Table 1. Schedule of the events by the Korean Council of Science Editors in 2016

<table>
<thead>
<tr>
<th>Event Type</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
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<tr>
<td>Science Editing (twice a year)</td>
<td>Vol.3 No.1 (20)</td>
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<td>Newsletter (4 times a year)</td>
<td>No. 17 (31)</td>
<td>No. 18 (30)</td>
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<td>Annual meeting and conference</td>
<td>2016 Annual meeting and conference (22)</td>
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<td>Editors’ Workshop</td>
<td>2016 Preconference Workshop (21)</td>
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<td>Manuscript Editors’ Training &amp; Workshop</td>
<td>Basic Manuscript Editing (13, 20, 27)</td>
<td>Basic Manuscript Editing (3, 17, 24)</td>
<td>Basic Manuscript Editing (9, 16)</td>
<td>Advanced Manuscript Editing (4, 18)</td>
<td>Advanced Manuscript Editing (1, 15)</td>
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<td>Publication Ethics Workshop</td>
<td>Publication Ethics Workshop (16-17)</td>
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<td>July</td>
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<td>November</td>
<td>December</td>
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<td>Science Editing (twice a year)</td>
<td>Vol.3 No.2 (20)</td>
<td>No. 19 (30)</td>
<td>No. 20 (31)</td>
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<td>Newsletter (4 times a year)</td>
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<tr>
<td>International Conference</td>
<td>3rd Asian Science Editors’ Conference and Workshop (20-22)</td>
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<td>Editors’ Workshop</td>
<td>Editors’ Workshop (2)</td>
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<tr>
<td>Manuscript Editors’ Training &amp; Workshop</td>
<td>Advanced Manuscript Editing (6, 20)</td>
<td>Advanced Manuscript Editing (3, 17, 31)</td>
<td>Advanced Manuscript Editing (7)</td>
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<tr>
<td>Publication Ethics Workshop</td>
<td>Publication Ethics Workshop (9)</td>
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<td>BELS certification examination</td>
<td>BELS Certification Examination (3)</td>
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*Date is noted in parenthesis.*
1. GENERAL INFORMATION

*Science Editing* (Sci Ed) is the official journal of the Korean Council of Science Editors (KCSE). Anyone who would like to submit a manuscript is advised to carefully read the aims and scope section of this journal. Manuscripts should be prepared for submission to *Science Editing* according to the following instructions. For issues not addressed in these instructions, the author is referred to the International Committee of Medical Journal Editors (ICMJE) “Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals” (http://www.icmje.org).

2. COPYRIGHTS AND CREATIVE COMMONS ATTRIBUTION LICENSE

A submitted manuscript, when published, will become the property of the journal. Copyrights of all published materials are owned by KCSE. The Creative Commons Attribution Non-Commercial License available from: http://creativecommons.org/licenses/by-nc/3.0/ is also in effect.

3. RESEARCH AND PUBLICATION ETHICS

The journal adheres to the ethical guidelines for research and publication described in Guidelines on Good Publication (http://publicationethics.org/resources/guidelines) and the ICMJE Guidelines (http://www.icmje.org).

1. Authorship

Authorship credit should be based on 1) substantial contributions to conception and design, acquisition of data, and/or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; 3) final approval of the version to be published; and 4) agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Every author should meet all of these four conditions. After the initial submission of a manuscript, any changes whatsoever in authorship (adding author(s), deleting author(s), or re-arranging the order of authors) must be explained by a letter to the editor from the authors concerned. This letter must be signed by all authors of the paper. Copyright assignment must also be completed by every author.

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4. Conflict of Interest Statement

The corresponding author must inform the editor of any po-
tential conflicts of interest that could influence the authors’ interpretation of the data. Examples of potential conflicts of interest are financial support from or connections to companies, political pressure from interest groups, and academically related issues. In particular, all sources of funding applicable to the study should be explicitly stated.

5. Statement of Informed Consent and Institutional Review Board Approval
Copies of written informed consent documents should be kept for studies on human subjects. For clinical studies of human subjects, a certificate, agreement, or approval by the Institutional Review Board (IRB) of the author’s institution is required. If necessary, the editor or reviewers may request copies of these documents to resolve questions about IRB approval and study conduct.

6. Process for Managing Research and Publication Misconduct
When the journal faces suspected cases of research and publication misconduct such as redundant (duplicate) publication, plagiarism, fraudulent or fabricated data, changes in authorship, an undisclosed conflict of interest, ethical problems with a submitted manuscript, a reviewer who has appropriated an author’s idea or data, complaints against editors, and so on, the resolution process will follow the flowchart provided by the Committee on Publication Ethics (http://publicationethics.org/resources/flowcharts). The discussion and decision on the suspected cases are carried out by the Editorial Board.

7. Editorial Responsibilities
The Editorial Board will continuously work to monitor and safeguard publication ethics: guidelines for retracting articles; maintenance of the integrity of the academic record; preclusion of business needs from compromising intellectual and ethical standards; publishing corrections, clarifications, retractions, and apologies when needed; and excluding plagiarism and fraudulent data. The editors maintain the following responsibilities: responsibility and authority to reject and accept articles; avoiding any conflict of interest with respect to articles they reject or accept; promoting publication of corrections or retractions when errors are found; and preservation of the anonymity of reviewers.

4. AUTHOR QUALIFICATIONS AND LANGUAGE REQUIREMENT

1. Author Qualifications
Any researcher throughout the world can submit a manuscript if the scope of the manuscript is appropriate.

2. Language
Manuscripts should be submitted in good scientific English.

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1. Submission
All manuscripts should be submitted to kcse@kcse.org by the corresponding author.

2. Peer Review Process
Science Editing reviews all manuscripts received. A manuscript is first reviewed for its format and adherence to the aims and scope of the journal. If the manuscript meets these two criteria, it is dispatched to three investigators in the field with relevant knowledge. Assuming the manuscript is sent to reviewers, Science Editing waits to receive opinions from at least two reviewers. In addition, if deemed necessary, a review of statistics may be requested. The authors’ names and affiliations are removed during peer review. The acceptance criteria for all papers are based on the quality and originality of the research and its scientific significance. Acceptance of the manuscript is decided based on the critiques and recommended decision of the reviewers. An initial decision will normally be made within 4 weeks of receipt of a manuscript, and the reviewers’ comments are sent to the corresponding author by e-mail. The corresponding author must indicate the alterations that have been made in response to the reviewers’ comments item by item. Failure to resubmit the revised manuscript within 4 weeks of the editorial decision is regarded as a withdrawal. A final decision on acceptance/rejection for publication is forwarded to the corresponding author from the editor.

6. MANUSCRIPT PREPARATION

1. General Requirements
• The main document with manuscript text and tables should be prepared in an MS Word (docx) or RTF file format.
• The manuscript should be double spaced on 21.6 × 27.9 cm (letter size) or 21.0 × 29.7 cm (A4) paper with 3.0 cm margins at the top, bottom, right, and left margin.
• All manuscript pages are to be numbered at the bottom consecutively, beginning with the abstract as page 1. Neither the author’s names nor their affiliations should appear on the manuscript pages.
• The authors should express all measurements according to International System (SI) units with some exceptions such as seconds, mmHg, or °C.
• Only standard abbreviations should be used. Abbrevia-
Manuscript preparation is different according to the publication type, including original articles, reviews, case studies, essays, editorials, book reviews, and correspondence. Other types are also negotiable with the Editorial Board.

2. Original Articles

Original articles are reports of basic investigations. Although there is no limitation on the length of the manuscripts, the Editorial Board may abridge excessive illustrations and large tables. The manuscript for an original article should be organized in the following sequence: title page, abstract and keywords, main text (introduction, methods, results, and discussion), acknowledgments, references, tables, figure legends, and figures. The figures should be received as separate files. Maximum length: 2,500 words of text (not including the abstract, tables, figures, and references) with no more than a total of 10 tables and/or figures.

- **Title page:** The following items should be included on the title page: 1) the title of the manuscript, 2) author list, 3) each author's affiliation, 4) the name and e-mail address of the corresponding author, 5) when applicable, the source of any research funding and a list of where and when the study has been presented in part elsewhere, and 6) a running title of fewer than 50 characters.

- **Abstract and Keywords:** The abstract should be one concise paragraph of less than 250 words in an unstructured format. Abbreviations or references are not allowed in the abstract. Up to 5 keywords should be listed at the bottom of the abstract to be used as index terms.

- **Introduction:** The purpose of the investigation, including relevant background information, should be described briefly. Conclusions should not be included in the Introduction.

- **Methods:** The research plan, materials (or subjects), and methods used should be described in that order. The names and locations (city, state, and country only) of manufacturers of equipment and software should be given. Methods of statistical analysis and criteria for statistical significance should be described.

- **Results:** The results should be presented in logical sequence in the text, tables, and figures. If resulting parameters have statistical significance, P-values should be provided, and repetitive presentation of the same data in different forms should be avoided. The results should not include material appropriate for the discussion.

- **Discussion:** Observations pertaining to the results of the research and other related work should be interpreted for readers. New and important observations should be emphasized rather than merely repeating the contents of the results. The implications of the proposed opinion should be explained along with its limits, and within the limits of the research results, and the conclusion should be connected to the purpose of the research. In a concluding paragraph, the results and their meaning should be summarized.

- **Conflict of interest:** Any potential conflict of interest that could influence the authors’ interpretation of the data, such as financial support from or connections to companies, political pressure from interest groups, or academically related issues, must be stated.

- **Acknowledgments:** All persons who have made substantial contributions, but who have not met the criteria for authorship, are to be acknowledged here. All sources of funding applicable to the study should be stated here explicitly.

- **References:** In the text, references should be cited with Arabic numerals in brackets, numbered in the order cited. In the references section, the references should be numbered and listed in order of appearance in the text. The number of references is limited to 20 for original articles. All authors of a cited work should be listed if there are six or fewer authors. The first three authors should be listed followed by “et al.” if there are more than six authors. If a reference has a digital object identifier (DOI), it should be supplied. Other types of references not described below should follow The NLM Style Guide for Authors, Editors, and Publishers (http://www.nlm.nih.gov/citingmedicine).

**Journal articles:**

**Books and book chapters:**


Online sources:


Conference papers:
8. Shell ER. Sex and the scientific publisher: how journals and journalists collude (despite their best intentions) to mislead the public. Paper presented at: 2011 CrossRef Annual Member Meeting; 2011 Nov 14-15; Cambridge, MA, USA.


Scientific and technical reports:

News articles:

Dissertations:

- Tables: Tables are to be numbered in the order in which they are cited in the text. A table title should concisely describe the content of the table so that a reader can understand the table without referring to the text. Each table must be simple and typed on a separate page with its heading above it. Explanatory matter is placed in footnotes below the tabular matter and not included in the heading. All non-standard abbreviations are explained in the footnotes. Footnotes should be indicated by \( \textsuperscript{a}, \textsuperscript{b}, \textsuperscript{c}, \ldots \). Statistical measures such as SD or SE should be identified. Vertical rules and horizontal rules between entries should be omitted.

- Figures and legends for illustrations: Figures should be numbered, using Arabic numerals, in the order in which they are cited. Each figure should be uploaded as a single image file in either uncompressed EPS, TIFF, PSD, JPEG, and PPT format over 600 dots per inch (dpi) or 3 million pixels (less than 6 megabytes). Written permission should be obtained for the use of all previously published illustrations (and copies of permission letters should be included). In the case of multiple prints bearing the same number, English letters should be used after the numerals to indicate the correct order (e.g. Fig. 1A; Fig. 2B, C).

3. Reviews
Reviews are invited by the editor and should be comprehensive analyses of specific topics. They are to be organized as follows: title page, abstract and keywords, main text (introduction, text, and conclusion), acknowledgments, references, tables, figure legends, and figures. There should be an unstructured abstract of no more than 200 words. The length of the text excluding references, tables, and figures should not exceed 5,000 words. The number of references is limited to 100.

4. Case studies
Case studies are intended to report practical cases that can be encountered during editing and publishing. Examples include interesting cases of research misconduct and publication ethics violations; experience of new and creative initiatives in publishing; and the history of a specific journal development. They are to be organized as follows: title page, abstract and keywords, main text (introduction, text, and conclusion), acknowledgments, references, tables, figure legends, and figures. There should be an unstructured abstract of 200 words maximum. The length of the text excluding references, tables, and figures should not exceed 2,500 words. The number of references is limited to 20.

5. Essays
Essays are for the dissemination of the experience and ideas of editors for colleague editors. There is no limitation on the topics if they are related to editing or publishing. They are to be organized as follows: title page, abstract and keywords, main text (introduction, text, and conclusion), acknowledgments, references, tables, figure legends, and figures. There should be an unstructured abstract equal to or less than 200 words. The length of the text excluding references, tables, and
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Editorials are invited by the editor and should be commentaries on articles published recently in the journal. Editorial topics could include active areas of research, fresh insights, and debates in all fields of journal publication. Editorials should not exceed 1,000 words, excluding references, tables, and figures. References should not exceed 10. A maximum of 3 figures including tables is allowed.

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8. Correspondence
Correspondence (letters to the editor) may be in response to a published article, or a short, free-standing piece expressing an opinion. Correspondence should be no longer than 1,000 words of text and 10 references.

In reply: If the Correspondence is in response to a published article, the Editor-in-Chief may choose to invite the article’s authors to write a Correspondence Reply. Replies by authors should not exceed 500 words of text and 5 references.

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Video clips can be submitted for placement on the journal website. All videos are subject to peer review and must be sent directly to the editor by e-mail. A video file submitted for consideration for publication should be in complete and final format and at as high a resolution as possible. Any editing of the video will be the responsibility of the author. Science Editing accepts all kinds of video files not exceeding 30 MB and of less than 5 minutes duration, but Quicktime, AVI, MPEG, MP4, and RealMedia file formats are recommended. A legend to accompany the video should be double-spaced in a separate file. All copyrights for video files after acceptance of the main article are automatically transferred to Science Editing.

10. Commissioned or Unsolicited Manuscripts
Unsolicited manuscript with publication types of original articles, case studies, essays, and correspondence can be submitted. Other publication types are all commissioned or invited by the Editorial Board.

Table 1 shows the recommended maximums of manuscripts according to publication type; however, these requirements are negotiable with the editor.

<table>
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<tr>
<th>Type of article</th>
<th>Abstract (word)</th>
<th>Text (word)</th>
<th>References</th>
<th>Tables &amp; figures</th>
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<tr>
<td>Original article</td>
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<td>Review</td>
<td>200</td>
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Maximum number of words is exclusive of the abstract, references, tables, and figure legends.

7. FINAL PREPARATION FOR PUBLICATION

1. Final Version
After the paper has been accepted for publication, the author(s) should submit the final version of the manuscript. The names and affiliations of the authors should be double-checked, and if the originally submitted image files were of poor resolution, higher resolution image files should be submitted at this time. Color images must be created as CMYK files. The electronic original should be sent with appropriate labeling and arrows. The EPS, TIFF, Adobe Photoshop (PSD), JPEG, and PPT formats are preferred for submission of digital files of photographic images. Symbols (e.g., circles, triangles, squares), letters (e.g., words, abbreviations), and numbers should be large enough to be legible on reduction to the journal’s column widths. All of the symbols must be defined in the figure caption. If the symbols are too complex to appear in the caption, they should appear on the illustration itself, within the area of the graph or diagram, not to the side. If references, tables, or figures are moved, added, or deleted during the revision process, they should be renumbered to reflect such changes so that all tables, references, and figures are cited in numeric order.

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☐ Sequence of title page, abstract and keywords, main text, acknowledgments, references, tables, figure legends, and figures. All pages numbered consecutively, starting with the abstract.

☐ Title page with article title, authors’ full name(s) and affiliation(s), corresponding author’s e-mail, running title (less than 50 characters), and acknowledgments, if any.

☐ Abstract up to 250 words for original articles and up to 200 words for reviews, essays, and features. Up to 5 keywords.

☐ All table and figure numbers are found in the text.

☐ Figures as separate files, in EPS, TIFF, Adobe Photoshop (PSD), JPEG, or PPT format.

☐ References listed in proper format. All references listed in the reference section are cited in the text and vice versa.

☐ The number of references is limited to 20 (for original articles, case studies, and essays), 100 (for reviews), or 10 (for editorials, book reviews, and letters to the editor).

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Examples of conflicts of interest include the following: source of funding, paid consultant to sponsor, study investigator funded by sponsor, employee of sponsor, board membership with sponsor, stockholder for mentioned product, any financial relationship to competitors of mentioned product, and others (please specify).

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Date __________________________________________________________________________