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://asianeditor.org). It aims to improve the culture and health of human beings by promoting the quality of editing and publishing scientific, technical, and medical journals. Expected 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 journals 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
- CrossRef
- 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, datacite, QR code, and App
- International standard of journal editing and publishing including
  - International Committee of Medical Journal Editors’ Recommendations
  - Reference styles including Vancouver (NLM) style, APA style, IEEE style, and ACS style
  - Digital publishing in the web and App
  - Education and training of editors, reviewers, and authors
  - Manuscript editing
  - Journal evaluation
  - Bibliometrics and scientometrics
  - Finance of journal publishing
  - History of scholarly journal
  - Copyright and Creative Commons License
  - Open access and public access approaches

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 bimannually. Supplement issues may be published. Total or a part of the articles in this journal are abstracted in ScienceCentral, Directory of Open Access Journal, Google Scholar, and Crossref. Circulation number of print copies is 500 per issue. Full text is freely available from: http://www.escienceediting.org or http://e-se.org. It is the member journal of Council of Science Editors, the Association of Learned and Professional Society Publishers, and European Association of Science Editors. There is no page charge or article processing charge of author side. This journal has been supported by the Korean Federation of Science and Technology Societies, the Government of the Republic of Korea since 2013.
Academic journals and cultural diversity

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

To this issue of Science Editing, Jung-Il Jin, Emeritus Professor of Korea University, has contributed a fascinating article on the early history of the journals published by the Korean Chemical Society (KCS), which is the oldest and largest academic society in Korea [1]. The KCS was established in 1946, a year after Korea became independent from the Japanese colonial rule. It was an extremely chaotic period in Korean history and the launching of the official journal of the KCS, Journal of the Korean Chemical Society, was delayed until 1950. The first issue of the journal was printed in June, 1950, but the Korean War broke out on June 25, just before the copies were going to be distributed. During the war, the office of the KCS was completely destroyed and most of its documents including those copies were burned. Nowadays only one copy of the first issue is being preserved by the KCS. The development of the KCS and its journals followed the same path as that of the Korean society. As the Korean economy began a rapid growth in the 1960s, the KCS and its journals also grew rapidly. Now the KCS has thousands of active members and its journals publish over 1,000 high-quality papers annually. This story illustrates the fact that academic societies and journals are a part of the larger society and its culture and are strongly affected by the events occurring in the society.

During the last few decades, there has been a dramatic progress in international transportation and communication. The spreading of the Internet is an especially important development. Since the Internet became widely available and fast during the late 1990s, it has changed human life extensively. Nowadays it’s a common scene in many countries that a lot of passengers on subway trains spend their time surfing through the Internet using smart phones. The Internet has also changed the way researchers do their research greatly. When I was a graduate student during the late 1980s, the only way to obtain relevant references was to go to a library, look up a particular article in a heavy bound journal volume, and make a photocopy of it. Therefore the quality of the library was very important for the quality of a research institution. These days I rarely go to a library because I can get most references from the Internet very easily. The expansion of online journals and open-access journals are leading to further changes.

The economic growth of the world and increased interaction between countries have led to the movement of globalization, which basically tries to make the world more uniform. The number of academic journals and conferences has increased greatly in recent years. In a large number of international conferences and journals, English is the only permitted language. Due to the great importance of having a fluency in spoken and written English, many countries whose mother tongue is not English are trying to educate their children to learn English as early as possible. The so-called English immersion education that tries to make students think in English, not in their
mother tongue, is an extreme example. However, is this a desirable trend? If this trend continues, it may be possible that many languages disappear in not so far a future, while only a small number of languages survive.

Language is one of the most important ingredients of human culture. Every language has expressions which are unique and cannot possibly be translated into other languages. This is because vocabularies and expressions reflect everything a group of people collectively experience in their natural and cultural environment. Therefore the extinction of a language amounts to the loss of precious human experiences. One of my favorite quotes is from Chief Seattle, “What would man be without the beasts? If all the beasts were gone, man would die from a great loneliness of the spirit.” The word ‘beasts’ can be replaced by many other words including ‘diversity.’ Human beings need diversity for survival. We do not want to live in a boring, uniform and standardized world, where all the trees are of the same kind and everybody speaks the same language.

I have an anticipation that within the next 20 or 30 years, the information technology will be developed sufficiently fast so that interlanguage translation softwares become much more accurate and practical than they are today. If that happens, then journals will be able to publish articles written in any language with no difficulty in communication. At the moment, there exist several full-text databases of scientific literature where a language translation service is provided under the help of an automatic translation program. A representative example is the ScienceCentral, which is a free or open access full-text archive of scientific society journal literature at the Korean Federation of Science and Technology Societies (KOFST) [2]. Users of ScienceCentral are able to read articles in their local languages since its translation program supports 81 languages of the world.

The laws of science are universal. They are the same regardless of the nationality or ethnicity of a scientist. The ways to organize and support the scientific community and to conduct the research, however, are part of the culture of the underlying society. People in different countries inevitably have different experiences, and sharing those will be interesting and useful for everybody. We can get ideas and insights from those experiences.

In the past and present issues of Science Editing, articles on Indonesian, Vietnamese, Japanese, and Korean experiences in scientific publishing have appeared [3–5]. I think these articles are highly valuable and strongly encourage the authors from all over the world to share their unique experiences and thoughts with people in other parts of the world by contributing to future issues of Science Editing.

Conflict of Interest

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

References

Journal editing and publishing practices during the first quarter century since the establishment of the Korean Chemical Society in 1946

Jung-Il Jin

KU-KIST Graduate School of Converging Science & Technology, Korea University, Seoul, Korea

Abstract
This article aims to provide the history of the editing practices and the development of the Journal of the Korean Chemical Society (JKCS) during the first quarter century since its first publication in 1949, following the establishment of the Korean Chemical Society in 1946. This article was based on previous literatures on the history of the Korean Chemical Society published in 1971 and 1999. During the 1940s and 1950s, societal chaos, an economic crisis, and the lack of human resources made it difficult to publish JKCS. Although academic journals were highly valued, it took a long time to develop a systematic approach to compiling, editing, and publishing them. In the 1960s, Korean society entered a stable period and the number of chemists increased; this made it possible, in 1971, to speed up the process of systematizing and advancing academic journal editing in time to celebrate the 25th anniversary of the Korean Chemical Society. When JKCS was first being developed, sacrifices made by a few pioneers were the main driving force of the journal. The history of editing JKCS can be seen as a microcosm of the entire history of Korean academic journal editing.

Keywords
Anniversaries and special events; History; Organizations; Publications; Societies

Introduction
This article aims to provide the history of the editing practices and the development of the Journal of the Korean Chemical Society (JKCS) during the first quarter century since its first publication in 1949, following the establishment of the Korean Chemical Society (KCS) in 1946. The historical events and works by the editorial board of the KCS were described based on the content published on December 31, 1971, entitled “The twenty-five-year history of the Korean Chemical Society” [1]. Some part of the present article was also based on “The fifty-year history

History of the Korean Chemical Society from Its Foundation to the Year 1971

The KCS, one of the oldest academic societies in Korea, was established on July 7, 1946 under the name of the Chosun Chemical Society. Its present name, KCS, has been in use since 1949. In 2016, it will celebrate its 70th anniversary. As one of the largest academic society in Korea, with approximately 5,000 members, the KCS hosts a general assembly, a provisional general assembly, and annual academic conferences in April and October at now. However, the KCS had very humble beginnings. On August 15, 1945, Korea was liberated from the Japanese colonial rule. The ensuing societal and political chaos made it impossible to set up the KCS until a Korean government was officially established in August, 1948. The Society's first general assembly was held in a Seoul National University auditorium on September 6, 1948. A variety of people attended this meeting: KCS members, students, and honored guests including Minister of Education, Minister of Commerce and Industry, and president of Seoul National University. An honored guest said that founding of the KCS was a matter of national importance. After being postponed several times, the KCS' second general assembly was held in the Korea Chamber of Commerce and Industry auditorium in Sogong-dong, Seoul from December 15 to 17, 1949. More than 300 people attended this meeting, which was perceived as successful. Unfortunately, the KCS was disrupted soon after this assembly due to the Korean War originated from North Korean invasion on June 25, 1950. To make matters worse, all of the documents belonged to the KCS were lost when the Department of Sciences, College of Liberal Arts and Sciences, Seoul National University in Cheongnyangri, Seoul where the KCS office was located was burned to the ground during the Korean War. In addition, the KCS was forced to elect new executives when its first president, Taikyu Ree, who had directed efforts to normalize the KCS for two consecutive terms, moved to the United States in September, 1948 (Fig. 1). Later, Dong-Hyuk Ahn and Dong-Il Kim took it in turns to be the president of the Society. Copies of the first issue of the first volume of JKCS (Dae-Han Hwahak Hoeji), were destroyed during the war, just as they were about to be distributed to members. Fortunately, a few copies had already been distributed to some of the leading members and were saved.

While the Korean government was based in a temporary capital in Busan during the Korean War, the KCS campaigned for reinstatement and held its third general assembly at Chung-ang Susan Shiheomjang (Central Experimental Fishery Station) located in Young-do, Busan on February 26, 1951. This assembly was attended by around 100 people including 50 members, all passionate supporters. Remarkably, in spite of very difficult circumstances, KCS members managed to publish 130 copies of the first issue of the second volume of JKCS in July, 1952. Another notable KCS’ achievement was establishing the Committee of Chemical Terminology to undertake the project of defining basic chemical terminology in response to a request from the Ministry of Education of the Korean government in 1951. The fourth general assembly and academic conference attracting around 300 attendees were held from December 13 to 14, 1952 at a temporary school building belonged to the College of Engineering, Seoul National University in Busan. While the KCS was preparing to publish its third issue of JKCS, a truce between the United Nations Command and North Korea/China was signed on July 27, 1953. The Korean government and other organizations moved back to Seoul in August 1953, and the office of the KCS was also moved to Seoul, beginning another journey of development.

After the truce, political and social instability and chaos continued and Korean industry was devastated, despite the government's efforts at post-war recovery. University-level research activities barely existed. On May 16, 1961, General Chung Hee Park took over the government, and started to organize society under a military rule. By forcefully implementing economic development projects, the government succeeded in reviving economic and industrial activities, and the KCS
became active again. In 1963, the KCS joined the International Union of Pure and Applied Chemistry (IUPAC) and began to host special lectures, inviting US scholars.

KCS directors made so much progress that in 1963 they began to publish four issues a year of JKCS, and in 1971 (the 25th year since the organization was founded) five issues a year. One of the most intriguing aspects of the history of the KCS is that its bylaws for editorial board, peer review, and distribution of print copies of the journal were established between 1964 and 1970, while the first instructions to authors were enacted much earlier, on October 10, 1948.


When the KCS was first founded, the president, vice president (1 to 2 people), and several administrative secretaries or executives were responsible for running the organization. The administration consisted of one or two secretaries, responsible for accounting, general affairs, and editing of JKCS. The fact that the first general assembly appointed one editorial secretary (pyonjib gansa), four editorial board members, and six editorial advisors indicated that the KCS had journal publication in mind from the beginning and took it very seriously. Initially, the society did not have enough money to publish JKCS. Three years later, in the second half of 1949, a benefactor donated 500,000 Korean won (the annual membership fee was only 600 Korean won) so that the KCS began work on the first issue of its journal. Receiving manuscripts submission, however, was difficult because of the small number of members (under 100) and the generally depleted research environment. Moreover, it was quite challenging to print scientific journal pages including numeric, symbols, and foreign languages with inadequate printing facilities. After many trials and errors, the KCS succeeded in printing the first issue of JKCS in June 1950 and were ready to distribute it, when North Korea invaded South Korea on June 25. During the war, the building where the KCS office was located burned down and all of its documents were destroyed. For this reason, only a few copies of the first issue of the first volume of JKCS still exist today. Dr. Chwa-Kyung Sung, the editorial secretary who was responsible for journal editing later said in an interview that the review process was very superficial and editorial secretaries rewrote articles so that they would meet the instructions to authors (Fig. 2). Such practices continued until the first issue of the fourth volume was published at the end of 1957. The first issue of the first volume of JKCS contained three reviews and 14 original articles (Figs. 3, 4). Although the cover records the date of publication as December 25, 1949, actual printing and publication of this issue was not completed until June, 1950.

The first instructions to authors of JKCS enacted on October 10, 1948 were simple but exemplary as shown below:

1) The manuscript has not been published in any other journal.
2) The review is the responsibility of the editorial board.
3) The editorial board is able to revise the manuscript.
4) The date that a manuscript arrives at the editorial office is the date of receipt.
5) The length of a manuscript should be equal to or less than 15 pages of wongoji (manuscript paper with squares for four hundred characters) including tables and figures.
6) A manuscript should be written from left to right and correctly not in the running style.
7) The table should be neatly written with a bud (ink brush). Line drawing should be thin.
8) An abstract in Korean should be included on the front page of a manuscript.
9) An Abstract in English, German, or French which is less than 800 characters should be included. Type the abstract with a typewriter if possible.
10) All tables and figures should be presented in English, German, or French.
11) References should be included at the end of the paper, with numbered footnotes in the main text. The follow-
The abbreviations of journals should follow those in Chemical Abstract. Metric units should be written as follows: m (meter), cm, km, m², m³, ℓ, g, kg, mg, t (ton), %, pH, mmHg, cal, kcal, °C, Volt, and Amp.

In the early years, manuscripts were not peer-reviewed as they are today, but had to be accepted by the editorial board. In reality, editorial secretaries had absolute authority; their decision was merely reported to the editorial board. Several years after the first issue of the first volume of JKCS was published, publishing the journal remained challenging, and the publication date was irregular. The first issue of the second volume of JKCS was published on July 10, 1952 including one review, 12 original articles; however, it was just mimeographed, not printed.

Normalization of Journal Editing and Publication Followed by Improvements in Korean Chemical Society Operations (1960-1971)

By the time the KCS celebrated its 15th anniversary in 1961, the situation had deteriorated to the point where publication was almost impossible. In the meantime, however, the number of chemists continued to grow, increasing steadily from approximately 30 just before the independence from Japan to 3,000 in 1954, based in 19 chemistry departments and 9 chemical engineering departments in universities. The number of members did not increase as quickly; the fifth general assembly and academic conference, held in November 1954, was attended by 300 members. In 1957, three years later, the first issue of the fourth volume of JKCS was published with much difficulty. In the following year, research activities in Korea stagnated and no papers were submitted. Even in 1959, only four papers were submitted. After many discussions about strategies for reviving the Society and publishing the journal regularly, the KCS was restructured in 1960 by adopting a ‘sec-
Journal editing and publishing of the Korean Chemical Society

Fig. 5. Chronological change in the number of articles in the parenthesis and page of the Journal of the Korean Chemical Society, and number of Korean Chemical Society members from 1949 to 1971.

Restructuring the instructions to authors
As the number of papers submitted to JKCS increased, the publication process had to be reorganized; this involved revision of the instructions to authors, the review processes, the bylaws of the editorial board, and the bylaws for the Chemical Terminology Committee. Those revisions were overhauled and improved up to the 25th anniversary of the KCS (1971). The document, instructions to authors enacted on October 10, 1948, was revised at the beginning of the year 1970. These instructions comprised of 16 items, of which the following were new or revised:

1) It allowed a paper published in a foreign journal to be published in Korean in JKCS as long as the editorial board approved, and the author clearly acknowledged the secondary publication.
2) It defined the style and format more precisely, for example, title, author's name, research location, address of affiliation, and total length of manuscript.
3) It reinforced that all titles and captions for tables and figures should be written in English, German, or French—even though the main text is written in Korean.
4) It explained references style and citation format in the main text in detail.
5) It recommended to use proper nouns in their original languages and to refer to chemical names rather than product names of medical drugs.
6) It asked to use chemical terminologies suggested by the KCS.

Guideline for review
Review and accepting manuscripts submitted to JKCS were based on the “Guideline for review.” It was enacted in June, 1964; a total of 15 items were revised in December, 1964 and again in December, 1970. The main content was as follows:

1) The reviewers are appointed by the editor-in-chief, and at least two reviewers read the same manuscript to determine whether it is eligible to be accepted.
2) When reviewers’ opinions disagree, the editorial board rereviews the manuscript to decide the acceptance.
3) Manuscripts are considered unsuitable for publication in the following cases: the originality of the paper is not clear; the paper lacks logical, clear reasoning to support its discoveries; and the foreign language writing is not suitable to be understood.
4) The result of a review is one of the three: ‘acceptable’, ‘pending’, or ‘unacceptable’. Pending cases require revision or re-editing.

Bylaws of the editorial board
In JKCS, only the names of editorial secretaries were listed un-
till 1962. In 1963, the names of standing editors were listed, and starting from 1964, the names of editorial board began to appear. One interesting fact is that there were no guidelines defining a standing editor's responsibilities, or the make-up of the editorial board. The first editorial board guidelines were established in December 1970. Before that, following decisions made by the editorial secretaries, standing editors and senior editors were appointed and reception and review of papers were conducted. However, instructions to authors had been established and followed as described earlier. The bylaws of the editorial board, established in 1970, comprised of 11 items. The main contents were as follows:

1) The board consists of an editor-in-chief, associate editor (former editorial secretary), and 9 editorial board members. The editor-in-chief is recommended by the secretary general and appointed by the president. If editor-in-chief nominates associate editors and editorial board members, the president appoints them.

2) The board follows ‘instructions to authors’ and ‘guideline for review’ and are responsible to review and accept manuscripts.

3) One-half of the editorial board members are replaced every year, and the board’s business is reported at a secretaries’ meeting every two months.

Bylaws for the Chemical Terminology Committee

When the KCS was founded, a majority of its members had studied in Japan. Later, chemists who had studied in Germany, France, and the United States began to join the Society. For this reason, chemical terminology was not consistent. It was necessary to establish official terminology, not only to make it easier for the KCS to publish its journal and encourage communications among members but also in response to a request from the Ministry of Education, which published textbooks for elementary and middle schools. In 1951, while moving to Busan during the Korean War, the KCS had established the Chemical Terminology Committee and started the process of standardizing its chemical terminology. However, the KCS members did not make much progress and the project resumed for another four years from 1961 to 1965. In March 1965, the fruits of this project were introduced in the first issue of the fifth volume of Hwa Hack Goa Kong-up Ui Jinbo (Progress of Chemistry and Industry), a news magazine published by the KCS from March 1961. In addition to the introduction to the International Union of Pure and Applied Chemistry terminology, articles were published on ‘How to name inorganic compounds,’ ‘How to name organic compounds,’ and ‘General chemical terminology.’

The bylaws of the Chemical Terminology Committee with seven items were enacted on April 7, 1966. The committee consisted of one chair and several standing committee members. Committee chair was nominated by the committee members and appointed by the president of the society. They had two-year terms and could serve consecutive terms. The committee chair had to report on the project at a general assembly. Later, the committee was specialized into each area of chemistry, and the general committee adjusted the discrepancy between each field’s committee. In 2007, the 5th edition of the Chemical Terminology Dictionary was published in English-Korean and Korean-English.

Characteristics of Early Editorial Practices of the Journal of the Korean Chemical Society

The foundation, stabilization, and growth of the KCS may reflect the history of science in Korea. Editing history of JKCS is also a microcosm of changes in society. Societal chaos in the first few years of the Republic was followed by critical events including the Korean War in June 1950, relocation to Seoul after the cease-fire agreement in 1953, General Park’s 1961 military revolution, and economic development in 1960s. During the thirty-six years of Japanese colonial rule from 1910 to 1945, science and technology education in Korea was very limited; an extremely small number of people had studied abroad, including Japan. When the World War II ended in 1945, there were fewer than 50 Korean chemists specializing in chemistry, chemical engineering, applied science, pharmacology, and other related fields. Only about ten of those had doctorates. The number of attendees at the first general assembly, 53, reflects this situation. Moreover, only a few of the existing chemists had ever been involved in editing academic journals. For this reason, the editing quality of the early journals was mediocre, although the papers in the journal were relatively well formatted. However, despite mistakes, the editing was highly commendable, particularly at such an early stage. One unusual feature was that most of the papers in the first issue of the first volume included references in the main text and did not include abstracts. Research papers describing experimental research were structured as follows: introduction, results of the experiment, and conclusion or summary. The author’s affiliation, date of submission, title of the paper, and author’s name were included before the introduction.

Conclusion

These early editing practices became an example for other academic societies to follow. The KCS is currently publishing one of Korea’s oldest academic journals, JKCS 6 times a year. It also has published the Bulletin of the Korean Chemical Society 12 times a year since 1980. Those two journals have been indexed.
in most well-known international indexing databases. The publication of the monthly newsletter, *Chemistry World*, formerly known as *Progress of Chemistry and Industry*, is continuing for the dissemination of the recent news of chemistry world. Those splendid journal publishing practices are originated from the long history of journals and training acquired during the early stage of very poor publication environment. The editing practices of JKCS could lead the development of chemistry and made a positive contribution to the editing and publishing of Korean academic journals by providing expertise and examples of the best practice.

**Conflict of Interest**

The author has been a member of the KCS since 1964, and has held many different roles, including planning secretary, general affairs secretary, secretary general (1991), president (2000), member of the Academic Committee, and member of the Publication Committee. This article presents the author’s personal opinion, not an official opinion of the KCS.

**Acknowledgments**

This work is supported by a grant from the Korean Council of Science Editors (2014-2).

**References**

Pattern of reference types and impact factors of journals in the Korea Citation Index according to academic discipline

So-Hyeong Kim
National Research Foundation of Korea, Daejeon, Korea

Abstract
The Korea Citation Index (KCI) is a citation database for scholarly journals from Korea, the number of journals of which is 2,168 in January, 2015. This article aims to analyze the pattern of reference types and impact factors of journals in the KCI according to academic discipline. Journals of the KCI were classified according to academic discipline: humanities, arts and sports, social science, science, and multi-disciplinary science. Science journals were sub-classified as natural science, engineering, agriculture & fisheries, and medical health. The pattern of reference types was classified as journal article, book, report/thesis/internet, and others. Changing patterns of the two-year impact factor were described according to the publication year of journals in each discipline. The reference type of each discipline in 2010 showed different patterns. In humanities, the portion of books out of cited literatures was 51.1%, while the portion of books in natural science, engineering, medical health, and agriculture & fisheries fields were 11.0%, 10.0%, 7.0%, and 11.0%, respectively. In social science, the portion of journal articles was 53.1% and books 27.3%. In medical health, the portion of journal article was 87.6%. Journals’ average impact factors in 2011 were 0.9 for social science, 0.8 for arts and sports, 0.55 for interdisciplinary, 0.5 for agriculture and fisheries and humanities, 0.45 for natural science, 0.32 for engineering, and 0.3 for medical health. Researchers in humanities in Korea use books as a primary source of references, while those in other disciplines use journals as a major source of references. Higher impact factors in social science journals and lower ones in science journals mean that social scientists in Korea deal with mainly domestic topics, while scientist deal with global topics.

Keywords
Books; Internet; Journal impact factor; Republic of Korea
Pattern of reference types and impact factors of journals in the Korea Citation Index

Introduction

The Korea Citation Index (KCI) is a literature citation database maintained by the National Research Foundation of Korea (NRF), which comprises of scholarly journals published in Korea [1]. It began to gather the journal literature information starting from 1998. It comprises of 1,075,690 articles and the 16,904,495 references listed in them. The KCI has characteristics as follows: first, journal data are gathered automatically, as publishers of each journal deposit article files to the KCI within 14 days after publication; second, article file deposit to the KCI is allowed only to those journals that passed the selection criteria set by the NRF of Korea and are designated as accredited journals or candidate journals; and third, the KCI is linked to the database of the Korean Researchers Information (KRI) which are linked to their affiliations' databases for researchers’ achievements. The searching service of the KCI on the web was launched in 2008. As a product manager of the KCI, I would like to show some interesting analyses on the reference types and the impact factor according to academic discipline and publication year.

Methods

The number of journals included in the KCI according to the discipline was shown in Table 1. There were 1,762 accredited journals and 406 candidate journals for accreditation in January, 2015. Total 16,904,495 references from 1,075,690 articles in the KCI were classified into four types: journal article, book, report/thesis/internet, and others. The two-year impact factor was calculated according to the following formula:

\[
\text{Sum} = \frac{A+B}{C+D}
\]

Number of cites by KCI articles published in 2011 to journal articles published in 2009 = A

Number of cites by KCI articles published in 2011 to journal articles published in 2010 = B

Number of KCI articles published in 2009 = C

Number of KCI articles published in 2010 = D

2011 Impact factor = \( \frac{A+B}{C+D} \)

The impact factor of journals was classified according to the academic discipline from 2008 to 2011.

Results

Reference types

The reference types according to academic discipline from the 2010 KCI data were shown in Fig. 1. In all disciplines, journal articles were the main reference type, followed by books except in humanities. In humanities, the portion of books in cited references was more than 51.1%, while the portion of books in natural science, engineering, medical health, and agriculture and fisheries were 11.0%, 10.0%, 7.0%, and 11.0% respectively. The proportion of journal articles was 87.6% in medical health fields. In social science, the portion of journal articles was 53.1% and books 27.3%. Out of all reference types from all fields, the internet data had increased continuously from 2008 to 2010, 1.6%, 2.2%, 2.4%, and 2.5%, respectively, while the portion of books had decreased gradually from 2008 to 2010, 27.0%, 25.4%, 24.3%, and 24.3%, respectively.

Impact factor

The impact factor had been increasing in every discipline, as

<table>
<thead>
<tr>
<th>Disciplines</th>
<th>Societies (A)</th>
<th>Accredited</th>
<th>Candidate</th>
<th>Total (B)</th>
<th>B/A (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>763</td>
<td>460</td>
<td>81</td>
<td>541</td>
<td>71</td>
</tr>
<tr>
<td>Social science</td>
<td>1,216</td>
<td>604</td>
<td>161</td>
<td>765</td>
<td>63</td>
</tr>
<tr>
<td>Science</td>
<td>965</td>
<td>553</td>
<td>109</td>
<td>662</td>
<td>69</td>
</tr>
<tr>
<td>Arts and sports</td>
<td>266</td>
<td>91</td>
<td>33</td>
<td>124</td>
<td>47</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>200</td>
<td>54</td>
<td>22</td>
<td>76</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td>3,410</td>
<td>1,762</td>
<td>406</td>
<td>2,188</td>
<td>64</td>
</tr>
</tbody>
</table>

a) Science comprises natural science (mathematics, physics, chemistry, biology, and earth science), engineering, agriculture and fisheries, and medical health.

Fig. 1. Pattern of reference types of journals from 2010 Korea Citation Index according to disciplines.
shown in Fig. 2. The number of journals, of which impact factor was greater than 1.2, grew from 13 in 2008 to 195 in 2011 (Table 2). These journals made up 17.1% of social sciences and 8.9% of arts and sports (Fig. 3).

Discussion

From the results on the reference types described above, it can be said that researchers in humanities in Korea use books as a primary source of references, while scientists use journal articles as a major source of references. Medical health researchers cite journal articles as their references most frequently, because the progress of the knowledge and technology is so rapid that more recent information can be obtained from journal articles rather than from books, reports, or theses. The chronological increase of journal impact factors in the KCI can be explained by several factors. First, the number of accredited journals and papers has increased, therefore a greater number of articles has been exposed to and cited by others. Second, the style and format of the KCI journals has been periodically checked by the NRF so that the references have become more precise. Third, the database quality has increased sufficiently owing to the link between the KRI and the KCI databases that it is now possible to detect small errors. Fourth, the most important thing may be the search function of the KCI that helps researchers to find relevant references from the journals published in Korea. The increase of the impact factor told us that the KCI did its role as an infrastructure for research in Korea.

The higher proportion of social science journals out of the KCI journals, of which impact factor was greater than 1.2 may be due to the following reasons: first, the number of the KCI journals in social science field (765) is the greatest among all disciplines; second, social scientists in Korea use journal articles for 53.1% of their references; and third, social scientists usually deal with domestic topics rather than global topics. On the contrary, scientists usually deal with universal topics, because the methods and materials can be the same to all international researchers. Therefore scientists cite foreign journal articles more frequently, the number of which exceeds that of domestic journal articles.
The KCI had been initially used for internal purposes of the NRF, such as bibliometrics and journal evaluation. The KCI has been a web-based searching database to provide the research products from the journals in Korea since 2008. From May 6, 2014, the KCI database became available from Web of Science, literature citation database maintained by Thomson Reuters so that the literature from Korea can be propagated through an international platform [2]. The KCI will aid in our understanding of weaknesses and strengths of specific fields in Korea. There are a variety of researches covered by the KCI. S-index, which is a novel evaluation index based on the number of citations of each article in a particular journal and the rank of the article according to the number of citations was suggested and tested in the KCI [3]. Kor-Factor was also suggested as a powerful tool for evaluating journals in the KCI [4]. Further researches with KCI data are highly recommended by the NRF.

The following conclusions can be deduced from the results described above. First, there was a heavy reliance on books for researchers in humanities; however, journal articles were main references in all other disciplines. Second, the impact factor has trended upward in all disciplines. The impact factor was highest in social science fields, which could be due to a large number of social science journals in the KCI and the domestic research topics that social scientists usually deal with. Third, low impact factors in science fields, especially in medical health fields, could be explained by the fact that the topics in these fields were global and universal rather than specific to domestic needs.

Conflict of Interest

Author is a product manager of KCI database who presides over the schema construction, data input and out, web design, and analysis of the results. It is based on the author’s opinion and does not reflect the official opinion of the NRF.

Acknowledgments

This work is supported by a research grant from the National Research Foundation of Korea (policy research-2012-064-academic infrastructure promotion).

References

Scientific journal status in Japan: the case of agricultural sciences journals, primarily Grassland Science

Toshihiko Yamada
Field Science Center for Northern Biosphere, Hokkaido University, Sapporo, Japan

Abstract
In Japan, most scholarly journals have been published by scientific societies as in other Asian countries. In those days, Japanese and English language articles were commonly found within the same issue of an academic journal published by scientific societies. Many societies of natural sciences started to publish separate periodicals of international journals with an English version and a domestic Japanese version 20 years ago due to the internationalization of the scientific community. The Japanese Society of Grassland Science has also published both an international journal called Grassland Science and a domestic journal called Japanese Journal of Grassland Science (Nihon Sochigakkai Shi) since 2005. The first impact factor for Grassland Science was announced in 2013. International foreign handling editors represent more than half of all handling editors covering the world. Thus, recently, the number of submissions from foreign countries, especially from China, has drastically increased. With the increase in submissions, it becomes difficult to edit a journal professionally because the editors are generally professors in universities and scientists in national institutes who work as part-time volunteer editors and have been changed frequently. The decrease in the number of members is also a serious problem in many societies of agriculture sciences. The construction of an Asian network for scientific information may be one direction in the near future. Additionally, it is necessary to change to open access journals in order to stabilize the publishing management of the journals.

Keywords
Agriculture; Grassland science; Impact factor; Japan; Scientific societies

Introduction
In Japan, most scholarly journals have been published by scientific societies as in other Asian countries. The impact factor (IF) of a scholarly journal is a measure reflecting the average number of citations to recent articles published in that journal. Although numerous criticisms...
have been made of the use of an IF ranking to compare the quality of journals, the IF value is usually one of the most important motives when authors choose a journal for submission of their manuscript. IF values are scored only for the journals that contain exclusively English language articles. Mixed Japanese and English language articles were common in the same issue of an academic journal published by scientific societies before 2000 in Japan. In those days, many Japanese scholarly journals had no IF values. Thus many Japanese scientists usually submitted high performance papers to the IF scored scholarly journals published in Europe and North America.

Grants-in-Aid for Scientific Research (KAKENHI) is the biggest national government grant to support creative and pioneering research. Considered ‘competitive research funding,’ it aims to substantially develop all fields of basic research across a wide spectrum of scientific fields, ranging from the humanities and social sciences to the natural sciences. One of the programs in this grant is the Publication of Scientific Research Results, which supports the publication of international scholarly journals in order to promote the internationalization of the scientific community. To be awarded the grant, many academic societies decided to publish an international journal that included only English articles. The number of international journals published by academic societies has increased since the grant was initiated in 2000. Now, many soci-

<table>
<thead>
<tr>
<th>Scientific society</th>
<th>International journal</th>
<th>Publisher/submission system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese Society of Breeding</td>
<td>Breeding Science</td>
<td>J-STAGE</td>
</tr>
<tr>
<td>The Japanese Society of Applied Glycoscience</td>
<td>Journal of Applied Glycoscience</td>
<td>E-mail</td>
</tr>
<tr>
<td>Japanese Society of Applied Entomology and Zoology</td>
<td>Applied Entomology and Zoology</td>
<td>Springer</td>
</tr>
<tr>
<td>Japan Poultry Science Association</td>
<td>The Journal of Poultry Science</td>
<td>J-STAGE</td>
</tr>
<tr>
<td>Crop Science Society of Japan</td>
<td>Plant Production Science</td>
<td>J-STAGE</td>
</tr>
<tr>
<td>Weed Science Society of Japan</td>
<td>Weed Biology and Management</td>
<td>Wiley</td>
</tr>
<tr>
<td>The Japanese Society of Sericultural Science</td>
<td>Journal of Insect Biotechnology and Sericology</td>
<td>E-mail</td>
</tr>
<tr>
<td>The Japanese Society of Veterinary Science</td>
<td>Journal of Veterinary Medical Science Advance Publications</td>
<td>J-STAGE</td>
</tr>
<tr>
<td>The Phytopathological Society of Japan</td>
<td>Journal of General Plant Pathology</td>
<td>Springer</td>
</tr>
<tr>
<td>Japanese Forest Society</td>
<td>Journal of Forest Research</td>
<td>Springer</td>
</tr>
<tr>
<td>Japanese Society of Fisheries Science</td>
<td>Fisheries Science</td>
<td>Springer</td>
</tr>
<tr>
<td>Japanese Society of Agricultural, Biological and</td>
<td>Environment Control in Biology</td>
<td>E-mail</td>
</tr>
<tr>
<td>Environmental Engineers and Scientists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japanese Society of Grassland Science</td>
<td>Grassland Science</td>
<td>Wiley</td>
</tr>
<tr>
<td>The Japanese Society of Agricultural Machinery and</td>
<td>Engineering in Agriculture, Environment and Food</td>
<td>Elsevier</td>
</tr>
<tr>
<td>Food Engineers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Society of Agricultural Meteorology of Japan</td>
<td>Journal of Agricultural Meteorology</td>
<td>J-STAGE</td>
</tr>
<tr>
<td>The Agricultural Economics Society of Japan</td>
<td>Japanese Journal of Rural Economics</td>
<td>Mail</td>
</tr>
<tr>
<td>Japan Society for Bioscience, Biotechnology, and</td>
<td>Bioscience, Biotechnology, and Biochemistry</td>
<td>Taylor &amp; Francis</td>
</tr>
<tr>
<td>Agrochemistry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Food System Research Association of Japan</td>
<td>Journal of Food Research</td>
<td>J-STAGE</td>
</tr>
<tr>
<td>The Japan Wood Research Society</td>
<td>Journal of Wood Science</td>
<td>Springer</td>
</tr>
</tbody>
</table>
| J-STAGE, Japan Science and Technology Information Aggregator, Electronic.
eties of natural sciences publish separate periodicals: both an international journal in English and a domestic journal in Japanese. For example, in the Japanese Agricultural Scientific Society, consisting of 52 academic societies in a range of various scientific fields of agricultural sciences, 25 of these societies publish international English journals scoring IF at present time (Table 1).

Recently, editorial works are carried out using an on-line submission system through publishers such as Wiley, Springer, and Taylor & Francis as well as the Japan Science and Technology Information Aggregator, Electronic (J-STAGE) which was developed by the Japan Science and Technology Agency (JST). In some journals, the manuscripts are still submitted by e-mail and mail (Table 1). Open access (OA) journals have been launched recently, but the number of OA scholarly journals is still a few in Japan.

This article describes the outline of Grassland Science published by the Japanese Society of Grassland Science under the umbrella of the Japanese Agricultural Scientific Society.

**Grassland Science**

The Japanese Society of Grassland Science publishes an international journal, *Grassland Science*, through Wiley online (http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1744-697X). This society was established in 1954 and, as of September 30, 2014, has 576 members. The purposes of the society are as follows: Fostering grassland agriculture, addressing issues relative to grassland management for animal production, and progressing grassland- and forage-related crop sciences in Japan.

Members are mainly Japanese scientists with interdisciplinary expertise in forage crop science, forestry, animal science, agribusiness, and additional related fields. In 2005, a mixed language journal published by the society was separated into two types (English and Japanese) of journal, namely, an English version journal ‘Grassland Science’ and a Japanese version journal ‘Japanese Journal of Grassland Science (Nihon Sochigakkai Shi)’.

The first IF value was announced in 2013, and the IF value was 0.554 in 2014. An online editorial system, Scholar One Manuscripts, was adopted in 2011. The editorial board of *Grassland Science* consists of 12 scientists who are Japanese handling editors and 16 scientists who are foreign handling editors covering the world, including: the USA, Germany, Switzerland, New Zealand, Brazil, China, and Taiwan. Managing editors consist of five Japanese scientists. Print copies are only available to library customers. *Grassland Science* will move to online-only publication in 2015.

Both the number of overall manuscripts submitted and manuscripts submitted from foreign countries, especially from China, has drastically increased recently (Fig. 1, Table 2). The reasons for the increase in submissions from China may be as follows: the size of the scientific community for grassland sciences expanded due to the high demand for livestock production in China; the journal’s high IF score as there are no IF journals relating to the scientific field of grassland sciences in China. Many manuscripts from China have been published with the increasing quality recently. The number of papers from China and Japan that have been published in the 2014 issues is almost the same (Table 3). Now, *Grassland Science* has become an international journal including many ar-

### Table 2. Number of papers submitted to Grassland Science sorted by country of the correspondence author

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>31</td>
<td>33</td>
<td>24</td>
<td>27</td>
<td>37</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>China</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>15</td>
<td>29</td>
<td>41</td>
<td>45</td>
</tr>
<tr>
<td>India</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Korea</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>USA</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Argentina</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Asian countries</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>13</td>
<td>8</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Other European countries</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>47</td>
<td>46</td>
<td>77</td>
<td>98</td>
<td>106</td>
<td>112</td>
</tr>
</tbody>
</table>

*Fig. 1. Number of submitted manuscripts in Grassland Science.*
ticles from a variety of foreign countries. Thus, Grassland Science has been successful in terms of the internationalization of a scholarly journal published by the society.

With the increased number of submission recently; however, it becomes difficult to edit the journal professionally because the editors are generally professors in universities and scientists in national institutes who work as part-time volunteer and have been changed frequently. The decrease in the number of members of the society is also a serious problem being faced by many other societies of agriculture sciences in Japan. The number of members of the Japanese Society of Grassland Science has decreased annually as well. Therefore, in the near future, some problems such as a decrease in paper contributions from members and a decrease in financial support from the society may occur.

**Conclusion**

Recently, OA journals have gained in popularity. OA journals are freely available to all readers using internet access. Generally, unrestricted online access to peer-reviewed research articles is available when authors pay an article processing charge. In Grassland Science, OA for an article is available through a one-off author fee as a publishing option. The shift to an OA journal may provide a chance to stabilize the publishing management even when the scientific society is decreasing in membership.

At present, journals published in Europe and North America have a higher IF than those published in Asian countries including China, Korea, and Japan. Thus, scientists in Asian countries want to publish in journals with a higher IF in Europe and North America rather than in journals published in Asian countries. Therefore, establishment of an Asian network for scientific information may be important in the future in order to increase IF in journals published in Asian countries. The distinctive weather feature of the monsoon in Asia is a contrast to other regions such as Europe and North America in terms of the agriculture situation. For example, agriculture is based mainly on rice production in Asia. To cultivate fodder crops, paddy fields are also essential land in Asia. Such scientific information should be dispatched from the Asian scientific network. In order to challenge the journals in Europe and North America, it could be necessary to launch Asian journals with scientific networks among Asian countries for the development of scientific activities in Asian countries.

**Conflict of Interest**

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

**Table 3.** Number of papers published in Grassland Science sorted by country of the correspondence author

<table>
<thead>
<tr>
<th>Year</th>
<th>Japan</th>
<th>USA</th>
<th>Germany</th>
<th>Australia</th>
<th>UAE</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>26</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2009</td>
<td>23</td>
<td>USA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>Japan</td>
<td>China</td>
<td>Germany</td>
<td>Australia</td>
<td>UAE</td>
<td>Other</td>
</tr>
<tr>
<td>2011</td>
<td>Japan</td>
<td>USA</td>
<td>Germany</td>
<td>Australia</td>
<td>UAE</td>
<td>Other</td>
</tr>
<tr>
<td>2012</td>
<td>Japan</td>
<td>USA</td>
<td>Germany</td>
<td>Australia</td>
<td>UAE</td>
<td>Other</td>
</tr>
<tr>
<td>2013</td>
<td>Japan</td>
<td>USA</td>
<td>Germany</td>
<td>Australia</td>
<td>UAE</td>
<td>Other</td>
</tr>
<tr>
<td>2014</td>
<td>Japan</td>
<td>USA</td>
<td>Germany</td>
<td>Australia</td>
<td>UAE</td>
<td>Other</td>
</tr>
</tbody>
</table>

http://www.escienceediting.org
Scientific and technological journals in Vietnam: the current state and direction of development

Banh Tien Long¹, Nguyen Duc Toan¹,²

¹School of Mechanical Engineering, Hanoi University of Science and Technology, Hanoi; ²Department of Mechanical Engineering, Hungyen University of Technology and Education, Hungyen, Vietnam

Abstract

Vietnam is on its way to becoming a more developed country and more integrated into the global community. One of the most important key factors for development is science and technology. Scientific publications bring the most up-to-date information to scientists, researchers, and society. The quality of Vietnam's scientific journals should be increased to international level. Also, the number of high quality articles published in international journals from Vietnam is limited compared to the number of researchers in Vietnam. There is still no Vietnamese journal indexed in Web of Science up to January 2015; while, three journals has been indexed in Scopus. This article discusses the current scenario of scientific and technological journals in Vietnam and the trend of development to international level.

Keywords:
Academies and institutes; Publications; Research personnel; Science; Vietnam

Introduction

Vietnam has hundreds of scientific and technological journals covering hundreds of topics. They have not been indexed in Web of Science, but at least three of them have been indexed in Scopus up to January 2015. The journal evaluation process is usually based on a point scale established by the organization, the State Council for Professor Title. The journal, Advances in Natural Sciences: Nanoscience and Nanotechnology (eISSN: 2043-6262, http://iopscience.iop.org/2043-6262/) published by IOP Publishing and the Vietnam Academy of Science and Technology (VAST), received the highest points in the field of chemistry. Vietnamese societies of science and technology, ministries, research institutes, and universities have published most of the journals [1]. Many universities produce their own journals, most of which are evaluated by the State Council for Professor Title, with the highest point [2]. For example, the Journal of Science and Technology at Technical Universities (Tạp chí Khoa học và Công nghệ các trường
Printed science and technology journals in Vietnam

Fig. 1. The number of articles published in scientific and technological journals in Vietnam from 2001 to 2005.

dại học kỹ thuật, ISSN: 0868-3980, http://www.vjol.info/index.php/DHBK) is published by the Hanoi University of Science and Technology and other 6 universities. The question remains: how can we maintain the scientific quality of journals? In this article, the situation of some top-ranking journals and elaboration of science editors to promote their journals will be introduced. Those may be able to provide the hint for local journal development in developing countries.

Journals in Vietnam as a Work of Valuable Achievement for Scientific Work

About 200 scientific journals from universities and 63 ones from provincial departments were presented at the 27th annual Interdisciplinary Council for Professor Titles of Vietnam, 2014. Out of them, many titles were equipped with ISSN (International Standard Serial Numbers). It is possible since ISSN center of the Ministry of Information and Communication of Vietnam Government provides ISSN for new journal. However, a few journals were peer reviewed. Articles published in those accredited journals were recognized as valuable achievement for professors and researchers. Number of articles published in domestic scientific journals according to year was presented in Fig. 1.

Case of the Journal of Science and Technology at Technical Universities

The process of start and development: It was launched at the beginning of early 1995 [3]. On October 6, 1995, delegates of leaders from four universities agreed to change the title Science and Technology Issues to present title. The four universities involved were the Hanoi University of Science and Technology, the Da Nang University of Technology, Ho Chi Minh University of Technology, and the University of Technical Education, Ho Chi Minh City. Afterwards, Thai Nguyen University of Technical Industry, the Posts & Telecommunications Institute of Technology, and the University of Economy and Technical Industry also participated in this title. Thus, seven leading technical universities in Vietnam now publish and distribute this title.

Legal basis: There was an agreement among the technical universities to launch the journal on October 6, 1995 with present title. There was a Decree of the Minister of Education & Training on January 2, 1996. The publication license was granted by the Ministry of Culture and Information on December 13, 1995, that has been renewed regularly.

Number of articles: In 15 years, the journal has published 79 volumes with 1,700 articles across all fields within science and technology area. Since 2009, the journal has published six issues. Out of six issues, two are only in English. Proportion of each topics was as follows: electrical engineering, 20%; mechanical engineering, 18%; chemistry, 16%; textiles, 10%; and other topics 36%.

Aims and goal: Its aims are to publish research findings, disseminate new products, spread knowledge in the areas of science and technology, and to facilitate technology transfer from the engineering school, the ministry, the institutes, the research centers, the rural offices of the Department of Science and Technology, and cities around the country. Languages are Vietnamese as well as English at now. The urgent goal is to change the language to English only to provide the more visibility of the scientific work from Vietnam.

Prestige of the title: The journal has been highly appreciated by the Science Board of Vietnam, which provides support for training PhD students, and assigns research topics. Articles have been appreciated highly by the State Council for Professor Title.

Problems in publishing the journal were as follows: uneven quality of articles; part-time editorial work; use of email for manuscript transfer; some low quality peer reviews; non-professional journal web site; and multi-disciplinary contents.

Further requirements are needed as follows: employment of professional managing editor or manuscript editor; improvement of peer review process and training of peer review; invitation of international researchers as peer reviewers; timeliness of publication; recruitment of novel content of manuscripts; international diversity of an editorial board; conversion to English only journal from 2016; and inclusion of title to international citation databases such as Web of Science or Scopus.
Cases of Publications Supported by the Vietnam Academy of Science and Technology

Three journals, *Advances in Natural Sciences: Nanoscience and Nanotechnology*, *Vietnam Journal of Mathematics*, and *Acta Mathematica Vietnamica* are part of a project of Vietnam Academy of Science and Technology which aims to improve the quality of journals according to international standards [3,4].

*Advances in Natural Sciences: Nanoscience and Nanotechnology*

It was launched from 2000. This journal made a publishing contract with British press houses, IOP Publishing. Since October 28, 2013, it has published four issues online according to international standards. Each issue features 20 articles, reviewed by two researchers. A total of 80 articles were published and the authors were from the following countries: Vietnam, 42; Asia and Australia, 26; Europe, 8; and USA, 4. According to the announcement of IOP Publishing, the international scientific community has downloaded the articles from this journal. IOP Publishing provided statistics of access to the title for the first 9 months of 2013 (Fig. 2). The access number was 109,448 over the 9-month period. It is now indexed in Scopus.


In Vietnam, this journal has achieved a high position in the field of mathematics, containing articles with high quality research output. Thus far, Springer Publishing Company has published four issues a year. Special issues were released to encourage prestigious mathematicians from around the world to contribute. In 2013, this title issued a call for papers on four special subjects, and received contributions from many mathematicians in various countries including Japan, France, Germany, and the United States. It received more papers in 2013 than in 2012. It was launched from 2009. Figs. 3 and 4 show the fate of manuscripts after peer-review and the countries of authors (Vietnamese or foreign) that it published between 2009 and November 20, 2013. All manuscripts were submitted and processed via online system that Springer Publishing Company designed for this title. The role of the editorial board was strengthened by making the board be responsible for handling manuscripts and critical comments. It began to be indexed in Scopus from October 10, 2013.

![Fig. 2. The access numbers for the first 9 months of 2013 to *Advances in Natural Sciences: Nanoscience and Nanotechnology*.](image)

![Fig. 3. Fate of peer reviewed manuscripts submitted to *Vietnam Journal of Mathematics* received from 2009 through November 20, 2013.](image)

![Fig. 4. Number of manuscripts submitted to *Vietnam Journal of Mathematics* received from 2009 through November 20, 2013 according to authors’ countries.](image)
It has been published with Singapore office of Springer Publishing Company from 2013. Until February 2015, it has published 108 articles online. The ratio of papers submitted by foreign authors increased in 2013 (from January through November 2013) by 86%. The ratio of work reviewed by foreign mathematicians also rose each year, which increased the quality of the articles (Fig. 5). It is the first scientific journal in Vietnam to be accepted by the Scopus Content Selection and Advisory Board in 2012.

Conclusion

Development of science and technology has played key role in helping Vietnam become an industrialized country. Scientific journals are doing a good job of communicating, disseminating, and publishing new discoveries by universities, research institutes, and companies. Also, it brings Vietnamese and foreign scientists work together. Almost all journals in Vietnam are changing and trying to improve their quality. They include the Journal of Science and Technology at Technical Universities published by seven universities. Another three journals published by the Vietnam Academy of Science and Technology were also good examples. The editorial board members are investing their competence in these periodicals in order to enhance the journal quality up to international level. In addition, critical peer reviews was stressed to improve the quality of the journals. With those efforts by editors, more number of Vietnamese journals may be eligible to be indexed in international citation databases such as Scopus or Web of Science. This article may be the first leap to develop scientific and technological journals in Vietnam and to promote their integration with the international scientific community.

Conflict of Interest

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

Acknowledgments

This work is supported by a travel grant from the Korean Federation of Science and Technology Societies, the Government of the Republic of Korea (2014).

References


Fig. 5. Continents of reviewers for Acta Mathematica Vietnamica in 2014 (%).
CrossRef text and data mining services

Rachael Lammey
CrossRef, Oxford, United Kingdom

Abstract
CrossRef is an association of scholarly publishers that develops shared infrastructure to support more effective scholarly communications. It is a registration agency for the digital object identifier (DOI), and has built additional services for CrossRef members around the DOI and the bibliographic metadata that publishers deposit in order to register DOIs for their publications. Among these services are CrossCheck, powered by iThenticate, which helps publishers screen for plagiarism in submitted manuscripts and FundRef, which gives publishers standard way to report funding sources for published scholarly research. To add to these services, CrossRef launched CrossRef text and data mining services in May 2014. This article will explain the thinking behind CrossRef launching this new service, what it offers to publishers and researchers alike, how publishers can participate in it, and the uptake of the service so far.

Keywords
Application programming interface; CrossRef; Digital object identifier; Metadata; Text and data mining

Introduction
Due to its position as a membership organisation for publishers, CrossRef has existing relationships with over 4,000 publishers and societies. These cover all subjects, all business models, and between all of these member publishers they have assigned nearly 70 million digital object identifiers (DOIs) to journal articles, books, conference proceedings and other types of content such as data. CrossRef does not hold the full-text of the content, but it does hold the bibliographic metadata for that content, and the links to the content on the publisher-maintained websites, which makes CrossRef well positioned to provide services that relate to text and data mining (TDM).

Over the past number of years, the issue of TDM has become very important and, because of the registry of unique identifiers and metadata for scholarly content that constitutes CrossRef’s infrastructure, CrossRef is in a unique position to extend that infrastructure to make TDM easier for researchers and their institutions and publishers.
What is Text and Data Mining?

Before going into detail on the CrossRef TDM Services and the problem they are trying to solve, it is important to define what TDM consists of. To use a clear description from PLOS blogs: Text mining is an interdisciplinary field combining techniques from linguistics, computer science and statistics to build tools that can efficiently retrieve and extract information from digital text [1].

In the same way as a person can read an article, in the field of text mining a computer program is reading the literature in order to find links or patterns within it. This may involve reading thousands of papers, which a computer program can do, but would take years for a researcher to do, and even if they could, they may never notice the links between the papers that a more automated process could pick up.

The text mining briefing paper from Joint Information Systems Committee gives a good example of text mining at work. It cites an example from the Journal of the American Medical Informatics Association, where a researcher called Marc Weeber used text mining tools to look at potential uses for the drug thalidomide. The example notes the efficacy of text mining tools in order to define a more refined and therefore useful corpus of content: “Type in thalidomide and you get 2,000 to 3,000 hits. Type in disease and you get 40,000 hits. With automated text mining tools we only had to read 100 to 200 abstracts and 20 or 30 full papers. We’ve created hypotheses for others to follow up,” says Weeber et al. [2].

It’s important to note that Weeber says that the work from his group has ‘created hypothesis for others to follow up.’ Some people have pointed to TDM as being a method that could provide new cures for many diseases, but it is not a magic bullet. The results resulting from this type of exploration still need to be analysed and built upon by researchers to test the hypotheses they raise. And of course the corpus of content used by the text mining tools needs to be the most comprehensive and best available.

Why has CrossRef Launched CrossRef Text and Data Mining Services?

CrossRef has launched this new service to try to help facilitate access to the relevant corpus of content for researchers who are interested in mining academic publications produced by CrossRef members. Currently, some issues exist for researchers trying to get the full text in order to mine it.

The first issue is that researchers find it impractical to negotiate multiple differing agreements with subscription-based publishers in order to get authorisation to text and data mine subscribed content i.e. content the researcher would already have access to via an institutional license or personal subscription. Because they may want to mine thousands of papers that are published by many different publishers, a researcher may need to contact many of these publishers to get access to the text which is a time-consuming, manual process.

From the publisher side, subscription-based publishers find it impractical to negotiate multiple bilateral agreements with researchers and institutions in order to authorise TDM of subscribed content. Again, they need to handle the transactions from researchers on a case-by-case basis, which is not an efficient process. As such, the CrossRef TDM services aim to give all parties standard application programming interfaces (APIs) and data representations that they can use to enable more automated TDM transactions across all publishers, regardless of their business model. The service is free for researchers to use.

Also, because it is a CrossRef service, it uses the DOI. This isn’t an unnecessary layer of complication, but rather provides several benefits. It provides an easy way to de-duplicate documents that may be found on several sites, as processing the same document on multiple sites could skew text and data mining results. It also provides provenance information for the piece of content i.e., a researcher can see it comes from the publisher of the work who will maintain and steward it, and update the DOI to point to the content in its current location if it ever moves.

CrossRef Text and Data Mining Services: In Detail

The main aspect of CrossRef TDM services is the CrossRef TDM API. The API is designed to allow researchers to easily harvest full text documents from all participating publishers regardless of their business model (e.g., open access, subscription). It makes use of CrossRef DOI content negotiation, which will be explained later in this article, to provide researchers with links to the full text of content located on the publisher’s site. As CrossRef does not hold the full-text, the publisher remains responsible for actually delivering the full text of the content requested. Thus, open access publishers can simply deliver the requested content to the researcher, while subscription-based publishers can use their existing access control systems to give access to researchers with subscriptions access to the full text.

To explain what is meant by content negotiation, this feature allows a researcher to request a resource in their preferred format. DOI resolvers already use content negotiation to provide different representations of metadata associated with DOIs. A content negotiated request to a DOI resolver is much like a standard hypertext transfer protocol (HTTP) request, except server-driven negotiation will take place based on the
list of acceptable content types a client provides. So a researcher who prefers to work with the content in extensible markup language (XML), can use the API to request that the XML version of the content be returned to them by the publisher, or if they prefer portable document format (PDF) they can use the API to request that. However, this does depend on what formats of the content the publisher can provide. For example, some publishers only have XML for their more recent content, so may only be able to provide back content in PDF format.

As well as content negotiation, the API also supports rate limiting. Rate limiting is a method used to control the rate of traffic sent or received by a website. The API used with CrossRef TDM services employs a set of standard HTTP headers that can be used by servers to convey rate-limiting information to automated TDM tools. Text mining tools can look for these headers when they query publisher sites in order to understand how to adjust their behaviour so as not to affect the performance of the site. The headers allow a publisher to define a “rate limit window”—which is basically a time span (e.g., a minute, an hour, a day) in which they will return a certain number of full-text documents.

The CrossRef TDM HTTP headers are as follows:
- CR-TDM-rate-limit: 1,500 (the rate limit ceiling per window on requests)
- CR-TDM-rate-limit-remaining: 1,387 (number of requests left for the current window)
- CR-TDM-rate-limit-reset: 1,378,072,800 (the remaining time in to be replaced with Coordinated Universal Time epoch seconds before the rate limit resets and a new window is started)

Note that the values given are example values—each publisher can determine their own values based on the needs of their publishing platform, if they choose to use these headers—use of them is optional. This rate-limiting technique is already used by many APIs, including the Twitter API.

In order for researchers to use the CrossRef API, publishers need to add two new pieces of metadata to their CrossRef DOI deposits. They need to deposit a full-text link in the metadata for each DOI so researchers can follow it to get the full-text at the uniform resource identifier (URI) stated. They should also deposit a license URI in the metadata for each DOI so researchers can use this to find out if they have permission to mine the piece of content, and under what conditions they can do so. There is no charge for publishers to deposit this additional metadata with CrossRef.

The section of a CrossRef XML deposit containing these extra pieces of TDM information is shown below.

```xml
<crossmark_domains>
<crossmark_domain>
<domain>escienceediting.org</domain>
</crossmark_domain>
</crossmark_domains>
<crossmark_domain_exclusive>true</crossmark_domain_exclusive>
<custom_metadata>
<assertion name="published" label="Published" group_name="publication_history" group_label="Publication History" order="0" start_date="2014-08-18"</assertion>
<ai:program xmlns:ai="http://www.crossref.org/AccessIndicators.xsd" name="AccessIndicators">
<ai:license_ref applies_to="tdm" start_date="2014-08-18" http://creativecommons.org/licenses/by-nc/3.0/</ai:license_ref>
</ai:program>
</custom_metadata>
<doi_data>
<doi>10.6087/kcse.2014.1.51</doi>
<resource>
</resource>
<resource>
</resource>
</doi_data>
<ai:program xmlns:ai="http://www.crossref.org/AccessIndicators.xsd" name="AccessIndicators">
<ai:license_ref applies_to="tdm" start_date="2014-08-18" http://creativecommons.org/licenses/by-nc/3.0/</ai:license_ref>
</ai:program>
</doi_data>
</crossmark>
</crossmark_policy>
10.6087/escienceediting.org/crossmark_policy
```

Specifically, the following section relates to the license information for the article:

```xml
<ai:program xmlns:ai="http://www.crossref.org/AccessIndicators.xsd" name="AccessIndicators">
<ai:license_ref applies_to="tdm" start_date="2014-08-18" http://creativecommons.org/licenses/by-nc/3.0/</ai:license_ref>
</ai:program>
```

This access indicators program means that publishers can provide a link to the license the article is published under, in the case of Science Editing, this is a Creative Commons CC-BY license which allows the content to be mined. By using the start_date information, a publisher can also represent embargo information—so if a paper is published under one license for a certain period of time, then changes to another, the start date can be used to show the date from which the new license will apply.

The following section relates to the full-text links that publishers should add to point the researcher to the full-text of
the content:
<collection property = "text-mining" setbyID = "kcse">
 <item>
 <resource content_version = "tdm">
 </resource>
</item>

Note that by using the collection_property element, a publisher can define the specific purpose of the full-text link (in this case for TDM). CrossRef members may also deposit full text links for use by crawlers like Google, and the iParadigms crawler (for CrossCheck indexing). Because the API supports content negotiation, publishers can deposit full-text links to more than one version of the full-text, as shown in the example below:
</collection>
<collection property = "text-mining">
 <item>
 <resource mime_type = "application/pdf">
 </resource>
</item>
</collection>

In this instance, the researcher can choose to use either the PDF or XML version of the article, and request either via content negotiation. More detailed information on formatting the XML relating to the license information is available on the CrossRef TDM support site [3].

If a publisher is an open access publisher or if they allow TDM as part of their standard subscription agreements, then that is all a publisher needs to do to enable their content for TDM via CrossRef. They can deposit those two additional pieces of metadata and optionally implement rate-limiting. They can then point researchers interested in mining their content with the CrossRef TDM services to the relevant page on the CrossRef TDM support site [4] so they can find information on how to use the API, and the commands they can use to call the full-text content. The entire workflow, showing

Fig. 1. The CrossRef TDM workflow. URI, uniform resource identifier; PDF, portable document format; XML, extensible markup language; DOI, digital object identifier; OA, open access; TDM, text and data mining.
how CrossRef, publishers and researchers combine to offer and make use of this service is shown in Fig. 1.

**The Click-through Service**

Publishers who require researchers to agree to a specific set of terms and conditions (T&Cs) before they are allowed to text and data mine content that they otherwise have access to (e.g., through an existing subscription) will need to make use of CrossRef’s click-through service, which handles that additional transaction. The use of the click-through service extends the CrossRef TDM services workflow, and the additional aspects are shown in Fig. 2.

**The Click-through Service for Publishers**

The click-through service allows publishers to upload and manage click-through TDM agreements for their content. It also allows publishers to verify with the service that a researcher has accepted one or more relevant registered T&Cs (via an API token). Publishers can go to the service at: https://apps.crossref.org/clickthrough/publishers/#/login and log in using their existing CrossRef credentials.

Once logged-in, publishers can upload and manage their T&Cs. Every agreement registered must have a unique name, a short description of the T&Cs, a unique URI which points to a copy of these terms on the publisher’s site and the full text of the T&Cs. When these are uploaded, the CrossRef member can ‘publish’ the agreement, thus making it available in the click-through service for researchers to be able to review these terms and decide whether to agree to them.

For the purposes of version control, once an agreement has been published and accepted by even one researcher, it can’t be edited or deleted, i.e., the T&Cs cannot change after someone has already agreed them. However, they can be disabled, and a new version then published to reflect any updated terms for researchers.

**The Click-through Service for Researchers**

If a researcher is interested in mining content from a publisher who requires them to sign an additional license to use their content for mining purposes, then they can review these licenses in the click-through service.

Fig. 2. The extended CrossRef TDM services workflow. URI, uniform resource identifier; T&Cs, terms and conditions; TDM, and data mining; DOI, digital object identifier; PDF, portable document format; XML, extensible markup language; API, application programming interface.
A researcher can log into the click-through service here: https://apps.crossref.org/clickthrough/researchers/#/login, using their Open Researcher and Contributor ID (ORCID) credentials. If they do not have an ORCID or profile, they will need to register for one here: https://orcid.org/register before using the service. The use of the ORCID means that the researcher can be disambiguated from other researchers with the same/similar names, they can use one set of log-in information for multiple services and it means that CrossRef is not storing this sensitive information.

Once registered, a researcher can click on the licenses that apply to the publishers they are interested in to view the specific T&Cs registered. They can then accept or reject the license, or choose to review it again later.

Once a researcher has accepted any license via the click-through service, they are issued with an API token. They can then use this API token in their TDM tools when they request the full-text of the article from the publisher to identify themselves to publishers. It is worth noting that a researcher can regenerate their personal token at any time if they feel that it has been compromised.

This researcher API token combines with a publisher API token that a publisher is given through their version of the click-through service. Using the publisher API token, the CrossRef member can check to see which licenses have been accepted by a particular researcher using an HTTP request. Examples of the request that a publisher can make are available on the click-through service support site [5]. CrossRef doesn’t advise publishers to query the API with every single request they get, but rather to do so every certain number of requests, or once every set length of time to avoid overloading the API. The aim of the click-through service section of CrossRef TDM services is to help provide machine-to-machine automated access for recognised mining, by enabling an easy mechanism for the use of supplemental licences for TDM.

Progress of CrossRef Text and Data Mining Services

As of November 2014, CrossRef has seen 17 publishers sign up to CrossRef TDM services, and publishers can register their interest in participation or let CrossRef know when they expect to start depositing the TDM-specific metadata with CrossRef via a web-based contact form [6].

Some publishers have already started to deposit this metadata with CrossRef—Elsevier has populated over 11 million DOIs with the license information and full-text links necessary for CrossRef TDM services, and Hindawi has added this information to over 120,000 of their journal articles. As further publishers join the service in late 2014 and early 2015, CrossRef expects this number to grow quickly. There is no cost for publishers to participate in CrossRef TDM services in 2014, and a decision will soon be communicated to CrossRef members regarding any proposed charges for 2015. As mentioned earlier in this article, there is no charge to researchers for using the service.

Conclusion

This article has aimed to explain the thinking behind CrossRef’s TDM services and the technical aspects involved in implementing the service for CrossRef members. It is hoped that this service will see healthy publisher participation and therefore become a useful resource for the TDM community, reducing the time and effort involved for all parties interested in supporting this process.

References

Applying Open Researchers and Contributors ID in scholarly journals

Jeonghee Im
M2 Community, Seoul, Korea

Abstract
Open Researchers and Contributors ID (ORCID) launched its registry services in October 2012. Consequently, adding personal information to the ORCID registry became routine work for researchers. To add ORCID to an online article, the tag `<contrib-id contrib-id-type="orcid">` needs to be included in the Journal Article Tag Suite extensible markup language file, if such a file has been produced by the publisher. Subsequently, all co-authors’ ORCID can be easily and conveniently collected and then integrated into the manuscript management system. In the current age of information and the Internet, journals need to keep pace with the surge of new standards and technologies. Editors should be able to accept and apply these new systems rapidly.

Keywords
Open Researchers and Contributors ID; Scholarly publishing

Introduction
The Open Researchers and Contributors ID (ORCID) registry was launched on October 16, 2012 (http://orcid.org). This article presents a description of ORCID and a step-by-step guide for adding ORCID data to Journal Article Tag Suite (JATS) extensible markup language (XML) files.

Definition of Open Researchers and Contributors ID
ORCID represents an open, non-profit, community-driven effort to create and maintain a registry of unique identification for researchers. It is operated by ORCID, Inc., which has made the ORCID registry available free of charge to individuals. ORCID records hold non-sensitive information, such as the name, email, affiliation, and research activities of authors. ORCID offers two core functions: first, a registry provides a unique identifier and manages a record of activities; second, an application programming interface supports system-to-system communication and authentication [1]. Through ORCID, researchers can maintain and modify their research using their unique identifier. They can choose the information from their research results...
that they would like to share, including setting the range of their publicly available excerpt. With the permission of the researchers concerned, references can be downloaded in a standard form. Further, all development programs are disseminated by an open-source software license.

The structure of an ORCID is as follows: http URL+16-digit number. An example is http://orcid.org/xxxx-xxxx-xxxx-xxxx or http://orcid.org/0000-0002-8559-8640. The numbers from 0000-0001-5000-0007 to 0000-0003-50000-0001 are issued and assigned randomly.

**Why Add Open Researchers and Contributors ID**

Many researchers inevitably share the same name, and as such, exact identification is necessary. Other systems have been proposed and used, including Thomson Reuters’s Researcher ID and Elsevier’s Scopus. As these two systems are operated by commercial companies, the founders of ORCID sought to provide a general, public registry system. An ORCID contains not only the published or presented works of authors but also information on authors’ bibliography, education, and funding history. For researchers registered in ORCID, their publications can be traced by institutes easily without needing to tap into the database of other institutions. As the ORCID system is adopted by many scholarly journals, authors can enjoy the advantages of having their complete records in ORCID.

**How to Add Researcher Information to Open Researchers and Contributors ID**

ORCID registration can be done at https://orcid.org/register. To add information to ORCID, researchers should sign in to the system through https://orcid.org/signin. Adding articles to ORCID is easy as long as they are registered in CrossRef, Scopus, Web of Science, Europe PubMed Central, and other platforms.

**Coding of the Open Researchers and Contributors ID Tag and Integration into the Journal Article Tag Suite Extensible Markup Language File**

The ORCID appears on the print copy either at the top or bottom of an article. It may be indicated, for example, as corresponding author: Sun Huh (http://orcid.org/0000-0002-8559-8640), or ORCID, Sun Huh: http://orcid.org/0000-0002-8559-8640.

Fig. 1. shows an ORCID appearing on the online version of a paper. To integrate an ORCID into the online version of the paper, certain tags need to be added to the JATS XML as shown in the following example for Sun Huh at the Department of Parasitology and Institute of Medical Education, College of Medicine, Hallym University, Chuncheon, Korea:

```
<contrib-group>
  <contribute contribute-type="author">
    Sun Huh
    <orcid>0000-0002-8559-8640</orcid>
    Department of Parasitology and Institute of Medical Education, College of Medicine, Hallym University, Chuncheon, Korea
  </contribute>
</contrib-group>
```

Fig. 1. Screen shot of an article that has an ORCID (Open Researchers and Contributors ID) tag (Available from: http://dx.doi.org/10.3946/kjme.2008.20.4.375).
If XML was not used in web publication, hypertext markup language coding can be added as follows:

Sun Huh <a href="http://orcid.org/0000-0002-8559-8640" alt="http://orcid.org/0000-0002-8559-8640" title="http://orcid.org/0000-0002-8559-8640" target="_blank"> <img src="/image/icon/orcid.gif" valign="middle" /></a>

In this coding, orcid.gif is an icon of ORCID. Clicking this icon leads to the author at ORCID site.

**Integration of Open Researchers and Contributors ID into the Manuscript Management System**

The best way to add an ORCID tag is to integrate the ORCID info into the manuscript management system or e-submission system involved, as shown in Fig. 2. At present, many manuscript management systems provide an ORCID field on author information in their page.

**Conclusion**

Journal publication continues to adopt new international standards and information systems, bolstered by advances in information technologies, especially the Internet. At present, the online version of journal articles reaches a wider audience and provides more convenient than the print version. To survive in the information and Internet age, journals should be equipped with all the new systems for organizing data, including ORCID, which is simple to be introduced in online journal publishing, requires the inclusion of one ORCID tag only, namely <contrib-id contrib-id-type="orcid" /> in the JATS XML file. Collectively, authors are encouraged to add their ORCID information by integrating an ORCID field in the manuscript management system.

**Conflict of Interest**

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

**Acknowledgments**

This work is supported by a research grant of the National

---

**Fig. 2.** Integration of author’s ORCID (Open Researchers and Contributors ID) information into an e-submission system (Available from: http://submit.jeehp.org/).
Research Foundation of Korea (policy research-2013-003-academic infrastructure promotion) and Korean Federation of Science and Technology Societies (KOFST-2013), the Government of the Republic of Korea.

Reference

1. ORCID. What is ORCID? [Internet]. Bethesda, MD: ORCID [cited 2014 May 10]. Available from: http://orcid.org/node/47
Why are retractions so difficult?

Elizabeth Wager

Sideview, Princes Risborough, Buckinghamshire, United Kingdom

Introduction

Retractions of published work from journals have moved from being a rather arcane topic of debate for those obsessed with publication ethics to having their own blog (http://retraction-watch.com/) and increasing media attention. However, as Retraction Watch clearly shows, journals’ policies and practices are far from uniform and there is evidence that not all seriously flawed work is retracted. The Committee on Publication Ethics (COPE) developed retraction guidelines in 2009 [1], and guidance is also available from other organizations such as the Council of Science Editors [2], yet, despite these guidelines, retractions continue to be regarded as problematic by editors and publishers. This essay addresses some of the difficulties associated with retractions.

Why are Retractions Important?

Journal editors and publishers should take responsibility for everything published in their journal. Therefore, if anything misleading, incorrect, or fraudulent is published, it is important that the record is corrected so that readers are not misled. For small errors, such as a misplaced figure legend or an omitted reference, a correction is usually sufficient. Some publishers separate errors made by authors from those made by the journal and may use the terms ‘erratum’ (plural, errata) or ‘corrigendum’ (plural, corrigenda) to distinguish these, but for practical purposes, and for most readers, they mean the same thing. However, when large sections or even entire articles are affected, either by misconduct or by honest errors, then a retraction is usually required.

The COPE retraction guidelines state that the purpose of retractions is to correct the literature rather than to punish the authors. Nevertheless, most authors take a negative view of retractions and may fear that they will harm their reputation. It is therefore important that journals have policies to ensure that retraction is used fairly and consistently and also to ensure that the reason for any retraction is always clearly stated. Researchers should be encouraged to notify the journal if they discover a problem with their work and, if this was due to an honest error, should not fear that readers might infer that the resulting retraction was a sign of misconduct. Similarly, authors should not be stigmatized for administrative errors caused by the journal (e.g., if the same article is accidentally published twice). Journals therefore have a duty to ensure that retractions due to misconduct and those due to honest errors are clearly distinguished.
Why do Journals Need Retraction Guidelines?

Journals do not always handle retractions consistently or appropriately. Two studies have examined medical journals’ performance in proven cases of misconduct. The first study considered journals’ responses to cases of data fabrication committed by Dr. Eric Poehlman [3]. His case had been investigated by the University of Vermont, Burlington, USA, which contacted the journals that had published affected articles in September 2003. The misconduct was also confirmed by the US Office for Research Integrity in March 2005 and Poehlman was jailed in 2006 for submitting falsified data in federal grant applications. Nevertheless, Sox and Rennie showed that by November 2005, five of the 10 journals that had published the discredited work had not issued a retraction. I rechecked the situation in 2013 and found that, of the 9 articles listed on Medline, only 6 have been retracted (one has an erratum, one has a comment, and one has no indication of any problem) (unpublished observation).

The second study considered journals’ responses to the discovery that the German anesthetist, Dr. Joachim Boldt had not received ethical approval for a large number of studies that he had published in several journals [4]. This case was less clear-cut than that of Poehlman, because the initial investigation by the German authorities considered only the lack of ethical approval and did not consider evidence of other problems such as fabrication or falsification. (However, since the initial investigation, further problems have been confirmed [5]). We showed that 9 articles remained unretracted at least two years after the investigation. We also examined the retraction notices in detail and found that only 5 of the 79 published notices fully complied with the COPE recommendations. These two studies clearly show that, even when faced with conclusive findings from well-conducted investigations, some journals fail to retract fraudulent publications.

Another reason why clear retraction guidelines are helpful is that authors (and readers) need to understand publication conventions, and having a clear policy will help editors explain why, in a particular circumstance, a retraction is, or is not, required. Authors (and readers) occasionally demand retractions for inappropriate reasons (e.g., authorship disputes or controversial articles with which they disagree) or object strongly to a proposed retraction of their work. These situations are easier to handle if the journal has a clear, written policy to which the editor can refer. However, a recent study suggests that only about 65% of the 200 biomedical journals with the highest impact factors have a written retraction policy [6].

Problems with Retractions

Given the evidence that journal retraction policies and practices are inconsistent, one qualitative study has tried to discover editors’ views about retractions and the reasons why they may be problematic [7]. We asked editors who had recently retracted articles to describe the process. One editor stated that each retraction was “painfully peculiar.” Several editors mentioned that having clear guidelines would be helpful.

It is hard to understand why, when faced with clear evidence of misconduct from a well-conducted institutional investigation, an editor would not retract any affected work. However, difficulties may arise if the authors’ institution either refuses to investigate well-founded concerns, or editors fear that an investigation was not fair or thorough. Problems can also arise if institutions refuse to share the findings of their investigations with editors, or insist that they must remain confidential and cannot be published.

Journals are not set up, either legally or practically, to investigate misconduct allegations and, in most cases do not have access to the necessary evidence, for example to determine whether data fabrication or falsification has occurred. Even if the journal does have evidence strongly suggesting misconduct, for example as a result of using text-matching software which can indicate plagiarism, or image screening techniques which can highlight inappropriate image manipulation, publishers may be concerned about legal liability if a journal retracts an article without reference to an institutional investigation. For example, if a journal simply reports that an investigation by University X has determined that misconduct (e.g., data fabrication) relating to a publication has occurred, this factual statement would not be considered defamatory or libelous. However, if no investigation has occurred, it may be necessary for the journal to accuse the author(s) of misconduct and, in theory, publication of such a statement could make the journal liable for legal action by the author(s). When the COPE retraction guidelines were developed, we took advice from senior legal staff at major publishers who informed us that they did not know of any cases in which a journal had been sued in such circumstances. However, even the threat of legal action may be enough to deter some publishers (and may incur costs, such as legal advice, even if such action is unlikely to succeed) [4].

Another problem faced by editors are lengthy, on-going investigations. In cases of suspected serious misconduct, editors may want to alert readers to possible problems with an article but may not feel it is appropriate to retract the publication until the investigation has concluded. In such cases, the publication of an ‘Expression of Concern’ may be helpful and is recommended by COPE.

Editors need to be alert if authors request a retraction, claim-
ing that it is due to honest error, when, in fact, their case is under investigation and thus hoping to avoid a retraction statement which identifies their misconduct. COPE therefore recommends that editors should check with the authors’ institution that the case is not under investigation and that there is no evidence that the honest error claimed by the authors was, in fact, deliberate misconduct.

Studies showing that journals do not always retract articles correctly have also revealed practical and technical difficulties with retractions. It is important that readers are alerted to the retracted status of an article, however it has been accessed. This means that databases should be informed as well as making sure that journal tables of contents and the article itself are clearly marked. Publishers can regulate only those websites that they control, and obviously cannot be responsible for versions of the article that may appear on independent sites such as institutional repositories. It is therefore possible that preprints or personal archive versions of retracted articles may exist that do not indicate that the article has been retracted. One very helpful solution to this problem is the use of Crossmark (http://www.crossref.org/crossmark/). This system allows publishers to indicate the most up-to-date, ‘publisher curated’ version of the article. By clicking on the Crossmark logo, readers who have downloaded a PDF can check whether updates (including retractions and corrections) are available. It is hoped that, as use of Crossmark becomes established, the well-documented phenomenon of articles continuing to be cited after they have been retracted will be reduced [8].

Conclusion

Journal editors and publishers have a duty to retract unreliable publications. However, it is also important that journals have policies to ensure that retraction is used appropriately and consistently. Difficulties can arise if authors’ institutions are uncooperative and further work is needed to develop relationships and foster trust between journals and institutions [9]. Applied and executed appropriately, retractions are a sign that a journal takes its responsibilities to publication integrity seriously and should never be considered a sign of failure. Peer review cannot be expected to detect all cases of fraud (especially if it is well concealed) or honest errors (which are not even initially visible to authors). Therefore retractions do not necessarily imply failures in the peer review process, although it is always good to learn from experience and consider how such problems might be detected in the future.

However, retractions may raise some practical difficulties and often require considerable amounts of editorial time. The COPE guidelines were developed to offer practical guidance and I encourage editors to use them to develop policies appropriate for their particular journal.

Conflict of Interest

I am the first author of the COPE retraction guidelines and was Chair of COPE from 2009 to 2012. I work as a freelance publications consultant providing training to authors and editors on publication ethics and have advised several publishers on their policies.

References


Introduction of the Board of Editors in the Life Sciences exam to Korea and its significance

Eun Jung Kim
Korean Council of Science Editors, Seoul, Korea

Introduction

In October 2013 and September 2014, the Korean Council of Science Editors (KCSE) organized the Board of Editors in the Life Sciences (BELS) certification examination in Korea. The total number of BELS examinees was 30 in 2013 and 27 in 2014. They comprised of domestic and foreign editors, manuscript editors, society staffs, and librarians. Nine of the examinees (2 in 2013, 7 in 2014), six of whom were Koreans, passed the exam. I had worked for preparation of these exams for two years as a general manager of KCSE. I would like to describe the process up to its introduction, exam registration process, and the significance of implementing the first BELS examination in Korea.

The Board of Editors in the Life Sciences Certification Examination

In the early 1980s, ten editors, who were responsible for the editorial and publication functions in various organizations, came to an agreement that there was a need for a program that would strengthen the professionalism of editors by evaluating their editing abilities, and hence enhance the quality of academic journals. With this in mind, they developed a qualification certification program and, with the establishment of BELS in 1991, conducted the first BELS certification examination [1]. The BELS examination is a holistic evaluation of the professional knowledge in the fields of life sciences, English proficiency, and manuscript editing proficiency. Applicants are required to solve 100 to 110 multiple-choice questions within three hours, and must achieve 65% or higher to pass. From 1991 to 2014, there had been 148 BELS examinations. Those exams have contributed to improve the professionalism of over 1,200 manuscript editors in 23 countries in the field of life sciences (personal communication with Leslie Neistadt).

Motivation for Implementation of the Board of Editors in the Life Sciences Examination in Korea

KCSE launched in September 2011, with the goal of “promoting the quality enhancement of scientific journals and contributing to scientific and technological development.” The KCSE started educating journal editors as the first step towards enhancing the quality of academic
Once the date was fixed, the KCSE established an eight-week
BELS exam in Korea would be performed on October 19, 2013.

willing to take the exam, which led to the confirmation that the first
exam if it were conducted in Korea. Exactly 20 of the attendees were
to see how many people would be willing to take the BELS
needed to take the exam. “A survey was done after her speech
how the BELS examination was established, and what is
"What kind of committee BELS is, with what history, why and
Leslie Neistadt was invited as a speaker. She gave a talk titled
society staffs and employees of publishing companies attended,
editors. In the Editors’ Workshop held in September 2012,
purpose of the BELS examination to editors and manuscript
exam. KCSE decided to organize a meeting to explain the
difficult to estimate how many would be willing to take the
part of the approval process for implementing the exam in
Sun Huh and Hye-Min Cho began to discuss how to implement
BELS exam in Korea through email conversations
with Leslie Neistadt, the secretary general of the BELS. As a
part of the approval process for implementing the exam in
Korea, the BELS imposed the condition that there should be
at least 20 applicants for the exam. KCSE immediately
attempted to count the number of applicants. However, since
even the name of the exam was not familiar to Koreans, it was
difficult to estimate how many would be willing to take the
exam. KCSE decided to organize a meeting to explain the
purpose of the BELS examination to editors and manuscript
editors. In the Editors’ Workshop held in September 2012,
where many editors, manuscript editors, publishers, and
society staffs and employees of publishing companies attended,
Leslie Neistadt was invited as a speaker. She gave a talk titled
“What kind of committee BELS is, with what history, why and
how the BELS examination was established, and what is
needed to take the exam.” A survey was done after her speech
to see how many people would be willing to take the BELS
exam if it were conducted in Korea. Exactly 20 of the attendees were
willing to take the exam, which led to the confirmation that the first
BELS exam in Korea would be performed on October 19, 2013.

Process of Implementation of the Board of Editors in the Life Sciences Exam in Korea

Eligibility requirements and exam processes were explained in
detail. The registration period for the BELS exam is up to two
weeks before the exam date, and applicants were permitted to
take the exam only upon successful registration. Applicants
must meet all the eligibility requirements before they can
register. Those requirements are a bachelor’s degree or higher
and at least two years’ editing experience.

In addition to the application form, BELS requests some
supplementary documents during the registration in order to
assist whether applicants meet these eligibility requirements.
A copy of a certificate of graduation or report card must be
submitted to satisfy the first criterion. Three letters of rec
recommendation from the editor of a relevant academic journal, a
fellow editor at work, and his or her employer must be sub
mitted to satisfy the second criterion. The application form
can be downloaded from the BELS home page [2]. There is
no set template for documents other than the application
form. Documents must be written in English and be submitted
to a BELS officer by mail or email, along with 50 US dol lar
for registration. It takes about a week for confirmation of
successful registration, so it is preferable to register in ad
vance. If the applicant receives a registration form from BELS
after submitting documents, he or she is eligible to take the
exam. The registration form is not available to the public on
the BELS website. The likely reason for this is to enable BELS
to maintain control over who is eligible to take the exam.
Upon receiving the registration form, applicant must fill out
the form and submit it to BELS, along with the fee of 200 US
dollars. Once the registration is confirmed, BELS sends the
applicant an admission slip and a receipt (Fig. 1). The applica
tion fee of 50 US dollars and the registration fee of 200 US
dollars are payable through mail transfer, credit card payment,
or wire transfer.
Introduction of the BELS exam to Korea and its significance

On October 19, 2013, thirty applicants gathered at the Seoul Center of College of Medicine, Hallym University to take the exam. BELS officer checked the test papers and reorganized the seating plan. Ten minutes before the start of the exam, the examinees, who were sitting in the waiting room, were asked to move to the exam room. Their admission slips and identification documents were verified when they entered room. Before the exam began, a BELS officer explained the caution during the exam. Once all the examinees sat down, the three-hour BELS exam officially began. Thirty examinees successfully finished the exam, two of whom passed (Fig. 2).

Conclusion

By implementing the BELS examination in Korea, I can learn more deeply about manuscript editing and professionalism of manuscript editors. This is significant since it creates a pool of human resources needed to improve the level of manuscript editing in Korea. It is also an opportunity to demonstrate that manuscript editors are important professionals whose expertise has been validated through professional training and education. When much number of academic journal editors demand their services, they will be able to contribute to the development of scientific, technological, and medical journals from Korea. Furthermore, BELS exam in Korea will provide more opportunities for editors in other Asian countries to get familiar with the BELS exam. Ultimately, it could be the cornerstone for enhancing the quality of Asian science journals.

Conflict of Interest

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

Acknowledgments

This work is supported by a grant from the Korean Council of Science Editors (2013).

References


Fig. 1. Registration process for the Board of Editors in the Life Sciences (BELS) exam.

Fig. 2. Photo celebrating the first group of Board of Editors in the Life Sciences examinees in Korea (October 19, 2013).
Report on the 2014 Association of Learned and Professional Society Publishers international conference

Soo Young Kim
Department of Family Medicine, Kangdong Sacred Heart Hospital, Hallym University College of Medicine, Seoul, Korea

The conference organized by the Association of Learned and Professional Society Publishers (ALPSP) is known to be one of the most famous events in which scholarly publishers communicate through. ALPSP was launched in 1972 by 24 learned and professional society publishers. By 2014, the number of publishers had reached 315 from 39 countries. ALPSP’s mission is to connect, train, and inform the scholarly and professional publishing community and to be an advocate on behalf of the non-profit publishing sector. Its goal is to be the most impactful scholarly publishing association in the world, and thus to create a successful future for scholarly and professional publishers.

I was lucky to have a chance to attend the 2014 ALPSP conference, which was held from September 10 to 12 in London, United Kingdom (Fig. 1). There, I became aware of the importance of recent revolutions in scholarly journal publication. I would like to briefly summarize the meeting content in order to help my colleague editors on recent trends in scholarly journal publishing. I will also suggest some specific topics that can be introduced to scholarly journals particularly in Asia.

On September 10, the first keynote speech by Amy Brand, entitled “Innovation and its place in the changing scholarly publishing landscape,” was the most interesting. Amy Brand introduced two projects initiated by Digital Science (http://www.digital-science.com/), namely ‘altmetrics’ and ‘figshare.’ ‘Altmetrics’ is an article-level metric that measures articles’ use not only through well-known databases such as Scopus, but also through social network services; therefore, it takes the online impact of a published article into account. ‘Figshare’ is an online data publishing system that is easily searchable and citable. Data are stored in a cloud so that they can be accessible at any place and any time. There is no copyright on this data, as it is based on the Creative Commons License.

In “Plenary 1: customers as competitors,” Graham Stone, an information resources manager from the University of Huddersfield, presented on the potential impact of open access repositories and scholarly library publishing on ‘traditional’ publishing models. He suggested that researchers do not mind where literature is located on the Internet. In accordance with the expansion of open access channels, people want information to be available anywhere at any time; therefore, they do not always visit publishers’ websites to access the content of interest.
The use of an accessible repository or platform has therefore become more important to them. Since institutional repositories are maintained by the institutions' library, the role of the library will expand. Additionally, libraries can help researchers to publish their research work in non-profit journals published by libraries, such as the *Journal of Huddersfield Student Research*.

Tony Horava, associate university librarian from the University of Ottawa, presented a unique model for supporting scholarly publishing. The University library supported the gold open access publication of three monographs selected by the University of Ottawa Press by providing the maximum fee per title, 10,000 Canadian dollars. One example of this phenomenon is “Homelessness and Health in Canada,” which is freely available at http://www.ruor.uottawa.ca/handle/10393/30952. Another interesting finding is that, although those monographs are freely available via the Internet, there is still a need to print copies. A total of 864 copies of four monographs were sold for a total income of 30,633 Canadian dollars. The total number of page views was 2,930, while the number of PDF file downloads was 5,857. After suggesting the model of gold open access monograph publishing, Horava addressed the questions of how to further incorporate open access into the business models and strategic directions of university libraries, and how to apply the financial implications of open access for university libraries. It is rare to find open access book publishing, although open access journal publishing has become common.

On September 11, an industry update parallel session was held. Andrew Preston, co-founder of Publons, presented a report on his company. He explained that the most difficult task for editors is to find reviewers. Publons is a network of editors and reviewers that provides a model of peer review in which an editor uploads a manuscript file and Publons suggests reviewers by searching its peer review database. The review opinion may be either closed or open. After publication, a post-publication review can be added. A discussion is also opened for each published paper. According to certain criteria, reviewers receive tokens: for example, one point for being on Publons and two points for being open (i.e., the review content is published). A total of 1,095 journals were participating in Publons as of September, 2014. Since the review process takes the form of a non-profit, voluntary commitment to academic societies, the potential reward for reviewers could be an important point to consider in maintaining this community. As of now, peer review is not considered a research activity and is not rewarded in the same way as the publication of articles. I am not sure in what direction this system will progress in the future; however, changing the reward system is an excellent idea for scholarly communities. In addition, text mining, the Copyright Clearance Center, and Creative Commons License 4.0 were presented in this parallel session. These topics are either new or upgraded versions of well-known services in the field of journal publishing.

On September 12, “Plenary 4: welcoming the robots” was also an interesting discussion, the topic of which was text and data mining (TDM). TDM is a process by which to extract and analyze high-quality information. High-quality information can be obtained through a method of defining patterns and trends, such as statistical pattern learning. Classic text mining comprises text classification, text clustering, concept/entity extraction, and text summary. Gemma Hersh, Policy Director from Elsevier, revealed Elsevier’s new TDM policy as follows: “Researchers at academic institutions can text mine subscribed content on ScienceDirect for noncommercial purposes via the ScienceDirect API. Access is granted to faculty, researchers, staff, and students at the subscribing institution.” TDM is a changing environment for researchers, and Elsevier is the top publisher in terms of the number of journals that it
handles. Gemma Hersh introduced a UK copyright exception as follows: on March 27, 2014, the UK government published a Statutory Instrument, the legal instrument needed to introduce a copyright exception for TDM. The regulations enable those with “lawful access” to a work to make copies of it for the purposes of non-commercial TDM. The exception will apply to any literary work, including books, journals, and websites. The exception will not be applied to databases. This kind of regulation may be a turning point for researchers who wish to study TDM.

ALPSP is a meeting of publishers at which attendees’ points of view on certain topics may be different from those of attendees at other editors’ meetings, such as the Korean Council of Science Editors (http://kcse.org) and the Council of Asian Science Editors (http://asianeditor.org). In conclusion, open access, TDM, and new information technologies are important topics to understand in the context of recent activities and future directions in journal publishing. TDM may soon be introduced to Asian countries, including Korea, while information technologies such as Publons will be able to solve the problems confronted by small society journals.

Conflict of Interest

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

Acknowledgments

This work is supported by a travel grant from the Korean Federation of Science and Technology Societies, the Government of the Republic of Korea (2014).
2014 CrossRef annual meeting and workshops

Kihong Kim

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

The 2014 CrossRef annual meeting and workshops were held at the Royal Society in London from November 11 to 12. They were lively and international events with over 150 attendees from many countries, including Asian countries such as Korea, China, Japan, and India.

On the first day, the CrossRef workshops were held. Two parallel sessions were organized in the morning. One was for people who were new to CrossRef and the other was for those who were familiar with the technical aspects of CrossRef. Since I was new to CrossRef, I attended the beginner’s session titled “Boot camp: an introduction to CrossRef.” Three speakers from CrossRef, Carol Meyer, Anna Tolwinska, and Susan Collins, gave presentations on the general introduction of CrossRef, current tools for small publishers, and CrossCheck plagiarism screening respectively. It was a good opportunity for beginners to learn about the CrossRef organization and its products. I thought it was quite impressive that such a small organization founded just 14 years ago had grown into a very important one leading technological innovations in scholarly publishing of the world (Fig. 1).

In the other parallel session, on system update, Chuck Koscher, Patricia Feeney, Mike Yalter, and Patricia Feeney gave four successive presentations with the titles “System update: an in-depth and technical look at CrossRef,” “Support update and multiple resolution overview,” “DOI co-access for books,” and “Reports and how to use them.” This was a technical session mainly for practitioners of the CrossRef products. The multiple resolution is about assigning multiple URLs to a single digital object identifier (DOI). It seems to be important to develop efficient tools for including books into the information space.

A plenary session titled “What’s new at CrossRef” was held in the afternoon. Three speakers from CrossRef gave presentations. Geoffrey Bilder gave a talk on Text and Data Mining (TDM) application programming interface (API). TDM, a beta service of which was launched in 2014, was an important keyword in this year’s CrossRef meeting. I thought this was a wonderful idea that could help researchers greatly. Bilder explained that to develop a TDM API, it was necessary to have an access to full texts and license information. Then he described the TDM workflow and showed a demo. I felt that this would grow to become an important and widely-used product in the near future.

In the second talk of the plenary session, Kirsty Meddings gave a presentation on new developments in CrossMark. The CrossMark logo identifies a publisher-maintained copy of a piece of content and provides important publication record information. A new development was
that information on linked clinical trials was added.

In the third talk, Karl Ward gave a presentation on small publisher tools. These tools are mainly for small publishers or publishers in developing countries, which have difficulty integrating CrossRef services. He explained that CrossRef depositor was being developed to extract the reference list from portable document format (PDF) files and add to existing DOIs. I found that his summary of the CrossRef’s mandate to be the citation linking backbone for all scholarly information in electronic form was very nice and concise.

After the plenary session, there were two parallel sessions, one on CrossCheck introduction & development roadmap given by Rachael Lammey and Shivendra Naidoo, and the other on book interest group given by Carol Meyer and Jennifer Kemp.

On the second day, the CrossRef annual meeting was held. Ed Pentz, the executive director of CrossRef, gave the first talk, titled "Introduction and CrossRef overview," where he explained the current situation of CrossRef including its financial situation. Chuck Koscher next gave a talk on system update and Geoffrey Bilder spoke about the strategic initiatives update. Bilder described the strategic initiative life cycle and many new initiatives at CrossRef, which included DOI event tracking, Wikipedia linking & outreach, linked clinical trials, small publisher tools, CrossRef depositor, text and data mining, CrossRef representational state transfer API, and linking data and publications.

In the CrossRef flash update session, five speakers from CrossRef, who were Carol Meyer, Rachael Lammey, Kirsty Meddings, Karl Ward, and Ed Pentz, gave presentations on “Branding,” “CrossCheck & CrossRef Text and Data Mining,” “CrossMark & FundRef,” “CrossRef Metadata Search,” and “Open Researcher and Contributor ID (ORCID)” respectively. Since there are so many people with the same name as mine in Korea, I have a strong interest in the concept of ORCID. Currently, an author with a specific ORCID claims a chosen set of papers as his or hers. There are inevitably false or inaccurate claims. I find it will be useful to have an efficient system to reduce the errors in the identification of the authors.

In the afternoon, six invited speakers gave talks. In the keynote speech titled “Ways and needs to promote rapid data sharing,” Laurie Goodman of GigaScience emphasized the importance of prepublication data sharing, especially in biomedical fields. She explained various obstacles in publishing and sharing scientific data and claimed that open data sharing would benefit the authors as well as the general public and reduce the publication of false and irreproducible results. Data publishing is not a new concept in physical science such as experimental high energy physics and experience in those fields can be useful.

Next, the speeches of four invited speakers and a panel discussion on the theme of improving peer review were organized. In the talk titled “Securing trust and transparency in peer review,” Adam Etkin of peer review evaluation (PRE) presented about the activities of PRE. He emphasized that in the current environment where there were many predatory journal publishers and prominent cases of faulty research being published, it was important to maintain the quality of peer review. As a way to create incentives to use best practices in peer review, PRE works with the publisher to provide independent validation of the review process and issues an endorsement that quality peer review has been conducted.

In the second talk of the panel with the title “bioRxiv: the preprint server for biology,” Richard Sever of Cold Spring Harbor Laboratory Press introduced the bioRxiv, a new preprint server in biology launched in 2013. This was modeled after the physics preprint archive launched in 1991. A remarkable new feature is that a DOI is assigned to each submitted preprint, so that it can be cited easily.

In the third talk of the panel, Mirjam Curno of Frontiers spoke about Frontiers’ collaborative peer review. Frontiers publish 48 open access journals, where they adopt a new peer review system consisting of the independent review phase and the interactive review phase. Curno said that there were about 50,000 editors for their journals. The new feature is that during the interactive review phase, authors and editors can interact with each other openly through real-time comments in the discussion forum. Once a paper is accepted, the reviewers’ names are disclosed. Recently, there have been many discussions about the deficiencies of the conventional peer review system. I felt that the attempts being made at Frontiers would
be valuable and might provide new directions in peer review.

Another interesting attempt at a new peer review system was presented in the talk “Do it once, do it well-questioning submission and peer review traditions” by Janne-Tuomas Seppänen of Peerage of Science. In this case, authors submit a manuscript to Peerage of Science, before submitting to any journal. Once submitted, any qualified peer can engage to review the manuscript. Peer reviews are themselves peer reviewed, increasing and quantifying the quality of peer review. The peer review process is available to all subscribing journals. Authors may accept a publishing offer from a subscribing journal, or choose to export the peer reviews to any journal.

Finally, in the closing keynote speech, Richard Jefferson of Cambia gave a talk titled “Innovation cartography: creating impact from scholarly research requires maps not metrics.” He presented an online service named the Lens, which he created. This service provides a large number of patent documents that are integrated with academic literature as open resources. Jefferson claimed that this would allow document collections, aggregations, and analyses to be shared, annotated, and embedded to forge open mapping of the world of knowledge-directed innovation. In addition to this somewhat abstract concept of innovation cartography, I also learned about the interesting story of Jan Huyghen van Linschoten, who stole the technology of maritime cartography from Portuguese and published a book about it in 1596. Jefferson claimed that the sharing of the knowledge of crucial technology made possible by this act paved the way for rapid developments in shipbuilding, sailing, logistics, cartography, navigation, insurance, investment, and finance.

In summary, I found many presentations in this meeting to be quite useful and interesting. CrossRef seems to be based on a very simple but extremely useful idea that all academic contents can be connected to each other through the use of DOIs. In the age of the Internet, an efficient interconnection not only is feasible, but also produces new information and insight. Having a good idea is very important. More important, however, is to pursue and implement the idea and produce something useful for human beings, as the people at CrossRef have done.

**Conflict of Interest**

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

**Acknowledgments**

This work was supported by a travel grant from the Korean Council of Science Editors (2014).

Hye-Min Cho

Infolumi, Seongnam, Korea

Product Information:
- Title: Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers
- Author: Council of Science Editors
- Publisher: The University of Chicago Press
- Year of publication: 2014
- Page: 840 pages
- Price: $70.00
- Homepage: http://www.scientificstyleandformat.org/Home.html

The Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers published by the Council of Science Editors (CSE) is an invaluable resource for authors, editors, and publishers alike in the scientific community. The CSE, formerly called the Council of Biology Editors until January 1, 2000, was established in 1957 through the collaborative work of the National Science Foundation and the American Institute of Biological Sciences [1]. The Council of Biology Editors issued its first formal style manual in 1960. The first 5 editions successively built upon preceding guidelines on writing and submitting papers for journal publication. Their range of scope was limited to the microbial, plant, zoological, and medical sciences. Later, this scope was expanded to include recommendations on other experimental and observational sciences by the sixth edition in 1995 and then to all the physical and life sciences by the seventh edition in 2006 [2]. Now in its 8th edition, the manual guide has been improved to cover the electronic and online aspects of scientific manuscript preparation and journal publication.

As with previous editions, the 8th edition is composed of 4 main parts. Part 1 on Publishing Fundamentals contains 3 chapters that cover the elements, policies, and practices of scientific publication and of copyright. In this edition, in line with current trends, a greater emphasis was placed on the importance of following copyright laws by addressing topics such as Creative Commons and other developments in copyright law. Especially, they emphasized the responsi-
bilities of not only authors, editors, and reviewers, but also of publishers, journal owners, and sponsoring societies to adhere to regulations. Part 2 on General Style Conventions is composed of 9 chapters that cover the fundamentals of English writing such as punctuation, spelling, capitalization, and abbreviation. A new addition to this section debates the usage and merits of the active voice and the passive voice and promotes greater use of the active voice in scientific writing. Part 3 on General Style Conventions is made up of 12 chapters covering matters concerning physics, chemistry, genetics, biological sciences, and astronomy, aimed at those who specialize in these fields. Lastly, part 4 on Technical Elements of Publications includes the following 6 chapters: journal style and format, published media, references, accessories to text (tables, figures, and indexed), typography and manuscript preparation, and proof correction. These sections focus on the technical sides of actually editing a journal and preparing it for publication, and thereby would prove useful to currently working publishers, editors, manuscript editors, and copy editors in the sciences.

As well as the aforementioned changes in each section, prominent alterations in this edition are changes that promote compatibility of users’ platform, both authors and editors, to an online platform. In terms of referencing for example, citing of sources from the Internet (such as online images and information graphics, podcasts and webcasts, online videos, blogs, social networking sites, and e-books) has been made easier by giving examples of citations from diverse sources in the style guide. The style guide also mentions the use of extensible markup language for online journal publishing or for electronic monographs. Further, taking into consideration that proof corrections are increasingly exchanged through e-mails as PDF proofs in recent years, an in-depth section on how to mark corrections on a PDF was added.

However, of the alterations that were made, the most prominent change made in the 8th edition is the adoption of a different citation system, from a citation-name to a citation-sequence-based referencing style. CSE’s rationale for employing a different system in this manual is as follows:

Having references in standard format is particularly important because the information for many references is now downloaded from online systems. The name-year advantage of author recognition within the text is not as important in this manual, because sources cover a wide range of scientific disciplines. Using citation-sequence also makes it easier for readers to find the appropriate end reference as they read along, unlike the citation-name system, where end references are arranged alphabetically by author. Thus, the citation-sequence system combines the best advantages of both the other systems and does not have their major disadvantages. (p. 557)

As such, the citation-sequence reference style may best accommodate current readers for a smooth read and ease the work of authors and editors. This change in referencing style adopted by the CSE is anticipated to influence many journals in the scientific fields to change their reference styles from a name-year or a citation-name referencing style to a sequence one.

CSE members have made a noticeable transition to make the publication and editing process an online-friendly one. Although the style guide is a hefty read of 780 pages, it is sure to be useful table-side tool for authors wanting to write concise scientific articles, and for editors and publishers wishing to publish scientific journals of the highest quality. Importantly, as of the 8th edition, the Scientific Style and Format is accessible to users online as well as print. Further, useful materials such as a citation quick guide, a sample correspondence to an editorial office, and one regarding editorial office practices, and an online forum are open to users at no additional cost.

Conflict of Interest

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

References

How do I make science journal

Min Suk Chung
Department of Anatomy, Ajou University School of Medicine, Suwon, Korea

Dr. Scifun

Episode 1: How do I make SCI journal?

I had a hard time because of SCI journal.

Science citation index journal

It's really hard to publish SCI articles depending on the fields.

Nature Science

Why don't I establish my own journal?

I can't be treated as a scientist if I do not publish my papers in SCI journals these days.

Although I do have a little compunction, I named my journal as 'Nature Science.'

Exceptional scientists will contribute papers which are actually for 'Nature' and 'Science.'

I, the editor-in-chief, can publish my papers as much as I please. Hooray!

The papers in 'Nature Science' would be frequently quoted to make SCI journal.

SCI is an abbreviation for science citation index. It's a great burden for scientist to publish their paper in SCI journal. SCI is also known as the acronym of spinal cord injury, since it bends and hurts scientist's waist. Plus, yet I don't know why, but it is also known as sexual contact injury.
There is something called 'invisible hand' in capitalism. Executives, employees and customers only care about their own interests. But these selfish deeds are also altruistic since it can be helpful to other's benefits. Invisible hands turning selfishness into altruism exists in a beauty contest and science.

‘Scientific’ has stricter meaning than ‘natural.’ So scientists seem to have to be ‘scientific’ rather than ‘natural.’ But a veteran scientist is not only ‘scientific’ but also ‘natural.’ Two words are thought to be closely related with each other. Science is nature.
Actually there are very few people to read scientific articles. Suppose that the impact factor of a journal is 1. It means only one person to peruse an article in the journal. On the contrary, abundant persons enjoy comics regardless of their specialty. Hopefully, like me, more scientists will challenge the comics regarding to their scientific activities.

Editor’s comments: The science cartoons by Dr. Min Suk Chung will be published in Science Editing from this issue. Dr. Chung, anatomist, has been famous not only for his work on Visible Korean project but also on science cartoons. The cartoons are generously provided by Dr. Chung, which are available from: http://anatomy.co.kr/.
Announcement

Events in 2015

The Korean Council of Science Editors announces the schedule of the events in 2015. Out of them, the 2nd Asian Science Editors’ Conference and Workshop (August 20-22, 2015) will be held in Hanoi University of Science and Technology, Hanoi, Vietnam. Theme of the conference and workshop is ‘How to add local scientific journals to international databases.’ There will be preconference workshop in August 20, 2015. One and half day is allocated for the conference. In the afternoon, August 22, 2015, there will be a tour in Hanoi city. The precise schedule and the call for papers will be propagated up to end of February 2015 through homepage of the Council of Asian Science Editors available from: http://asianeditor.org/.

The 15th Editors’ Workshop (March 2-3, 2015) will be held in the Korean Federation of Science and Technology Societies, Seoul. This workshop will deal with Journal Article Tag Suite extensible markup language.

In May 2015, there will be launch of manuscript editor certificate program by the Korean Council of Science Editors. This program will be organized by Ms. Hye-Min Cho, Chair of Committee on Manuscript Editing. It is the first trial in Korea to train and certify the performance of manuscript editors.

The 16th Editors’ Workshop (July 2-3) will be held in Seoul. It will be workshop for reviewers and authors.

The 18th Editors’ Workshop (December 3-4, 2015) is for novice editors. The program will consist of basic knowledge and skill for novice editor who are new editors or have an experience as editors less than three years.

Precise schedule and registration of above workshops were or will be available from: http://www.kcse.org/.

<table>
<thead>
<tr>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Editing (twice/yr)</td>
<td>Vol.2 No.1 (20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newsletter (4 times/yr)</td>
<td>No. 13 (31)</td>
<td></td>
<td>No. 14 (30)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Editors’ workshop</td>
</tr>
<tr>
<td>15th Editors’ Workshop (2-3)</td>
</tr>
</tbody>
</table>

| Manuscript editors’ training & workshop |
| Basic Manuscript Editing (15, 22, 29) |
| Basic Manuscript Editing (5, 12, 26) |
| Basic Manuscript Editing (5, 12) |
| Manuscript editors certificate program (DTBD) |

| Publication ethics forum & workshop |
| 9th Publication Ethics Forum (12) |
| 10th Publication Ethics Workshop (18) |
| 11th Publication Ethics Workshop (19) |

This is an open access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/3.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.
<table>
<thead>
<tr>
<th>Event Type</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Editing (twice/yr)</td>
<td></td>
<td>Vol.2</td>
<td>No. 15</td>
<td></td>
<td>No. 16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No. 2</td>
<td>(20)</td>
<td></td>
<td>(30)</td>
<td>(31)</td>
</tr>
<tr>
<td>Newsletter (4 times/yr)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No. 15</td>
<td>(30)</td>
<td></td>
<td></td>
<td>No. 16</td>
</tr>
<tr>
<td>International conference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Editors’ workshop</td>
<td></td>
<td>16th</td>
<td>18th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Editors’ Workshop (2-3)</td>
<td>Editors’ Workshop (3-4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manuscript editors’</td>
<td></td>
<td>Advanced</td>
<td>17th</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>training &amp; workshop</td>
<td></td>
<td>Manuscript Editing</td>
<td>Manuscript Editors’ Workshop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(10, 14, 16, 23)</td>
<td>(3-4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publication ethics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>forum &amp; workshop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTBD, date to be determined.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Correction of mistyped country name in the article

Editorial Office, Korean Council of Science Editors

Please note that the librarian, Jeffrey Beall, mentioned in the article entitled “The big picture: scholarly publishing trends 2014” by Pippa Smart (Sci Ed 2014;1(2):52-57, DOI: http://dx.doi.org/10.6087/kcse.2014.1.52) is American, and not Canadian. The author and editorial office apologizes for this error.
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.

- Corresponding author and first author: Science Editing does not allow multiple corresponding authors for one article. Only one author should correspond with the editorial office and readers for one article. Science Editing does accept notice of equal contribution for the first author when the study was clearly performed by co-first authors.

- Correction of authorship after publication: Science Editing does not correct authorship after publication unless a mistake has been made by the editorial staff. Authorship may be changed before publication but after submission when an authorship correction is requested by all of the authors involved with the manuscript.

2. Originality and Duplicate Publication

Submitted manuscripts must not have been previously published or be under consideration for publication elsewhere. No part of the accepted manuscript should be duplicated in any other scientific journal without the permission of the Editorial Board. If duplicate publication related to the papers of this journal is detected, the manuscripts may be rejected, the authors will be announced in the journal, and their institutions will be informed. There will also be penalties for the authors.

A letter of permission is required for any and all material that has been published previously. It is the responsibility of the author to request permission from the publisher for any material that is being reproduced. This requirement applies to text, figures, and tables.

3. Secondary Publication

It is possible to republish manuscripts if the manuscripts satisfy the conditions of secondary publication of the ICMJE Recommendations (http://www.icmje.org/urm_main.html).

4. Conflict of Interest Statement

The corresponding author must inform the editor of any po-
potential 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.

5. SUBMISSION AND PEER REVIEW PROCESS

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-
tions should be avoided in the title of the manuscript. Abbreviations should be spelled out when first used in the text—for example, extensible markup language (XML)—and the use of abbreviations should be kept to a minimum.

- The names and locations (city, state, and country only) of manufacturers should be given.
- When quoting from other sources, a reference number should be cited after the author's name or at the end of the quotation.

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 a), b), c), ..., 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
figures should not exceed 2,500 words. The number of references is limited to 20.

6. Editorials
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.

7. Book reviews
Book reviews are solicited by the editor. These will cover recently published books in the field of journal publication. The format is same as that of Editorials.

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.

9. Video Clips
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>
<thead>
<tr>
<th>Type of article</th>
<th>Abstract (word)</th>
<th>Text (word)(a)</th>
<th>References</th>
<th>Tables &amp; figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original article</td>
<td>250</td>
<td>2,500</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Review</td>
<td>200</td>
<td>5,000</td>
<td>100</td>
<td>No limits</td>
</tr>
<tr>
<td>Case study</td>
<td>200</td>
<td>2,500</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Essay</td>
<td>200</td>
<td>2,500</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Editorial</td>
<td>No</td>
<td>1,000</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Book review</td>
<td>No</td>
<td>1,000</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Correspondence</td>
<td>No</td>
<td>-</td>
<td>1,000</td>
<td>10</td>
</tr>
<tr>
<td>Letter to the editor</td>
<td>-</td>
<td>500</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>In reply</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Video clip</td>
<td>No</td>
<td>30 MB, 5 min</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

\(a\)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.

2. Manuscript Corrections
Before publication, the manuscript editor may correct the manuscript such that it meets the standard publication format. The author(s) must respond within 2 days when the manuscript editor contacts the author for revisions. If the response is delayed, the manuscript's publication may be post-
poned to the next issue.

3. Galley Proof
The author(s) will receive the final version of the manuscript as a PDF file. Upon receipt, within 2 days, the editorial office (or printing office) must be notified of any errors found in the file. Any errors found after this time are the responsibility of the author(s) and will have to be corrected as an erratum.

8. PAGE CHARGES OR ARTICLE PROCESSING CHARGES
No page charge or article processing charge applies. There is also no submission fee.

Contact Us

Editor-in-Chief: Kihong Kim
Department of Physics, Ajou University, 206 World cup-ro, Yeongtong-gu, Suwon 443-749, Korea
Tel: +82-31-219-2584, Fax: +81-31-219-1615
E-mail: khkim@ajou.ac.kr

Editorial Office: Korean Council of Science Editors
Eun Jeong Kim
The Korea Science & Technology Center 2nd floor, 22 Teheran-ro 7-gil, Gangnam-gu, Seoul 135-703, Korea
Tel: +82-2-3420-1390, Fax: +82-2-563-4931
E-mail: kcse@kcse.org

NOTICE: These instructions to authors will be applied beginning with the February 2014 issue.
☐ Manuscript in MS Word (docx) or RTF format.

☐ Double-spaced typing with 11-point font.

☐ 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).

☐ Covering letter signed by the corresponding author.
COPYRIGHT TRANSFER AGREEMENT

Manuscript ID

Manuscript title

Corresponding author name

Fax  E-mail

The authors of the article hereby agree that the Korean Council of Science Editors holds the copyright on all submitted materials and the right to publish, transmit, sell, and distribute them in the journal or other media.

Corresponding author

Print name

Signed  Date

Co-authors

Print name

Signed  Date

Print name

Signed  Date

Print name

Signed  Date

Print name

Signed  Date
CONFLICT OF INTEREST FORM

Manuscript ID

Manuscript title

As the corresponding author, I declare the following information regarding the specific conflicts of interest of authors of our aforementioned manuscript.

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).

<table>
<thead>
<tr>
<th>Author</th>
<th>No conflict involved</th>
<th>Conflict (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I accept the responsibility for the completion of this document and attest to its validity on behalf of all co-authors.

Corresponding author (name/signature) ____________________________

Date ____________________________