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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 being 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
- CrossCheck
- Legal issue in journal publishing
- Peer review process
- Reporting guideline for medical journals
- Medical and scientific literature databases
- Advanced information technology applicable to journal editing and publishing including PubMed Central schema, journal article tag suite schema, Digital Object Identifier, CrossMark, FundRef, ORCID, 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 biannually. Supplement issues may be published. 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 had been supported by the Korean Federation of Science and Technology Societies, the Government of the Republic of Korea (2013-2014).

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Open data policy of Science Editing

Kihong Kim

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Recently, the number of journals adopting an open data policy has been rapidly increasing. A common form of this policy requires authors to provide the raw data for the presented results and make it available in a public domain. An obvious benefit of making scientific data open is that it will enhance the transparency of the results and suppress research frauds. Furthermore, by allowing open data to be reanalyzed and reused freely without any restrictions, one can also help the verification and reinterpretation of the original results. We believe these benefits are sufficiently large and support the basic ideas of the open data movement. Therefore, we have introduced the following open data policy to Science Editing:

“For clarification on result accuracy and reproducibility of the results, raw data or analysis data will be deposited to a public repository, for example, Harvard Dataverse (https://dataverse.harvard.edu) after acceptance of the manuscript. Therefore, submission of the raw data or analysis data is mandatory. If the data is already a public one, its URL site or sources should be disclosed. If data cannot be publicized, it can be negotiated with the editor. If there are any inquiries on depositing data, authors should contact the editorial office.”

This policy can be found on our web page about Best Practice (https://www.escienceediting.org/about/best_practice.php) and will be effective from the next issue (volume 6, number 1, February 2019). We hope our policy can help making the results published in Science Editing more transparent and more open.

Conflict of Interest

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

Adaptation of Journal Article Tag Suite XML for Japanese humanities papers

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Abstract
Out of East Asian languages which do not use the Latin alphabet, Japanese is a very complicated writing system that uses “kanji,” which are ideograms, and “kana,” which are phonetic characters. Most of the Japanese papers published so far using Journal Article Tag Suite (JATS) are science, technology, and medicine fields adapting horizontal writing systems, which are structurally consistent with English papers. Most of them only replace Latin letters with Japanese characters. In this presentation, we suggested method of presenting vertically oriented Japanese humanities articles in JATS XML. For vertical description of Chinese numeric, we would like to propose the introduction of an element which specifies description direction. Alternatively, <styled-content> could be used as a hidden command when creating a document. We propose the following notation in the part of the number that can be converted: <styled-content style-type="numeric">六五</styled-content>. Chinese numeric 六五 is a Arabic numeric 65. With this, it is shown that 六五 of Chinese numerals can be converted to 65 in Arabic numerals. For vertical text description with JATS, we would like to suggest adding @writing-mode as an attribute to <article>: <article writing-mode="vertical">. Furthermore, note and references should be differentiated for example, between a <mixed-citation> and a <note> in the future. As Kanji are ideograms, there are variations that cannot be expressed with UTF-8. If these difficult Kanji are included in the JATS text, it will be necessary to decide on their description method. For the propagation of use of JATS XML for non-Latin characters articles, the structure of the document for example, vertical description, and special presentation should be considered more widely.

Keywords
Japanese language; Journal Article Tag Suite; Humanities; Vertical writing; XML

Introduction
Around the world, many studies in the sciences and humanities are made outside of English speaking countries, and many articles are written in languages other than English [1]. Languages and letters, moreover, are not necessarily used as one unit, and one character can often...
render multiple languages. For example, the Latin letters used in English also transcribe Turkish and Vietnamese, as well as German and French. In East Asia, Kanji, which is a unique ideogram system based on vertically written Chinese characters, is widely used for language notation. The population using Kanji is 1.5 billion people in Japan, Taiwan, Korea, and China, while close to 1.8 billion people use Latin letters. Also, in Japanese, in addition to Kanji, we use the original Japanese characters comprising the Kana phonetic writing systems of Hiragana and Katakana.

Since Journal Article Tag Suite (JATS), developed from United States National Library of Medicine Document Type Definition (NLM DTD), can describe multiple languages, even Japanese and other languages using Kanji can be expressed in JATS XML [1,2]. However, JATS, which originally developed from the representation of Latin letters, is accomplished with difficulty with regard to the notation of letters other than Latin letters. Despite this difficulty, we have been using JATS XML for publication of Japanese online journals since 2012. This background and detailed method was announced at Journal Article Tag Suite Conference (JATS-Con) 2015 [3].

This paper reports on our efforts to make a Japanese journal of humanities called “the Journal of Indian and Buddhist Studies,” which incorporated vertical direction notation via JATS, in 2017. In addition, We would like to propose the future use of JATS for the adaptation of East Asian languages.

Japanese Online Journal Using JATS

When Japanese papers are published online, J-STAGE, the Japan Science and Technology Agency’s platform, is most often used. JATS was adopted as DTD from J-STAGE version 3 and has been in use since May 2012. Since then, it has become possible to publish Japanese journals online in XML. The first example was the Japanese journal “the Journal of Gastroenterological Surgery”, published in July 2012.

Some actual screen images displayed on J-STAGE are shown in Fig. 1. This screen can be displayed anywhere, in any computer environment equipped with Kanji fonts (This was the case at that time; the interface has since been changed. https://www.jstage.jst.go.jp/browse/jjgs/45/7/_contents/-char/en/).

Even papers using Kanji are displayed in the form of full text online journals like this. English is used only for the caption of the figure. Abstracts and captions are written in English to promote international understanding and is often done in Japanese papers.

Previously in Japan, only PDF was used to display Japanese language papers. As a result, it was not possible to use various functions of online journals in Japan, so the convenience of online journals was not well understood and therefore not widely utilized. It seems that this prevented the development of the Japanese online journal.

In our presentation at JATS-Con in 2015, we presented methods and pointed out issues that arose with this first Japanese online journal publication. We also made a proposal for JATS tag for application in the East Asian language environ-

![Fig. 1. First online journal written in Japanese, "the Journal of Gastroenterological Surgery" (J-STAGE 2012).](http://www.escienceediting.org)
ment. Several of these proposals have been adopted in JATS 1.1 and JATS 1.2 d.

For example, although the <emphasis> tag, which represents general purpose emphasis, was not adopted as a new element, it was solved by introducing @style-detail in the existing element called <styled-content>. With this and existing attribute @style-type, detailed emphasis description became possible, and it became possible to emphasize in Japanese such as the Kenten (Fig. 2). NISO JATS Standing Committee recommended changes between NISO/JATS 1.1 and JATS 1.2d1 (Committee draft) in response to comments on NISO Z39.96-2015 (JATS V1.1) through April 10, 2017.

In addition, we appreciate the JATS Committee’s concession that “Many languages (Japanese, Korean, Thai, Chinese, Arabic, Hungarian, and Armenian, to name but a few) use stress marks and similar typographic conventions (such as dots or sesamis) in the same way that English (as one example) uses <bold> or <italic> emphasis.” in the concluding comment of this denial of the <emphasis> tag adoption.

Although it was not our proposal, East Asian documents including those written in Japanese became easier to describe, such as <ruby> element and <era> element (Fig. 3). We appreciate the JATS Committee’s understanding of the circumstances of non-Latin languages.

![Fig. 2. Example of Kenten emphasis.](image)

**Example**

```xml
...<date date-type="received" calendar="Japanese iso-8601-date="1947-07-01"><day>1</day><month>7</month><year>22</year><era>昭和</era></date>...
```

**Fig. 3.** Elements <era>. Eastern Asian calendars can be displayed with historical eras.

![Fig. 4. “The Journal of Indian and Buddhist Studies” in J-STAGE.](image)

**The Present Status and Breakthrough of Japanese Vertical Writing Paper**

Since then, the number of Japanese papers created in JATS XML has been gradually increasing, and it can also be applied in the other East Asian countries such as Korea and China. However, it has not yet become mainstream because of the difficulty of Asian language XML expression. In Japan, for a long time, it has been taken for granted that online journals are to publish via PDF or images. This is remarkably behind the trend of the rest of the world.

XML expression, especially in the field of Japanese humanities, is considered impossible, and even attempts to publish have been abandoned due to this limitation. Among the J-STAGE, of 2103 journals, less than 100 journals can be said to be humanities journals. This number is far fewer than the 716 journals of the total J-STAGE expressed in Japanese. Most of these, with a few exceptions, are PDF publications.

In humanities journals, the structure of the articles are not fixed, in contrast to the document structure in STM journals; moreover, they are, fundamentally different from the STM in the cited documents and notes, as well as the vertical writing. These facts make it difficult to establish as an online journal. It is especially problematic that many of the Japanese papers use vertical writing. The orientation of East Asian writing was originally vertical, and horizontal writing was only adopted in recent...
years to create consistency with Western documents. STM papers are currently almost always horizontally written, while those in the humanities almost always use vertical writing. However, notwithstanding such obstacles, image PDF method is no longer accepted and, at minimum, bibliographic information such as cited documents must be provided in XML. Let us now turn to the history and technical problems of the publication of the humanities journal, “the Journal of Indian and Buddhist Studies” as an online journal (Fig. 4). URL is as follows: https://www.jstage.jst.go.jp/browse/ibk1952/-char/ja/.

Characteristics of Japanese Humanities Papers and of “the Journal of Indian and Buddhist Studies”

“the Journal of Indian and Buddhist Studies”, published as online journal via J-STAGE, is an academic journal that studies the fields of Indian philosophy and Buddhist studies, and an institutional journal of “the Japanese Association of Indian and Buddhist Studies” founded in 1951. Characteristically, along with English written articles, vertically oriented Japanese articles about Indian philosophy and Buddhism studies are listed (Fig. 5). Paper journals with vertical writing are not unusual in the humanities, but among J-STAGE journals this number is also extremely small, only 15, and even if we add “the Journal of Indian and Buddhist Studies” it counts just 16 journals. Many of these vertical writing online journals do not even include bibliographic descriptions, and only two journals offer citations in XML.

In addition, quotations used in the Buddhist scriptures are very numerous in “Indian Science Studies Buddhist Studies”, and various Kanji characters are used. Finally, non-Latin, non-Kanji characters such as Bon-ji (Siddhaṃ script), which are ancient Indian characters, are also used (Fig. 6).

As is common in humanities journals, notes are frequently used, but they are used for both citations and supplements of the contents of the paper, and the list of cited documents is not an independent item. The composition of these articles tends to be seen most often in Japanese humanities literature journals, in contrast to the JATS online journal developed based on similarly structured STM journals in Europe and the US style.

“The Journal of Indian and Buddhist Studies” is devoted exclusively to the humanities and it is therefore difficult to apply JATS XML developed for STM use in English. In the first place, it may seem that this was not the original purpose of JATS. A schema called TEI is said to have been developed for this purpose in the humanities system [4]. However, J-STAGE is the only platform that has a wide range of online journals in Japan, and there J-STAGE has adopted JATS. Although J-STAGE itself originally started as an online journal platform for STM, it absorbed the NII-ELS of the National Institute of Informatics, which had handled a broader field, with the exception of STM, in 2017. The exact reason for the absorption is outside the scope of this paper; however, because of this absorption, documents originally published in NII-ELS have been flowing into J-STAGE.

It may be possible for languages such as English, widely used in many countries, but in many small countries including Japan, it is difficult to create separate schema systems for every non-STM academic field for each language. It is impossible to provide many online journal platforms for every language and every field, mainly for budgetary reason. JATS has already been widely adopted and used, so it is thus likely that from now on, making online journals with schemas other than JATS will be difficult regardless of the field. JATS has already left NLM and is also getting out of English. It is more realistic to expand JATS than to look for another schema, with, of course, respect to its
limitations and appropriate application methods.

**Practice of Bibliography XML**

There are two methods of loading to J-STAGE by XML. One is a technique to create the whole paper in XML. Although this is indispensable in HTML publication, there are not many example, even in STM fields in Japan, because XML tools for Japanese are not fully developed and its cost is high. The other is the bibliography XML, a method we have adopted, in which the main text is not written in XML, but only the bibliography. The citation reference link, which is the one of the most advantageous merits of the online journal, can be used. For these reasons, at this time We have adopted bibliography XML.

In “the Journal of Indian and Buddhist Studies”, abstracts are described in English. There is also a horizontally written thesis. In that case, tagging with XML is done first, and automatic formatting is done using dedicated software, but in the case of vertical writing this technique cannot be used, as it basically writes out an article formatted by Adobe InDesign in XML and converts it using XSLT to JATS XML.

**Bibliography of vertical written articles**

Although JATS adopted in J-STAGE is capable of multilingual correspondence, the premise is that left to right horizontal writing is essential. The direction specification of description is not currently supported. Also, J-STAGE itself does not support vertical HTML display. Of course, since the tag structure also supports only left to right horizontal writing, in the case of vertically written articles, we face the problem of horizontalization of vertical writing. The horizontalization of the citation reference description is particularly important for XML as a journal cannot be retrieved unless it is written in horizontal contents with Arabic numerals (Figs. 7, 8). It will be retrieved if the original paper archive is written in horizontally written Chinese numerals, which was very rare.

In this case, it is unnatural that we simply rewrite vertical written text to horizontal written text because there is a fundamental difference in notation in vertical writing and horizontal writing. Arabic numerals, especially become a problem, as in Japan, Arabic numerals are used for horizontal writing, and Chinese numerals are used for vertical writing. In newspapers et cetera, Arabic numerals are sometimes used in vertical writing, but only when there are few digits. This is a combination of vertical and horizontal writing, and Japanese InDesign supports this style (Fig. 9). However, at least in “the Journal of Indian and Buddhist Studies”, this style of notation is not used. Normally, in Japanese typography, when changing vertical writing to horizontal writing, conversion of Chinese numerals to Arabic numerals by substitution as a group is performed.

However, we cannot replace all Chinese numbers with Arabic numerals here; this is because there are many expressions.

![Fig. 7. Original vertical writing citation reference.](image)

![Fig. 8. An example of converting vertical cited documents in Fig. 7 to horizontal writing.](image)

![Fig. 9. Acceptance of numerical notation of vertical writing and horizontal writing](image)
that must remain Chinese digits even in horizontal writing. For example, numbers are also commonly used in people's names, where Chinese numerals cannot be replaced with Arabic numerals characters. The popular Japanese name “一郎 (Ichiro),” which means “first-born boy,” provides a good example; the name “一 (ichi)” means “1” or “first,” but is never written as “1郎.”

Chinese numerals are also frequent in Buddhist scriptures. In the case of Buddhist terminology such as “念仏三昧,” “三” is a Chinese numeral of “3,” but this cannot simply be alphabetically represented as “念仏mn.” This would change the fundamental terminology of Buddhism entirely or render it nonsensical. In English, this would be something like expressing “Trinity” as “3 nity” in writing about Christianity.

For this process, we used a script provided by Mr. Kiyonori Nagasaki of this society. Among them, the logic to not convert personal names and titles is written, but eventually we had to visually confirm them one by one to be sure, a painstaking process.

Problem with notes in bibliography XML
The largest issue with publishing journals online was the problem of “notes” widely used in humanities journals. Humanities journals are packed with various information such as supplements and acknowledgments of the text, not limited to references cited in the “Notes.” To make cited document links effective they need to be tagged, but it is impossible to tag them in this note description. Under present circumstances it is difficult to technically overcome this, and it is necessary to change the description method of the paper itself. In these examples, there are many other journals separating supplemental notes from cited references, and this method has been adopted from volume 65 in “the Journal of Indian and Buddhist Studies” as it was effective.

However, in the case of religious and historical papers, there are citations for sutras and historical materials as primary literature. This is a global description in religious studies, philosophy, and historical papers worldwide, for example in the case of Christianity the text position is done by section such as when citing the Bible, for example, “MAR.9.47, ACT.8.37.”

In “the Journal of Indian and Buddhist Studies,” it is widely practiced to cite sources with the page number of the “Taishō Revised Tripitaka,” which is the total collection of Buddhist texts translated into Chinese, when quoting a scripture [5]. However, there is no clear provision in the JATS citation stipulation method for this Buddhist scripture, and since there are too many documents to cite, Buddhist texts are currently not described as cited references. Instead, these references remain in the notes. Therefore, only some secondary documents published as articles are tagged with bibliography XML.

Proposal for Humanities Journal Full Text XML

Elements for vertical notation
Currently, there are no elements that specify the direction of description. This is thought to be because the vertical writing is an expression problem unrelated to its structure. Certainly, there is horizontal writing notation in Japanese, and even if vertical writing is converted to horizontal writing, the meaning itself, although not perfect, will not change very much. However, a final problem lurks in the margins of imperfect conversion, in terms of Japanese literature, Japanese history, et cetera, fields which, in particular, have source materials that can only be accurately represented in a vertical writing orientation by their very nature.

Of course, it is not right at present to expect this role of JATS, which is intended for STM. Also, if we need accurate rendering in order to stay faithful to source materials, we can use PDF. However, as we have seen this time, it is necessary to accurately express cited references and the like even if vertically written text is expressed horizontally. Otherwise, the advantage of the online journal cannot be used.

In this regard, we would like to propose the introduction of an element which specifies description direction. Alternatively, <styled-content> could be used as a hidden command when creating a document. We propose the following notation in the part of the number that can be converted:

<styled-content style-type="numeric">六五</styled-content>

Chinese numeric 六五 is a Arabic numeric 65. With this, it is shown that 六五 of Chinese numerals can be converted to 65 in Arabic numerals.

We are conceiving of a <mixed-citation> utilization method, in which we introduce an element that carefully specifies the volume or issue, and at the time of conversion, if the Chinese numerals are used in the <volume> and <issue> tags, they will be converted to Arabic numerals.

However, in order to eventually satisfy both the convenience of online journals and vertical rendering, vertical writing should be supported on the platform side, as in J-STAGE. Currently CSS 3 supports vertical writing, proving this is not impossible, and vertical writing sites have already begun to appear. Of course, it will only be in the distant future that the online journal platform like J-STAGE will fully implement its function. Technically there is probably no problem. But before the support for vertical writing, there are many things we must do; for example, J-STAGE does not support even JATS 1.1 yet.

Before J-STAGE realizes it, it will become important to be able to specify the original description direction of the document. Currently, we cannot write vertically on the platform, but if we do not designate it anywhere in the XML text, there
will be a possibility of causing problems in the future. If we do not leave room for specifying whether the original text was premised on vertical writing or not, the XML document that we create will be inaccurately rendered and therefore insufficient for some future research purposes.

In CSS 3, there is a property that specifies the character direction. For JATS, We would like to suggest adding @ writing-mode as an attribute to `<article>`.

```xml
<article writing-mode="vertical">

This article document may be expressed horizontally on a platform that cannot be written vertically. However, in the future, when vertical writing online journals become possible, they will be expressed in vertical writing all at once. If current articles are written in this style XML, the information that the article was originally intended to be written in a vertical orientation will be preserved.

### Note and references

Problems of notes and cited documents also need to be addressed and solved. To use the cited documents described in the previous traditional note separately is to change their traditional description method. It is not preferable to change the tradition just because it has entered the online world. We need some solution. It is easy to imagine that Artificial Intelligence will learn to automatically tell the difference between a `<mixed-citation>` and a `<note>` and extract one from the other in the near future, even if cited documents are written in the notes.

Additionally, it is necessary to think about linking primary documents such as sutras from the notes or from the text to the scripture database. The text database of SAT “Taishō Tripiṭaka (大正新脩大藏経)” has already been created and reading the paper while linking with existing databases like this will undoubtedly be extremely useful for future research progress.

### Difficult and rare characters

There are no examples of describing difficult Kanji or classical Bonji or Siddhaṃ script (as in the Hebrew text of the Old Testament of the Bible) inside of the cited references, but when the full paper XML becomes possible, that description problem will surely arise. In the present situation, character is expressed in UTF-8 and it is not thought to be difficult, but examples of difficult Kanji which cannot be described in UTF-8 will also certainly occur in the future. As Kanji are ideograms, there are historical variations that cannot be expressed with UTF-8. In that case, it will be necessary to decide on their description method.

### Conclusion

It can be said that JATS currently holds the position of the world’s common framework of academic information on behalf of English. Despite the differences between languages, the contents themselves are easier to understand due to the development of translation software and other tools. From now on, the most important consideration is not the language of scholarship itself, but the structure of the document containing it. If structured documents are common to the world, it will be easier to understand and collaboratively utilize the contents of scholarly documents.

JATS has already been used as a de facto standard all over the world in many research fields. Would it not be possible to expand the vast academic world by allowing papers of all languages and all fields to be expressed within the common JATS infrastructure?

The barriers of English and Latin letters have been removed. We wonder if the barriers of STM field can be lowered just a bit at this time. Our only choice, at the moment, is JATS.

### Conflict of Interest

Hidehiko Nakanishi has been a President of Nakanishi Printing Company Limited, Kyoto, Japan since 2016 and Tsuyoshi Yamamoto, Nao Hattori, Satoshi Taga have been staffs of the company. This article is for research purpose not for advertisement of co-authors’ companies.

### References


abstracts/416

Latest trends in innovative global scholarly journal publication and distribution platforms

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Abstract
This review article presents the latest trends in innovative global scholarly journal publication and distribution platforms, with implications for local journals. Changes have taken place in distribution policies, as pre-publication distribution has become a viable option, and for post-publication distribution, public access or mandatory open access policies have been introduced for articles supported by public or governmental funds. New formats of articles include graphical abstracts, interactive PDFs, the application of semantic enhancements, and the utilization of research data, social networking sites, such as Mendeley and ResearchGate, have become common sites for information exchange. Altmetrics have been adopted to complement traditional journal metrics. PubMed Central, F1000Research, KoreaMed Synapse, and ScienceCentral have been introduced as innovative full-text scholarly journal distribution systems. To publish web-based scholarly journals, it is necessary to adopt an open platform and to explore options such as an author profile database, an online collaborative editing module, and Crossref text and data mining services. To maximize the influence of local journals, it is necessary to integrate various external tools, such as researcher ID, research data, social media, and altmetrics services.

Keywords
Access to information; Scholarly publishing; Scholarly social media; Scholarly social networking; Semantic publishing

Introduction
Due to excessive commercialization and price increases, the open access movement appeared in the 2000s. Open access scholarly journals enable users from throughout the world to access information freely, as these journals can be freely accessed online without any legal, economical, or technical barriers [1]. Scientific publishing has also changed since the development of
the open access movement. As most Korean scholarly journals publish their articles online, along with a print version, considerable budgetary resources are required not only for printing and shipping costs, but also to maintain the editorial quality of the peer review system and journal management platforms. Existing subscription-based pricing models generate profits by selling scholarly journals to libraries. However, to maintain the quality of journals, online journal publication systems have become increasingly diversified; of particular note is the emergence of the ‘gold’ open access journal system, which is burdensome to authors due to article processing charges [2].

Despite the wide range of changes in journal publishing and distribution, funding agencies, universities and researchers are only interested in international journals listed in the SCIE and Scopus, so that many local academic journals are ignored. The number of SCIE papers published by Korean researchers in 2016 was 59,628, which is the 12th highest in the world. In 2018, there were 105 SCIE journals in Korea, which is significantly less than the corresponding figure of 3,706 in the USA. The reason why many Korean researchers are actively seeking to publish only in international SCIE-indexed journals is that many Korean universities and government funding agencies underestimate local journals [3].

To increase the global awareness of local scholarly journals, journal internationalization is essential. In particular, there is a demand for the rapid distribution of research outcomes, which can be conducted domestically or through increased international collaboration. Therefore, in this review, we introduce some excellent and innovative journal publishing platforms that can contribute to the internationalization of Korean academic journals and present directions of development for domestic scholarly journals.

**Changes in the Distribution of Scholarly Journals**

**Pre-publication distribution**

Early-view services provide full-text articles online before the edited print manuscripts are published. As soon as the author approves the final revisions, the manuscript is posted online, and the digital object identifier (DOI) information is provided with the online publication date for other articles to quote and cite. Early-view papers can be integrated into journal databases for combined searching and browsing, and all figures and tables can be cited. E-mail notifications are also available and can be obtained through the journal’s homepage.

A typical example of a preprint archive is arXiv (https://arxiv.org/), which is a website that collects preprint papers in mathematics, physics, astronomy, computational science, quantitative biology, and statistics. In 1991, it started as a venue to store preprint papers in the field of physics. The site is a nonprofit organization operated by Cornell University and is considered a prime example of open access, and researchers regularly use this site for pre-review before submitting a paper to peer-reviewed journals.

SHERPA/RoMEO (http://www.sherpa.ac.uk) is a UK/JISC (formerly the Joint Information Systems Committee) project to provide an open archive and licensing information. Many publishers present self-archiving terms for preprint and post-print on this website. For example, the conditions set by Springer Nature for Sherpa/Romeo are that preprint archiving is allowed, but posting the publisher version or PDF is forbidden.

**Distribution after publication**

Recently, international research outcomes supported by public funds have been required to be released within 6 months to 12 months after the publication of academic papers. Based on these trends, subject-oriented open access institutional repositories that can preserve these academic papers have become more common [2].

The most representative example is the National Institutes for Health (NIH). NIH-funded researchers must deposit their final manuscript in PubMed Central (PMC) within 12 months of publication. At this time, the author may directly register with PMC, or the publisher that published the paper may register on behalf of the author. The authors should then consult with the publisher before transferring the copyright to meet all the conditions of the NIH policy, and should not enter into contracts with the publisher in violation of NIH policies [4,5].

The Research Councils UK prefers an open, unrestricted, gold-based, open access approach, but at the discretion of the researchers, the authors can contribute directly to an open access journal or donate the article to institutional repositories. If researchers submit a manuscript to a journal that requires an article processing charge for open access, Research Councils UK subsidizes the cost of publishing [6].

Germany has recommended that all research results supported by the German Research Foundation should be made available as open access starting in 2006. Since 2016, the Federal Ministry of Education and Research has been obliged to release all government-supported research results with open access as soon as they are published [7]. In Europe, open access will be required for research results (scholarly papers, monographs, reports, etc.) written using public funds from all EU countries starting in 2020 [8].

Since 2017, the Japan Society for the Promotion of Science has implemented an open access policy for all research grant projects. The results are to be published in peer-reviewed aca-
ademic journals, and anyone is able to freely access and obtain papers from the internet without restrictions of time and place. An embargo can be placed on papers for a certain period [9].

The Latest Trends in Publishing and Distribution

New formats of journal articles
Many commercial publishers are working to provide new article formats on journals’ homepages, including Elsevier’s “Article of the Future” project (http://www.articleofthefuture.com/). According to Elsevier’s research on user behavior, users still preferred the PDF format, which best presents the basic structure and findings of the article. Elsevier has kept the layout of the PDF format according to users’ preferences, but with enhanced functionalities, including annotation and easy linkage to figures and charts. The interface is automatically adjusted to the screen size of various mobile devices using HTML5.

Furthermore, figures can be exported automatically with bibliographic information to PowerPoint, and graph data can be exported to Excel. As shown in Fig. 1, abstracts can be expressed as an image so that the highlights of the article can be easily understood at a glance [10].

The Journal of the American Medical Association (JAMA), published by the American Medical Association, provides podcasts of JAMA editors’ summary, author interviews, and the popular JAMA Clinical Reviews series. The New England Journal of Medicine also provides a video summary or animation.

Springer Nature now produces the top-rated ‘Nature Podcast’ to showcase the best publications from its various medical journals. Podcasts are an excellent opportunity to promote discussion among researchers, resulting in greater involvement of the international scientific community [11].

Semantic enhancement in publishing
Applying various semantic publishing techniques can provide richer visualizations of data than is possible for papers presented in PDF format, as shown in Fig. 2 [12,13]. Furthermore, the Smarter Content feature helps users find relevant articles, even if the keywords they search for do not yield results in academic papers. In addition to research data, it is possible to link to other information; doing so helps readers to improve their understanding of the papers and increases the usage rate.

Utilization of research data
Recently, as a part of the Open Science movement, a platform for efficiently managing research data in order to support open research activities is gaining attention. Scientifically rigorous attempts to verify research data or conduct peer review after publication are being made to increase reproducibility.

In addition to the efforts made by public research funders to strengthen the open access policy, publishers are also encouraged to link their research data to academic papers as complementary data or to publish data journals. Many stakeholders (publishers, governments, and funding agencies) are exploring various solutions for dataset management. Clarivate Analytics (formerly Thomson Reuter) has developed the Data Citation Index to enhance the accessibility of research data. Several publishers, including Elsevier and the Nature Publishing Group, have visualized supplementary research data submitted in conjunction with academic papers [14]. This new technology is now starting to be applied to Korean academic journals as well, as shown in Fig. 3 [15].

Utilization of academic social networking sites
Researchers’ use of social media has not had a significant impact on the academic community. Researchers have been cautious about using scholarly communication tools that have not undergone peer review because of their low quality and reliability. Nonetheless, membership in academic social networks (e.g., Academia, Mendeley, ResearchGate) has been rapidly increasing as a way to promote visibility. These sites are becoming important channels for discovering and sharing new content and for discovering potential collaborators. They are also used as tools for online discussion and as reference
ResearchGate (http://www.researchgate.net) is a representative social networking site (SNS) for scientists launched in 2007. It encourages researchers to communicate by recommending related researchers. As of 2018, more than 14 million researchers have enrolled, and more than 100 million papers have been shared. Real-time ResearchGate scores are provided to see how much of this information is being used. ResearchGate also provides a variety of discussion boards, allowing users to follow favorite researchers or to share ideas with other experts.

Academia.edu (https://www.academia.edu) is an academic SNS for researchers, launched in 2008 by a venture entrepreneur named Richard Price. This platform can monitor the impact of articles and follow researchers in subject areas of interest. More than 61 million users have registered as of 2018, and 31 million users visit each month. More than 20 million papers are posted on this site. It supports open science, and therefore provides datasets and code information used in papers in cooperation with GitHub. A study of research distrib-

Fig. 2. The ecosystem of published articles, documents, spreadsheets, data fusion, and machine-readable RDF data files resulting the application of semantic enhancement to a PLoS Negl Trop Dis article by Reis et al. [12]. Reproduced from Shotton D et al. PLoS Comput Biol 2009;5:e1000361, according to the Creative Commons license [13].

Fig. 3. Journal of Educational Evaluation for Health Professions (https://jeehp.org) utilization of supplementary material.
uted through academia.edu showed that articles published on that site were cited 64% more than other papers on similar topics [17].

Mendeley (https://www.mendeley.com) was developed by 3 doctoral students in the UK in 2007 and was acquired by Elsevier in 2013. It is a cloud-based paper and dataset management program that works on desktop, web, and mobile platforms. Researchers in the same group can collaboratively store and view articles and share highlights and annotations. It also provides a reference management tool that can automatically generate references for a target journal. Mendeley usage is being tracked as a main parameter in various altmetrics tools.

Changes in research evaluation metrics
Altmetrics is an abbreviation for alternative metrics, and refers to ways to more extensively measure the impact of research through various Web 2.0 tools or SNS. Altmetrics are used as a complement to citation-based bibliometrics [14]. Altmetrics can tell how often articles are mentioned or used in public websites such as Faculty of 1,000, Wikipedia, research blogs, Twitter, and Mendeley. When these altmetrics capabilities are applied on journal websites, it is easy to see at a glance the status of online usage in social media, the usage of individual articles, and citation information.

A representative altmetrics tool is Altmetric (https://www.altmetric.com/). This is an open-source website that makes it easier to share academic research achievements online. It reflects an attempt to build an online performance-based compensation system by helping researchers to share the stories of their research that is published in data-driven articles. It is a nonprofit corporation supported by the National Science Foundation and the Alfred P. Sloan Foundation. It offers free services including Unpaywall and oaDOI. It has collected various research achievements of researchers and provided altmetrics information for individual articles by collaborating with organizations such as Scopus, Springer, Wiley, and Nature Publishing Group.

Plum Analytics (https://plumanalytics.com/) was founded in early 2012 and was incorporated into EBSCO Information Services in 2014, but was acquired by Elsevier in 2016. As a pioneer of altmetrics, it collects dozens of items on academic materials, media channels, and social media, as well as existing citation-based data, and measures academic influences in a wide range of contexts. It provides information on usage, captures (favorites/bookmarks), mentions (reviews), social media engagement, and citations.

A representative example of how altmetrics information can be applied is furnished by Public Library of Science (PLoS), a non-profit open access academic publisher. PLoS

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**Fig. 4.** PLoS usage statistics using altmetrics [http://journals.plos.org/plosgenetics/article?id=10.1371/journal.pgen.1003546].
visualizes altmetrics information for individual articles, as shown in Fig. 4. It shows real-time usage statistics, such as the number of saves, citations, views, and shares.

Some Korean journal publishing vendors including M2community (http://www.m2community.co.kr/) are now providing a similar usage service utilizing altmetrics, as shown in Fig. 5.

Global Innovative Scholarly Journal Distribution Systems

PMC
PMC (https://www.ncbi.nlm.nih.gov/pmc/) is a free biological full-text database developed by the National Medical Library. As shown in Fig. 6, 2,110 English-language academic journals and 4.8 million academic papers were uploaded to PMC in 2018.

It manages core journals in biomedical and clinical research and aims to preserve them for the long term. In addition, NIH-funded research results are provided free of charge by the public access policy. PMC provides criteria for journal selection through the PMC guidelines. Although many scholarly journals and NIH-funded research results satisfy these selection criteria, PMC maintains its quality by only archiving articles that are published in peer-reviewed journals.

F1000Research
F1000Research (https://f1000research.com/) is an open-science oriented academic publishing platform for papers, posters, and slides in the life sciences and medicine. The authors pay an average of $150 to $1,000 per publication. Publication time is an average of 7 days. The peer reviewer's evaluation is released through the platform transparently, and evaluations by the readers are also posted on the website. F1000Research has great significance in that it shares not only the research articles, but also research data without filtering, which can be easily omitted from the existing publishing process. This platform not only uses a transparent peer review channel, but also allows the free analysis of research data at any time and allows data to be copied. This helps to improve the reproducibility and reliability of studies. Accepted articles
Fig. 6. PubMed Central (PMC) is a free full-text archive of biomedical and life sciences journal literature at the US National Institutes of Health’s National Library of Medline (https://www.ncbi.nlm.nih.gov/pmc/).

Fig. 7. F1000Research: an open research publishing platform for life scientists, offering immediate publication of articles and other research output without editorial bias (https://f1000research.com/articles/6-1722/v1).
are indexed in the main literature database and are deposited with PMC and the European PMC. This platform will help to ensure that research results are released promptly and not stagnate in the time-consuming review process of academic journals. The transparent buddy review process as shown in Fig. 7 is not used for editorial decision-making (i.e., acceptance or rejection), but serves as a way for authors to receive constructive feedback focused on improving their research.

Frontiers
As an innovative open access publisher rooted in the research community, Frontiers (https://www.frontiersin.org/) published 59 open access journals in 2018. In psychology, neuroscience, and plant science, some of these journals were ranked among the most frequently cited journals, and their average 2016 Journal Citation Ranking impact factor was 6.4. Frontiers has published over 65,000 academic papers, with 71,000 active editors. It has actively applied the latest publishing technologies, such as researcher community networks and social media, and therefore received the Association of Learned and Professional Society Publishers Gold Award for innovation in 2014. To make peer review more efficient and transparent, it integrates with Loop, which is a research network and social platform that provides real-time information about an article’s influence. As Fig. 8 shows, it promotes collaborative research and open publication and is striving to enhance the influence of authors.

Innovative Scholarly Journal Distribution Systems in Korea

KoreaMed Synapse
Since 2007, Korean Association of Medical Journal Editors has provided a digital archive platform known as KoreaMed Synapse (https://synapse.koreamed.org) for the internationalization of domestic journals. As of June 2018, 120 Korean medical journals are available on this platform. As Fig. 9 shows, KoreaMed Synapse uses the DOI, Crossref, and Journal Article Tag Suite (JATS) XML, making it well-suited to international publishing standards and allowing automatic transfer to PMC.

ScienceCentral
ScienceCentral (https://www.e-sciencencentral.org/) is a specialized database of open access journals developed by the Korea Federation of Science and Technology Societies. As Korean medical journals are indexed in PMC, their impact factor is rising rapidly due to increased international exposure. Therefore, the Korea Federation of Science and Technology Societies developed a platform to utilize PMC as a model to increase the global visibility of Korean non-profit scientific journals. Based on JATS XML, journals can be converted to PubRead-

Fig. 10. ScienceCentral: a platform providing a free or open access full-text database of journals of scientific societies developed by the Korean Federation of Science and Technology Societies (https://e-sciencecentral.org/advanced/Browse.php).
Fig. 11. KoreaScience: a reference linking platform of Korean journals in science and technology (https://koreascience.or.kr).

Fig. 12. The Korean Journal Publishing Service (KPubS): a scholarly open access journal publishing platform operated by the Korea Institute of Science and Technology Information (https://kpubs.org).
er or EPUB format, enabling them to be viewed in e-book form in a web environment. References can be hyperlinked, and the platform provides cited-by and related articles functionality. As Fig. 10 shows, as part of an intuitive user interface, it also contains information on ORCID, Funder Registry, Crossmark, and downloading figures or citation information.

Korea Science
Since 2008, the Korea Institute of Science and Technology Information has been working with Crossref, an international not-for-profit organization, to provide DOIs to domestic journals. Through its online journal platform, KoreaScience (http://www.koreascience.or.kr), it has improved the visibility of domestic journals and improved the use of citations. As of June 12, 2018, 469 journals are available (Fig. 11).

KPubS
KPubS (Korean Journal Publishing Service, http://kpubs.org) is a scholarly open access journal publishing platform developed by the Korea Institute of Science and Technology Information. The purpose of this system is to support the entire journal publication process, including manuscript management, archiving, web service, and international circulation. As of June 2018, 115 academic journals are available. All figures and tables can be downloaded as PowerPoint files, and various reference styles are automatically provided, as shown in Fig. 12.

Developing an Open Online Publishing and Distribution Platform

Research funding agencies play an increasingly important role in scholarly communication. Measuring the impact of funded research outcomes and publicizing them more widely are steps that strengthen open access policies [2]. Research performance evaluation is now being conducted in real time, not only by counting the number of citations of papers, but also by assessing how widely they are discussed in the research community through altmetrics. Thus, many researchers register with SNS (e.g., Academia.edu, Mendeley, or ResearchGate) to increase the visibility of their academic papers and to increase their influence [15]. Several ways to enhance the international visibility of research using the latest publishing technologies are presented below.

Utilization of a global author profile database
The most widely-used manuscript submission system allows users to log in through ORCID (https://orcid.org). This reduces the time and effort that authors must spend entering their information, and a reviewer can easily check an author’s research performance. Editors can also make use of this functionality for inviting appropriate peer reviewers [18].

Applying various peer review modules
A transparent peer review system, as exemplified by F1000, encourages constructive feedback by focusing on improving authors’ research output rather than on making editorial decisions. Altmetrics can also measure the impact of an article in real time after publication, which is a potential alternative to post-publication review.

Utilization of citation and usage statistics from various angles
It is necessary to actively utilize free tools to visualize research outcomes and citation information from various angles. Usage statistics on the journal’s homepage can be easily obtained using Google Analytics. Usage statistics, such as browsing and downloads, can be developed based on the standardized usage statistics calculation method known as COUNTER (https://www.projectcounter.org). It is a practical tool that allows publishers to generate consistent and reliable usage data. It helps libraries to compare usage data from various vendors and to understand the value of the electronic resources they subscribe to.

Providing an online collaborative editing module
Publishers have provided general services, such as peer review and manuscript proofreading services. Some large publishers are looking to provide further author services through Overleaf (https://www.overleaf.com), which allows researchers to collaborate online. Utilizing a variety of open-source software resources, Overleaf provides more than 2,400 journal manuscript formats and a variety of tools to create collaborative articles among co-authors easily.

Utilization of Crossref text and data mining
Text and data mining was a pilot service of Crossref launched on May 28, 2014. It automatically analyzes and extracts information from documents registered in the metadata of over 4,000 publishers subscribed to Crossref and links to the original text directly. Leveraging the Crossref Metadata API functionality, it can be used in any journal regardless of its business model.

Conclusion

Despite the striking changes that have taken place in scholarly communications in the online publishing environment, the local academic journal publishing and distribution system has not adequately prepared itself to respond to these new trends [19]. Based on an analysis of exemplary academic journal publication and dissemination systems from throughout the world, it is necessary to modularize the core characteristics
first and to collaborate flexibly with third-party partners. Overall, scholarly publishing is divided into the 3 elements of peer review, publishing, and dissemination. Each module can be implemented independently from the others. If necessary, a module could be implemented in cooperation with an external platform, or be replaced.

To publish academic journals online, it is necessary to collaborate not only with the traditional printing system but also to integrate research data and to interact with the research community. To maximize the influence of domestic journals, they should use an open research platform capable of integration with various external tools, such as each researcher’s unique ID (ORCID), academic SNS, Crossref, and altmetrics services. In order to develop these open platforms for sharing research, long-term policy strategies and sufficient budgetary resources must be prepared systematically, and publishing experts must be trained.

Conflict of Interest

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

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History, tradition, and development of journals of the Korean Mathematical Society

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Abstract

In October 1946, mathematicians and physicists founded the Korean Society of Mathematics and Physics, which was relaunched as the Korean Mathematical Society (KMS) in March 1952. This article presents the history of three journals published by the KMS. Volume 1 of the first journal, Mathematics Education, was published in 1955, but it was discontinued after publication of volume 3. After that, as the KMS was reorganized in the 1960s, it began once more to publish a journal in 1964, with the title Mathematics. Later, Mathematics was divided into the Journal of the Korean Mathematical Society and the Bulletin of the Korean Mathematical Society. A third journal, Communications of the Korean Mathematical Society, was first published in 1986. Since then, a total of three journals have been published by the KMS. We can conceive of the years before 1980 as an era focused on education, while the subsequent years have constituted a research era. In this period, mathematics in Korea achieved remarkable growth through extensive international collaboration in research and the internationalization of journals of the KMS. In particular, the Journal of the Korean Mathematical Society and Bulletin of the Korean Mathematical Society achieved being indexed in SCIE, while Communications of the Korean Mathematical Society achieved being indexed in ESCI, a stage that precedes being indexed in SCIE. The journals published by the KMS will continue to serve as a venue for outstanding research results from throughout the world to be published and contribute greatly to the international growth of Korean mathematical capabilities.

Keywords

History; Mathematics; Publications; Republic of Korea; Societies

Introduction

The Korean Mathematical Society (KMS) was relaunched on March 11, 1952; it was initially founded as the Korean Society of Mathematics and Physics in 1946. This article presents the histo-
History of three journals published by KMS and describes how these journals have developed internationally. Volume 1 of *Mathematics Education* was published in 1955, but the journal was discontinued after issuing volume 3. In its place, a journal titled *Mathematics* was launched in 1964. Then, in 1968, *Mathematics* was divided into a journal and bulletin, entitled the *Journal of the Korean Mathematical Society* (JKMS) and the *Bulletin of the Korean Mathematical Society* (BKMS), respectively. Furthermore, in 1986, *Communications of the Korean Mathematical Society* (CKMS) was first published. This article describes the history of these three journals based on the content of the *History of the Korean Mathematical Society* (volume 1) and the *70 Year history of the Korean Mathematical Society* [1,2]. This article will provide an opportunity for younger scholars to understand the history of the journals published by the KMS and the role played by senior scholars who have invested considerable time and energy into the development of the journals. Moreover, it also will contribute to further international development of these journals.

### Capabilities of Korean Mathematicians after Independence in 1945

After the Japanese colonial government pulled out in 1945, the Korean math world held conferences within the framework of the Korean Society of Mathematics and Physics. However, as these conferences focused on the introduction of new theories or methodologies in the field of mathematics education, they were not suitable venues for serious research articles. However, a piece of surprising news then arrived in the math world. With the title “On a problem of Max A. Zorn,” a paper written by Prof. Rimhak Ree of Seoul National University (SNU) was published in the *Bulletin of the American Mathematical Society* in 1949, volume 55, pages 575-576. As the only paper by a Korean mathematician that was published in an international journal between 1945 and 1950, the year of the Korean War, this paper confirmed that the capabilities of Korean mathematicians were excellent, even though there were not many mathematicians at the time. The publication of this great paper became the foundation of future development of math journals.

### The First Bulletin (*Mathematics Education*)

After the KMS was relaunched at the temporary school of College of Engineering, SNU on March 11, 1952 (Seodaesin-dong, Busan), its third general meeting was held in an auditorium at the College of Liberal Arts and Sciences, SNU on August 29, 1954. Here, the issue of publishing a journal was seriously discussed as a special matter. Although the economic circumstances then were not appropriate for devotion to learning or striving for research time, publishing a journal was discussed, and as a result, *Mathematics Education* volume 1 was published on July 5, 1955. Its size was 52 × 218 mm, and the body text consisted of 80 pages (Fig. 1). Its editor is unknown.

*Mathematics Education* volume 1 contained opening remarks by Chairman Yoon-Sik Choi (최윤식), congratulatory messages from Seon-Geun Lee (이선근), the Minister of Culture and Education, and Kyu-Nam Choi (최규남), the President of Seoul National University, pieces about mathematics education at the...
time, and an interpretation of the draft mathematics curriculum of each school that was promulgated in August 1955 (Fig. 1).

Mathematics Education volume 2, which was published in the spring of 1957, consisted of 104 pages and was mostly about mathematics education. It contained a codification of mathematics terminology enacted by the Ministry of Education and Human Resources Development.

Mathematics Education volume 3, which was published in the spring of 1958, contained 68 pages and a total of 18 articles, four of which were about mathematics education in Korean and 13 were about mathematics. Of those 13 articles, 10 were mimeographs typed in English.

Mathematics, a Journal Published at the Time of the Reorganization of the KMS

On March 28, 1964, the KMS held a board of directors meeting at Chonbuk National University, decided to publish a journal, and indicated that the details would be left to the discretion of the permanent board of directors. This decision was made because Mathematics Education had been discontinued since the publication of volume 3 in 1958, and in light of the foundation of the Korean Society of Mathematical Education, continuing to publish a journal named Mathematics Education would not be justified. Therefore, Mathematics was chosen as the title of the journal that would be newly published, and the decision was made to publish it starting with an initial issue, not as a continuation of Mathematics Education volume 1.

Mathematics volume 1 was issued and distributed on June 6, 1964, when a conference was held at the Republic of Korea Naval Academy. Mathematics volume 1 consisted of 36 pages and contained a series of lectures at the level of graduate school classes, master's theses, summaries of papers presented at conferences, and a description of activities of various universities and members; the issue was characterized as being quite enlightening (Fig. 2).

This first issue of Mathematics is now regarded as volume 1 of the JKMS and the BKMS, and volume 2, 3, and 4 were published in 1965, 1966, and 1967, respectively. Mathematics volume 1 and 2 were edited by Woo-Han Lee, and the College of Liberal Arts and Sciences of SNU took responsibility for editing Mathematics starting with volume 3, which is confirmed to have been edited by Sehie Park. The text of volume 3 comprised 38 pages, consisting of 5 papers, 3 survey articles, and a book review. Additionally, news of the KMS was introduced briefly.

Governmental Support for Journal Publication

With the start of the 5-year economic development plan in 1962, the Korean government gradually emphasized the importance of science and technology. On January 16, 1967, when the second 5-year economic development plan started, the Framework Act on Science and Technology was enacted and the Ministry of Science and Technology was established. The Ministry of Science and Technology secured research grants as part of the government's budget to support the activities of small academic societies in difficult situations, and then received proposals from academic societies about how they planned to spend academic activity grant funds after screening. The grant process has continued to the present day, and each academic society receives governmental aid for the publication of academic journals and academic activities through the Korean Federation of Science and Technology Societies (KOFST). In 1968, the KMS also received grants of 250,000 won for journal publication and 50,000 won for conference expenses. To receive these grants, the KMS had to submit a project plan. On June 8, 1968, the board of directors met to create the project plan, and the decision was then made to publish Mathematics volume 5. Eul-Yong Park and Woo-Han Lee, who were delegated by the board of directors to take responsibility for the publication process, called a temporary editorial board meeting at the College of Liberal Arts and Sciences of SNU, and discussed all issues regarding the development of journals of the KMS in depth. Eul-Yong Park, Woo-Han Lee, Sehie Park, Jeh Pil Kim, Chi-Young Kim (김치영), Jeong-Soo Kim (김정수), Chairman Gyeong-Chan Park (박경찬), and Standing Director Seong-Goo Woo (우성구) participated as members of the temporary editorial board. At this
editorial board meeting, it was decided that its academic journal of the KMS was to be divided and published as the JKMS and the BKMS. The journal of the KMS, Mathematics, included mathematics research papers, book reviews, and the news about the KMS. The temporary editorial board decided to divide the Mathematics into the JKMS and the BKMS, and each journal to be published two issues per year, a total of 400 pages. It was also decided that both journals would start from volume 5, following volume 4 of Mathematics. After that, volume 5 of the JKMS, which only contained mathematics papers, was published on an accelerated schedule on October 26, 1968, the day of the regular conference. The editorial members of the first JKMS were the same as those who attended the temporary editorial board meeting. However, for the first issue of the BKMS, Woo-Han Lee was the editor, and the members of the editorial board were Jeh Pil Kim, Jae Chul Rho, Sehie Park, Jang Ik Eom (엄장익), and Chang Goo Lim (임창구).

Rapid Growth of the JKMS and the BKMS at the Time of the 35th Anniversary of the KMS

In 1968, the JKMS and the BKMS started from volume 5 (Fig. 3). The decision was made that the JKMS would include only papers written in English, while the BKMS would include papers written in Korean or English; this idea was suggested by Sehie Park and Jeh Pil Kim. Thick, commercially-available, blue colored paper and yellow colored paper was used for the JKMS and BKMS, respectively, to reduce printing expenses. The JKMS and BKMS were published twice a year each, with a total of 400 pages, and provided a venue for exchanges with universities, research institutes, academic societies, and libraries all over the world. They received papers from foreign scholars, as well as members of the KMS, and they were distributed worldwide.

Start of the TeX Era for Academic Journals

In the 1990s, the publishers that set the letters in type and printed the journals declared that they would no longer typeset mathematics papers, which were full of complicated symbols. This was a serious crisis for the journals of the KMS. For this reason, the KMS decided to use TeX for both the JKMS and the BKMS, starting with volume 28, number 1 (the February issue in 1991). The KMS computerized all manuscripts that were submitted by members of the KMS by having an expert typist use the new system of TeX. The manuscripts were first printed on large papers using a 24-pin dot printer, and were then reduced again and printed to improve the quality of the final text. To promote this method of creating electronic manuscripts among members, information about this process was published in the newsletter. At the time, the computing committee, especially Chairperson Hong-Jong Kim and the member Ki-Hyoung Ko, who developed the Korean version of TeX, were very helpful.

Efforts of the KMS to Be Selected for the Excellent English Journals Cultivation Project and to Be Indexed in SCI

The KOFST launched the Excellent English Journals Cultivation Project by selecting excellent domestic English-language journals and intensively supporting them, and the JKMS was selected for this project in 1997. The world’s leading authorities in the corresponding fields were invited to publish in these journals, or international conferences in which such prestigious scholars participated were held in Korea. The papers they presented were published in excellent domestic English-language journals, which helped improving the quality of domestic journals. This project played a major role in holding international conferences and improving the status of the JKMS through the 2000s.

JKMS, BKMS, CKMS Indexation in International Index Databases

In the late 1990s, research grants to faculties, were expanded, and publishing papers in journals indexed in the SCI or by the Korea Research Foundation (formerly National Research Foundation of Korea) began to be used as an evaluation criterion for professors’ research performance. In December 2001, the JKMS, BKMS, and CKMS (Fig. 4) were indexed by the Korea Research Foundation. In 2000, KMS held an international conference called “Mathematics in the New Millennium,” and attracted outstanding papers from the invited presenters for publication in the JKMS, thereby greatly improv-
ing its reputation. In June of the same year, KMS started preparing for the JKMS to be indexed in SCIE in earnest. The next Editing Executive Director Woo-Young Lee and members ensured the punctuality of journal publication, which was an important requirement for being indexed in the SCIE, and internationalized the editing system. Additionally, the construction of an online journal system for the journals of the KMS was completed after a great deal of effort by Editing Executive Director Woo Young Lee for about 1 year, and with this, in early January 2003—over a year after applying to be indexed in the SCI—it was decided that the JKMS would be indexed retroactively from volume 39 (2002) in SCIE and the CompuMath Citation Index. Finally, the longtime goal of KMS and its members was achieved. On January 14, 2003, KMS publicized this fact in major newspapers and held a conference to commemorate the JKMS being indexed in the SCIE in the auditorium 2F of the KOFST on February 20, 2003.

For the BKMS, Editing Executive Director Sang-Geun Hahn applied for indexation in the online Thomson ISI database from volume 45, number 1 in January 2008, and the journal was notified that it would be indexed in SCIE on April 30, 2008. It was indexed retrospectively from volume 44 (2007). After the JKMS was indexed in the SCIE, the BKMS was also indexed in the SCIE. Since 2008, KMS has remained the only academic society in Korea that publishes journals at the level of the SCI database. CKMS achieved being indexed retrospectively from volume 31 (2016) in the ESCI, which is a stage that precedes being indexed in SCIE.

Internationalization and Computerization of Journals

On October 10, 2006, the online manuscript submission system for the JKMS was launched. The English-language homepage of the JKMS was created, along with a manuscript submission management system, as part of the internationalization initiative. This system was also designed in a way that authors could select possible reviewers for their manuscripts. Starting on January 14, 2008, this system was expanded to the BKMS and CKMS and used for all subsequent submissions. In August 2008, original texts from all three journals, starting with the first issues, were made available online, with downloadable PDFs and database search capacity.

Open Access Policy

The KMS introduced an open access policy early, allowing anyone in the world to freely read, distribute, and utilize non-profit papers from its three journals (JKMS, BKMS, and CKMS). Since two of these three journals are partially supported through the taxes paid by Korean citizens, in the form of governmental aid, they were made publicly available in order for everyone who is interested in mathematics, as well as math majors, to easily access the papers. The JKMS has no publication fee as an international journal, while the other 2 journals have a publication fee of 10,000 won (US dollar 10) per page, which is low enough to be accessible even for researchers with no research funds. It is difficult to find an international journal that is open access and

![Recent cover page of three society journals of the Korean Mathematical Society published in 2018.](image-url)
Enhancement of Fairness of Academic Journal Research Ethics

Regulations on research ethics were enacted in 2008 as an effort to enhance the fairness of academic journal research ethics, and the Research Ethics Committee was established as a permanent committee of the KMS in 2015. All papers to be published go through a similarity verification process, and when a research ethics violation is caught or reported, the Research Ethics Committee is called and deliberates on the matter. When the violation is serious, an investigation committee consisting of experts in the corresponding field is constructed, and strict investigation and verification of the reported papers are conducted, after which appropriate follow-up measures are taken.

Conclusion

The KMS has surmounted various challenges, such as journal typesetting, the restrictive number of papers to be published, the paper review period, and research fund support. However, the journals of the KMS were able to grow internationally thanks to many editorial executive directors and operational staff members who have devoted to the journals. The American Mathematical Society, which is the most representative society in the field of mathematics, has made its efforts to abide by strict reviews and regulations and to meticulously check whether any research ethics violations have occurred, and the American Mathematical Society has served as a good example for the KMS. The journals of the KMS are expected to keep growing steadily and to make major contributions to the development of mathematics (Fig. 4).

Conflict of Interest

The authors are members of KMS, and they have participated in the society in many different roles, including handling editors, vice-presidents, and as members of the KMS Board of Directors. This article presents the authors’ personal opinions, not official opinions of the KMS.

Acknowledgments

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References

Update: Bibliometric analysis of publications from North Korea indexed in the Web of Science Core Collection from 1978 to July 2018

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Abstract

This study presents an update of a previous study, 'Bibliometric analysis of publications from North Korea indexed in the Web of Science Core Collection from 1988 to 2016,' which was published in Science Editing volume 4, issue 1. A re-analysis was performed because an incomplete search strategy was used in the original publication, and the present study analyzed the same bibliometric characteristics of publications from North Korea indexed in the Web of Science Core Collection from 1978 to 2018. The Web of Science Core Collection was searched by selecting 'North Korea' in the country field of the basic search results on July 31, 2018. A total of 533 articles were identified. There were no results from before 1978. China, Germany, and Australia were main countries of collaboration. Researchers from Kim Il Sung University produced the most articles. The main research fields were physics, mathematics, materials science, chemistry, and engineering. The funding agencies were mostly from China. The number of articles by North Korean authors only was 105, with the same main research fields. The results were almost the same as reported in the previous article, except for a much higher number of publications. The above results indicate that the North Korean government has asked researchers to publish their works in international journals; therefore, it has allowed them to access the internet. Based on the trends we identified, we anticipate that there will be a continuous increase in publications from North Korea in international journals indexed in the Web of Science Core Collection.

Keywords

Bibliometrics; Democratic People's Republic of Korea; Publications; Research
Introduction

In a previous study on the bibliometric analysis of publications from North Korea, we stated that a total of 318 articles from North Korea were found in the Web of Science Core Collection [1]. However, we found that this figure underestimated the true number of articles. When we read an article in Nature news section that reported that “the isolated nation (North Korea) publishes fewer than 100 scholarly articles a year” [2], we realized that our analysis missed a number of publications. We found that our search strategy was incomplete, because it would be more accurate to search for articles published by North Korean researchers using the country field than using the address field, as we did in the previous study. Therefore, we would like to present updated results for the same bibliometric parameters, including the number of articles by year, countries of the co-authors, affiliations, journal titles, and research fields. We also added funding sources as a parameter to investigate.

Methods

The Web of Science Core Collection was searched by year. The country field “North Korea” was selected, using the year terms [1990–1981] and [1982–2018], in the basic search interface on July 31, 2018. The following settings were used: Science Citation Index Expanded, 1900 to present; Social Sciences Citation Index, 1956 to present; Arts & Humanities Citation Index, 1975 to present; and Emerging Sources Citation Index (ESCI), 2015 to present. We added ESCI in this analysis. This search strategy initially resulted in 558 hits. After removing articles from South Korea that were mistakenly included, a total of 533 articles were identified. The number of articles by year, countries of the co-authors, affiliations, journal titles, research fields, and funding sources were analyzed. Articles published by North Korean researchers alone, without collaboration with researchers from other countries, were selected as a subset. The same bibliometric parameters were analyzed. Word clouds were built using the same methods that were used in the previous study [1], including separate word clouds for all articles and the subset of articles with only North Korean authors. No chronological comparison was conducted. This literature-based study utilized descriptive statistics, and institutional review board approval was not necessary, since this study was a literature database-based analysis.

Results

The total number of articles from 1978 to July 2018 was 533. No results were found from 1900 to 1977. The number of articles began to increase in 2008, and reached 79 in 2016 (Fig. 1, Suppl. 1). The main collaborating countries were as follows: China (306, 55.3%), Germany (67, 12.1%), the United States (18, 3.2%), and Australia (13, 2.3%) (Fig. 2, Suppl. 2). The top 5 organizations in North Korea from which researchers published articles in Web of Science journals were as follows: Kim Il Sung University (235, 44.1%), Kim Chaek University of Technology (75, 14.1%), the Academy of Sciences of the Democratic People’s Republic of Korea (46, 8.6%), the State Academy of Medical Science, 4 Kim Il Sung University, 235 University of Science, 35 State Academy of Science, 30 Academy of Sciences of the Democratic People’s Academy of Agricultural Science, 8 Kim Hyong Jik Normal University, 8
my of Science (36, 6.8%), and the University of Science (35, 6.6%) (Fig. 3, Suppl. 3). The 5 journals that published the most articles by North Korean researchers were Optics Express (11), International Journal of Systematic and Evolutionary Microbiology (10), Acta Petrologica Sinica (9), and Plasmonics (8) (Fig. 4, Suppl. 4). According to the research fields categorized in Web of Science, the 5 most highly-represented areas were physics (103), mathematics (86), materials science (72), chemistry (71), and engineering (65) (Fig. 5, Suppl. 5). The 5 funding agencies that most often supported North Korean researchers’ work were as follows: the National Natural Science Foundation of China (93), Fundamental Research Funds for the Central University (China) (17), the National Science Foundation of China (12), the Alexander von Humboldt Foundation (9), and the National Basic Research Program of China (7) (Fig 6, Suppl. 6). The 3 North Korean researchers who published the most articles were as follows: first, Kwang-Hyon Kim, who is a researcher at the State Academy of Science, Pyongyang, has published 17 articles in the field of nanoparticles; second, Song-Jin Im, who is a faculty member in the Department of Physics, Kim Il Sung University, Pyongyang, has published 15 articles on theoretical physics and nanoscience; and third, Chol-Jun Yu, who is a faculty member in the Department of Computational Materials Design, Faculty of Materials Science, Kim Il Sung University, Pyongyang, has published 15 articles on materials science.

Of the 533 articles, 105 were written by North Korean authors only. The number of those articles began to increase in 2018 (Fig. 1, Suppl. 1). The affiliations of the authors of those articles were as follows: Kim Il Sung University (56), the Academy of Sciences of the Democratic People’s Republic of Korea (18), the State Academy of Science (11), Kim Chaek University of Technology (1), and University of Science (9)
that there were negligible opportunities for scientific collaboration between North and South Korean researchers. This indicates that a number of researchers from North Korea visited China with Chinese researchers (Fig. 2, Suppl. 2). This result shows that China was the main collaborating country, as in the previous study (46) (Fig. 1, Suppl. 1). Thus, the present results reflected typos in the articles. However, in this study, those articles were excluded, as in the previous report, where articles with erroneous listings of the country of researchers were likewise excluded.

In the previous report, the journals that published the most articles by North Korean researchers were International Journal of Systematic and Evolutionary Microbiology (8), Journal of High Energy Physics (7), Linear Algebra and Its Applications (6), Physica B Condensed Matter (5), Journal of Raman Spectroscopy (5), and Acta Physica Sinica (5). In this study, the most articles by North Korean researchers were found in Optics Express (11), International Journal of Systematic and Evolutionary Microbiology (10), Acta Petrologica Sinica (9), Plasmonics (8), and Journal of High Energy Physics (7) (Fig. 4). In the previous results, the main research fields were physics, mathematics, material sciences, chemistry, and engineering. In this report, the same results were found: physics, mathematics, material sciences, chemistry, and engineering (Fig. 5).

In this analysis, we analyzed the funding agencies. There were 605 grants that supported 533 articles. Thus, most articles were funded. In particular, there were a number of funding agencies in North Korea. The word clouds generated in this analysis were almost identical to those presented in the previous report (Fig. 9). This study also had some methodological differences with the previous report: first, the year of the search term extended to July 2018; and second, data from ESCI were included, although ESCI only accounted for 10 articles.

In conclusion, our results showed a greater number of publications in the Web of Science Core Collection from North Korea than was reported in our previous study. Almost identical results were found regarding the collaborating countries, journal titles, and research fields. It is also evident that there was a surge in the number of articles in 2015 and 2016. The
trend for an increased number of publications from North Korea indicates that the North Korean government has asked researchers to publish their work in international journals, which means that elite researchers in North Korea can access the internet to submit their manuscripts to international journals without hindrance. We believe that all information published in free or open-access scholarly journals was available to them. We anticipate that there may be a further rapid increase in the number of articles from North Korea published in the Web of Science Core Collection.

**Conflict of Interest**

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

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**Supplementary Material**

Supplementary files are available from https://doi.org/10.6087/kcse.135.

- **Suppl. 1.** Year of publication of 533 articles by North Korean authors from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 2.** List of collaborating authors’ countries from 533 articles by North Korean authors from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 3.** List of organizational affiliations from 533 articles by North Korean authors from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 4.** Citation data, including authors, source journal titles, publication year, and abstract, of 533 articles by North Korean authors from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 5.** List of research fields of 533 articles by North Korean authors from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 6.** List of funding agencies acknowledged in articles by North Korean authors from the Web of Science Core Collection [cited on July 31, 2018]. Some funding agencies in South Korea were included; however, they were not major contributors.
- **Suppl. 7.** List of organizational affiliations from 105 articles by North Korean authors only from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 8.** Citation data, including authors, source journal titles, publication year, and abstract, of 105 articles by North Korean authors only from the Web of Science Core Collection [cited on July 31, 2018].
- **Suppl. 9.** List of research fields of 105 articles by North Korean authors only from the Web of Science Core Collection [cited on July 31, 2018]. Some data from South Korea were included; however, they were not major contributors.
- **Suppl. 10.** List of funding agencies acknowledged in 105 articles by North Korean authors only from the Web of Science Core Collection [cited on July 31, 2018].

**References**

Comparative analysis of manuscript management systems for scholarly publishing

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Abstract

To improve scholarly communications with scientists throughout the world, an international-level manuscript management system is indispensable. We analyzed the manuscript management systems currently in use in Korea and suggested ways to improve these domestic systems through benchmarking with representative overseas systems. Drawing information from the manufacturer's documentation, we compared the functionalities of the major manuscript management systems available in Korea to international systems. Based on this analysis, we identified the essential elements necessary to meet international standards. The representative international systems provide an intuitive interface and an efficient communication channel for authors, editors, and reviewers, enabling them to save time. The two domestic paid systems are almost at the international level; however, the free systems developed in Korea need to be upgraded. In particular, more advanced visualization tools, more efficient tools for communication between stakeholders, and convenient linking to external content are needed. Studies of these manuscript management systems, which are essential for the internationalization of domestic journals, can be utilized as primary materials to improve the level of Korean academic journals in response to the rapid changes in modern scholarly communication.

Keywords

Journal management system; Manuscript management system; Peer review system; Scholarly communication; Scholarly publishing

Introduction

Journal management is a complicated and time-consuming task, and considerable investments of time and workforce must be made to follow traditional journal management procedures. As academic publishing has transitioned into the internet age, journal editors are under great pres-
sure to shorten the time from manuscript submission to publication. In order to do so, it is important to select a manuscript management system that can effectively manage the review process of journal articles [1].

An online manuscript management system can be used to promptly send and receive manuscripts online and to track the progress of manuscripts from submission to publication. It provides an efficient communication channel for authors, editors, and reviewers, including automated e-mail alerts and convenient visual displays of the peer-review status of submissions [2].

In recent years, many Korean academic societies have used an online manuscript management system provided by the government free of charge. However, despite the great expectations that accompanied this initiative, they have expressed many complaints about the technical incompleteness and complicated interface of this systems [3].

This manuscript management system, which is provided free of charge by governmental agencies, is unable to effectively address the challenges faced by existing users due to difficulties in securing a budget for improving its performance [4]. Therefore, many Korean academic societies have started using a paid foreign or domestic manuscript management system instead of the free system.

To investigate this trend, this study examined and analyzed representative major free and paid manuscript management systems in Korea and abroad, and through a comparative analysis, identified the essential features necessary for establishing an online manuscript management system that meets international standards in a way that is suitable given domestic societies' limited budget.

**Methods**

We compared the major functionalities of representative free and paid manuscript management systems available in Korea. As the websites of foreign companies provided quite detailed information, we referred to information available on those sites. However, due to limitations in the information available for the domestic systems, we verified our results through an email interview with the two domestic system vendors (M2community and Medrang/Inforang). We also verified our final result with the representative of ACOMS, Editorial Manager and Scholar One via email.

Table 1 summarizes the manuscript management systems that are most widely used in Korea and abroad.

**International free manuscript management systems**

**Bepress**
bebress (https://www.bepress.com) is a journal publishing system that was launched in 1999 by law professors at UC

**Open Journal Systems**

Public Knowledge Project administered by 6 universities, including Stanford University

- **Overseas paid systems**
  - **ScholarOne**
    - Clarivate Analytics
    - 7,000
    - Used in Wiley, T&F, Sage, American Chemical Society, Emerald, Royal Society of Chemistry etc.
  - **Editorial Manager**
    - Aries Systems
    - 6,700
    - Used by Springer Nature, T&F, PLOS, etc.
  - **EVISE**
    - Elsevier
    - 2,000
    - Used by Elsevier itself

**Domestic free systems**

**ACOMS**

Korea Institute of Science and Technology Information

- **JAMS**
  - National Research Foundation of Korea
  - 1,189
  - Used by academic societies regardless of subject

**Domestic paid systems**

**eSS@i**

Medrang/Inforang

- **EMS**
  - M2community
  - 120
  - Medicine, etc.

ACOMS, Article Contribution Management System; JAMS, Journal & Article Management System; eSS@i, E-Submission Solution at Inforang.
Berkeley, including Robert Cooter. It provides Digital Commons, which is a paid publishing solution. As of July 2018, this system is used by approximately 500 institutions, primarily university libraries and university publishers. It was acquired by Elsevier in August 2017 and continues to provide value-added services in conjunction with Elsevier’s Scopus or Plum Analytics, while maintaining the current pricing model.

Many professors want to publish journals in their field of study, but commercial publishers are reluctant to publish journals in new or specialized fields. In response to these customers’ needs, Digital Commons supports faculty and students to publish their journals through institutional repositories.

It provides a flexible workflow, including double-blind peer review and detailed usage and citation analysis reports for authors and editors. It provides detailed trends of search keywords, searches by region, number of readers by topic, usage trends over time, and so on. This system supports datasets and streaming media, and seeks to improve the visibility and influence of journals through search engine optimization via Google Analytics. It also offers flexible subscription options, such as open access or paid subscriptions.

**Open journal systems**

The Open Journal Systems (OJS, https://pkp.sfu.ca/ojs/) is an open journal management and publishing system developed by the Public Knowledge Project through its federally funded efforts to expand and improve access to research. From submission of manuscripts to online publishing and indexing, it supports all stages of the peer review process. It also provides online publishing and management of all content and a flexible subscription model. A separate publishing process can be set up according to the user’s requirements and can be installed and used on a user’s server [5].

OpenJournalSystem.com which was launched in 2013, has been providing the journal hosting service to the academic societies and institutions to establish online journals using the free OJS software with fee around $460 to $900 per year. The service is divided into OJS hosting, customization, support, upgrade, training, programming, and editorial services. OJS accommodates various file formats, such as HTML, PDF, EPUB, audio, and video. It provides not only an English-language homepage, but also article search and archiving functions. It integrates the latest publishing technologies such as Google Analytics, so even novice editors can publish journals easily.

According to ‘2012 Library publishing services: strategies for success’, OJS was the most popular system among the survey respondents, accounting for 56.8% of responses, and approximately 25% of the libraries had contracts with Berkeley Electronic Press [6].

**International paid systems**

**ScholarOne**

ScholarOne Manuscripts (https://clarivate.com/products/scholarone/) is a manuscript management system used by leading commercial publishers, academic societies, associations, and university publishers such as Wiley. It provides an overview of the manuscript status and identifies bottlenecks where the peer review is stagnant so that the review process can proceed smoothly. It allows editors to assign tasks, sends e-mail alerts, and facilitates easy web-based searching. It can capture data and files in multiple languages, and files can be transferred directly into PDF and HTML proofs.

Editors can obtain a complete overview report in a standard format, or can easily create their own reports. It also provides an intuitive system that allows editors to focus on quality work that increases the value of content by reducing the administrative burden. Furthermore, it allows editors to search for reviewers through their internal databases or external sources such as Web of Science. Also, it provides an automated reviewer recommendation tool (Reviewer Locator) using Web of Science data.

Authors can check all the journal-specific requirements, such as file format and size limitations, when submitting a paper, which supports the prompt submission of manuscripts.

**Editorial Manager**

Editorial Manager (https://www.ariessys.com/) is a commercial manuscript management system which is now used by many publishers such as Wolters Kluwer, Springer Nature, BMC, Taylor & Francis, PLOS, etc. Authors benefit from easy, time-saving submission features like Xtract, which uses automated metadata extraction to prepopulate submission fields using the author’s uploaded manuscript document. Authors can also use ORCID Single Sign On to login to multiple Editorial Manager sites using only their ORCID ID. Authors have the ability to send their submission directly from a preprint server or from commonly used manuscript composition applications such as Overleaf or ManuscriptsApp, which is possible to submit a manuscript by capturing metadata or files easily, and the reviewers can accept or reject a request for review through a secure deep link without logging in. Integrations with partners like StatReviewer allow editors to share automated statistical analysis with reviewers. ORCID reviewer recognition can be set up to automatically deposit peer review activity to reviewer ORCID profiles.

For the editors, they can use the similarity check, and the artwork quality check automatically. The references of the submitted manuscript are automatically linked to CrossRef and PubMed and reformatted according to the style of the submitted journal. It could save time searching for reviewers.
by interacting with ProQuest's Pivot database. It is possible to conveniently transmit rejected manuscripts and reviewers' comments to cooperating journals. Enterprise Analytics Reporting provides a quick visualization of key data such as manuscript submission status by region.

Completed manuscripts and supplement materials can be exported to a publishing production tracking system such as Production Manager or exported to an evaluation system such as PRE (Peer Review Evaluation). It is possible to manage the user authority by dividing the detailed role of the editor such as editor-in-chief, editor, associate editor, and administrator. RightsLink and other e-commerce platforms can be used to handle article process charges and interoperability. Editorial Manager supports integration with standard systems such as ORCID, Ringgold, Funder Registry, JATS, and CRediT.

Elsevier EVISE
The EVISE system (https://www.elsevier.com/editors/evise) is an online review system developed by Elsevier. With a single sign-on for all Elsevier products, a user can easily access Scopus or ScienceDirect without using a separate login while using EVISE. The system is designed intuitively and adapts to the user's requirements and usage patterns, providing a visual overview so that editors can easily recognize what they need to do, and it is convenient to manage manuscripts under review.

Editors can search for, invite, and manage reviewers with minimal clicks on a single screen. When a new manuscript is received, a similarity check is automatically performed, which allows the editor to determine straightforwardly whether an article has been plagiarized. Editors can create and maintain author-specific customized notices used to notify authors of the review results. The editor can also use features to support and manage special calls. Editors can filter reviewers by invitation status and choose between “all reviewers” or “my reviewers.” If a reviewer's email is bounced back, a warning message will be displayed when searching for this reviewer later. If a revised manuscript is reviewed again, information about the previous reviewer is shown. The editor can use Elsevier's new subject categories (OmniScience) and Scopus' discovery tool to search for reviewers that match the topics of interest and search the full EVISE reviewer database. References are automatically linked through Crossref, allowing editors and reviewers to verify the bibliographic records and to ensure that references are entered correctly.

The manuscript submission process is simplified into 4 steps: inputting manuscript information, uploading files, providing additional information, and submitting. Authors' submission files are automatically sorted by the file format, which allows authors to submit articles faster and more easily. Authors can send emails through a simple link to the journal editor in EVISE, facilitating communication between authors and the journal editor. If authors and coauthors log in with their ORCIDs in EVISE, the publication will automatically be added to their ORCID account after publication.

Comparison of international manuscript management systems
For the authors' convenience, international systems allow use of individual author information, such as ORCID. When submitting a manuscript, the author can specify a co-author, depending on the role of the contributor. The author can either enter the keywords for the manuscript directly or select them from the keyword-controlled database provided by the journal. In the case of EVISE and Editorial Manager, the author can verify the manuscript status before completing the article submission. When submitted manuscripts pass the review process, the review results and editors' comments can be sent to the authors. The author can respond to the reviewers' feedback, which is then passed on to the reviewers or editorial staff automatically.

When reviewers are requested to conduct a peer review, they can indicate whether they intend to do so. Additionally, if they decline the proposed review request, they can appoint a substitute. Authors may request or reject specific reviewers with detailed reasons. When re-uploading a manuscript with the with the reviewers' comments, the file is automatically anonymized to protect the anonymity of the reviewers.

In the Editorial Manager system, reviewers can see the references in the submitted article, which can be automatically accessed through PubMed and Crossref and can be reformatted to fit the journal's reference style.

For editors, articles in a specific stage of the review process can be identified by color or sorting by the peer review status. The editor can conduct similarity checks and send an invitation e-mail by registering a specific reviewer. If the first reviewer refuses the review, the next reviewer will automatically be invited. Moreover, the editor can decide whether to accept or reject submitted papers regardless of their peer-review status. In Editorial Manager, the editor can evaluate reviewers' performance and check their activities for other journals.

Korean free manuscript management systems
Article Contribution Management System
Since 1997, the Korea Institute of Science and Technology Information (KISTI) has provided the Article Contribution Management System (ACOMS, https://acoms.kisti.re.kr/) to Korean academic societies free of charge. By utilizing bibliographic information and full texts obtained through this system, KISTI shortens the distribution cycle of scholarly content produced by domestic researchers and provides cost savings for database construction, such as the National Digital Sci-
ence Library and KoreaScience, which provides high-quality English academic journals produced in Korea [7]. As of May 2018, 143 academic journals used ACOMS 4.0 for their English-language website, to manage submissions and the peer-review process, and to link to electronic journal sites.

Authors can indicate when they are not available and can check on the manuscript’s progress at every step from submission to publication. Editors can send an automated e-mail whenever they receive a new manuscript. If there is no response from the invited reviewers, the editor can cancel the invitation or send a reminder e-mail. It is also possible to check for papers whose review has been delayed for a specific period.

Meanwhile, ACOMS 4.0, which was developed by KISTI, has been transferred from the National Research Foundation of Korea and used in 23 journals, most of which are English-language journals, under the name of ACOMS NRF. ACOMS provides many excellent functions, but unlike OJS, which makes open-source software public and enables customization, ACOMS suffers from operational difficulties regarding the choice of which structure(s) to customize based on the needs of each society. Therefore, it is desirable only to provide a mandatory/hidden setting for the standard functions, meaning that the necessary banners and titles are to be produced directly by the society, utilizing only the standardized template function, as in OJS. ACOMS 4.0 version minimizes customization by applying standard template of journal website [8]. Functions that differ from one society to another must be supported through the development of the necessary systems using the provided API function. It is also possible to maintain consistency by not allowing the terminology to be revised for each society, and the Korean/English basic menu uses standard terms as much as possible [8].

**Journal & Article Management System**
The National Research Foundation of Korea has developed an online journal submission and review system called the Journal & Article Management System (JAMS, https://portal.jams.or.kr/), which provides a system that supports the entire process of publishing journals, including manuscript submission, peer review, and electronic publishing. As of May 2018, 1,189 journals are using this system. It operates in conjunction with the Korea Citation Index, which was developed for quantitative evaluation of domestic journals. It also provides online full-text searching and a preprint service for accepted papers. JAMS 2.0 provides various administrative functions necessary for the operation of academic societies, such as the management of the society homepage, conference organization, and an electronic journal service.

**Korean paid systems**

**EMS**

M2community provides more specialized online and mobile services (http://www.m2community.co.kr/). Since 2003, it has provided a comprehensive range of services, including manuscript submission/review, publication, and distribution for about 100 academic societies. This service includes modules for PDF auto-conversion, reference extraction and a full-text linking service, and an automated similarity check service. It also supports individual customization for each journal, an EPUB system linked with the journal homepage, and a professional proofreading and printing module.

The advantages for authors include the ease of creating and signing the copyright agreement, inputting their ORCID, sorting the uploaded files according to their preferences, converting files in multiple formats to PDF files, viewing the PDF files before final submission, selecting preferred or excluded reviewers, and the tracking the progress of submitted papers.

Reviewers can see all other reviewers’ comments and confirm the author’s response to the reviewer’s feedback. Editors can verify authors’ responses to feedback from reviewers and check all submitted files at each stage. Regardless of peer-review status, editors can decide whether to accept a submitted manuscript and can visualize at a glance the review status of each reviewer.

**E-Submission Solution at Inforang**
The E-Submission Solution at Inforang (eSS@i, http://www.medrang.co.kr/) by Medrang/Inforang is a platform that integrates the online submission and review process. It provides one-stop service from manuscript submission to peer-review status at a glance. It also provides various functions, such as preventing delays in the review process, management of publication fees, and statistics for each peer-review stage. It supports effective journal management and circulation by linking with Crossref and ORCID.

Authors can create a copyright agreement, select a preferred reviewer, and sort the uploaded files according to the author’s preference. It is possible to convert files in various formats into PDF files and check the PDF files before the final submission. Reviewers can search by title or keyword in PubMed or KoreaMed, and they can see the author’s response to the reviewer’s feedback immediately. On the editorial side, it is possible to convert an editor’s role to an author or a reviewer without requiring a separate account, and editorial decisions can be made about a submitted manuscript regardless of the progress of peer review.

Recently, support has been added for submissions in various formats used in basic science, such as TeX file conversion through arXiv.org ID. It also provides unregistered ORCID veri-
fication and a linking service with the FundRef institution code.

**Comparative analysis of domestic manuscript management systems**

We analyzed the domestic systems from the authors’, reviewers', and editors’ points of view. First, authors can register on their own or can be registered by the editorial office, and duplicate checking is possible. An author may designate a co-author as a corresponding author. In addition, authors can select keywords and metadata for submitted papers within a word limit. The manuscript can be returned by a reviewer or based on the decision of an editor, and it is not necessary to create new metadata if a revised manuscript is submitted.

EMS by M2community (M2-EMS) can input personal identifiers such as ORCID, ISNI (International Standard Name Identifier), PubMed, and Scopus author ID, and can specify the first author and the corresponding author separately, thus making author identification straightforward. M2-EMS and eSS@i can upload and convert files in various formats, convert PDF files, guide PDF verification before the final submission, and arrange the uploaded files according to the author’s preferences. ACOMS provides several convenient functions, such as designating the first author and the corresponding author separately, easy keyword selection, and choosing preferred reviewers.

Reviewers can usually register on their own or be registered by the editor. If a review request is received, the recipient may express his or her intention to accept or refuse. Reviewers can submit their opinions using the provided online evaluation form and use the temporary save function before submitting their comments. Reviewers can upload attachments in addition to the review results. In ACOMS, they can decide whether to accept or reject a review request without logging in.

Reviewers using M2-EMS and eSS@i can see the authors’ responses, and those using M2-EMS can see all comments from authors, reviewers, and editors. In ACOMS, reviewers can indicate dates when they are not available during registration.

Editors can distinguish folders or specific items that require attention based on color-coding. Furthermore, editors can search for reviewers by name, address, institution, subject field, manuscript keyword, or dates of availability. If the preferred reviewer is not yet registered, the editor can easily register the reviewer and request a review. Editors can conveniently visualize the status of the entire review process by obtaining a status report. Moreover, editors can sort manuscripts by the editorial decision (acceptance, rejection, withdrawal, transfer) and upload/download/edit attachments for submitted manuscripts. ACOMS provides the screening status by user authority, so that the editor-in-chief, editors, reviewers, and journal manager can check the submission and review status of manuscripts submitted to the journal.

Furthermore, M2-EMS can display and print the entire report before a reviewer’s opinion is submitted, and ACOMS provides a function for sharing opinions among the editors. Within M2-EMS and eSS@i, users can switch roles among reviewers, editors, and authors without logging out.

**Analysis of essential factors for the establishment of a new system based on a comparison of online manuscript management systems**

Representative international online manuscript management systems provide an efficient communication channel for authors, editors, and reviewers, including various convenient functionalities. Notably, they offer an intuitive interface that saves time through tools such as automated e-mail alerts, standardized templates, and various visualized reports. The 2 domestic paid systems almost meet international standards; however, the domestic free systems need to be upgraded. More advanced visualizations, more efficient communication tools for stakeholders, and convenient linking to external content are needed.

We classified recommendations for improvement for the functionalities available to authors, reviewers, and editors based on JAMS, which is provided by the NRF of Korea free of charge, and is the most common system used by Korean societies. Table 2 shows a comparative analysis of these systems from the authors’ point of view.

The author submission process can be simplified to 4 steps: entering manuscript information, uploading files, entering additional information, and submitting the manuscript. Authors’ submission files are automatically sorted according to the file format, allowing authors to submit manuscripts more easily and quickly, and authors can e-mail editors through simple links, which supports easy communication. Table 3 presents recommendations for improvements in the functionality available to authors.

It is also important to be able to easily customize the authority and role of the editor-in-chief, journal manager, and editors according to the internal environment of individual societies. Depending on access authority, 4 modules should be developed for authors, journal managers, editors, and reviewers, and different functions should appear after logging in to each module. Depending on the system, modules can be distinguished for convenience, but in practice, each module interworks with the others.

Table 4 shows a comparative analysis of these systems from the reviewers’ point of view and Table 5 shows recommendations for improvements in the functionalities available to reviewers.

Table 6 shows a comparative analysis of these systems from
Table 2. Comparative analysis of manuscript management systems from the authors’ point of view

<table>
<thead>
<tr>
<th>Author registration</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors can register themselves on the system or can be pre-registered by the editorial office.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Authors can enter personal identifiers such as ORCID, ISNI, PubMed Author ID, Researcher ID, and Scopus Author ID (as permitted by the journal).</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ — ○</td>
</tr>
<tr>
<td>The system supports secondary fields for author information so that international authors can enter alternative names or translated addresses.</td>
<td>○ ○ ○ ○ ○</td>
<td>— ○ — ○</td>
</tr>
<tr>
<td>Author registrations are checked for duplicates.</td>
<td>— ○ ○ —</td>
<td>○ ○ ○ —</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Authority control</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submitting author can designate a co-author to be the corresponding author.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>First author and corresponding author can be designated separately.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File uploading</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author’s uploaded files can be automatically sequenced according to publication-defined preference.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Authors can upload single or multiple files in a single compressed (ZIP) format.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ — —</td>
</tr>
<tr>
<td>Authors can conveniently categorize multiple uploaded files (e.g., images).</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Authors can upload a wide variety of file formats for conversion into a PDF file (Word, WordPerfect, Text, RTF, TeX, EPS, LaTeX, PDF, GIF, JPEG, TIFF, PowerPoint, Excel, OpenOffice, etc.).</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ — —</td>
</tr>
<tr>
<td>Authors can upload one or multiple files using drag-and-drop.</td>
<td>○ ○ ○ ○ ○</td>
<td>— — — —</td>
</tr>
<tr>
<td>The author sees interactive feedback about submitted files.</td>
<td>○ ○ ○ —</td>
<td>○ ○ — ○</td>
</tr>
<tr>
<td>Authors are required to check the PDF version before final submission to the editorial office.</td>
<td>— ○ ○ —</td>
<td>○ ○ ○ —</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Input keyword</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors can select their own keywords that describe the submission.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ — ○ ○</td>
</tr>
<tr>
<td>Authors can select their own keywords that describe their area of expertise.</td>
<td>○ ○ ○ ○ ○</td>
<td>— — ○ ○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input metadata</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors have a clear and easy way to submit a revised manuscript without having to resubmit all metadata and files.</td>
<td>○ ○ ○ —</td>
<td>○ ○ ○ —</td>
</tr>
<tr>
<td>Author-entered submission metadata (e.g. abstract, title, short title, etc.) can be limited by a number of characters or words.</td>
<td>○ ○ ○ —</td>
<td>○ ○ ○ ○</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Review process communication</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors can suggest or oppose reviewers during manuscript submission.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Submission can be bounced back to author for re-submission following inspection and/or editing by the editorial office.</td>
<td>○ ○ ○ ○ ○</td>
<td>○ ○ ○ ○ ○</td>
</tr>
<tr>
<td>Other authors of a submission may be asked to verify that they contributed to the paper.</td>
<td>— ○ ○ —</td>
<td>— — — —</td>
</tr>
</tbody>
</table>

OJS, Open Journal Systems; eSS@i, E-Submission Solution at Inforang; ACOMS, Article Contribution Management System; JAMS, Journal & Article Management System.

JAMS’s weak points.
Table 3. Recommendations for improvements in the functionalities available to authors

<table>
<thead>
<tr>
<th>Classification</th>
<th>Detailed description of the recommended features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>If an author has a problem using an official email address when registering his or her email, the author can also register an alternative e-mail.</td>
</tr>
<tr>
<td>Links to external content</td>
<td>When registering as a new user, desired author information such as ORCID registration should also open in a new window through linkage with the ORCID API, so that ORCID registration can be done automatically. If the author and coauthor log in through ORCID, the article should be added automatically to the author's ORCID account after the article is published. A menu should be configured to upload supplementary files, such as research data and data sets, for research data sharing. If the research is supported by research funds, information should be added through FundRef.</td>
</tr>
</tbody>
</table>

ORCID, Open Researcher and Contributor ID; API, application program interface.

Table 4. Comparative analysis of manuscript management systems from the reviewers’ point of view

<table>
<thead>
<tr>
<th></th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EVISE</td>
<td>ScholarOne</td>
</tr>
<tr>
<td>Review process</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Users can register themselves on the system and indicate their willingness to be reviewers or can be registered by an editor.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can accept or decline a reviewer invitation.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can respond to reviewer assignments without needing to explicitly log into the system, by clicking on secure links embedded in emails sent to them by the publication.</td>
<td>—</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can be prompted to suggest alternate candidate reviewers if they decline an assignment.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can indicate dates when they are not available.</td>
<td>—</td>
<td>○</td>
</tr>
<tr>
<td>Convenience of a review process</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can submit their review online.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can save their review for later submission.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can use a pre-defined reviewer form.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>When reviewing a revised manuscript, reviewers have access to prior revisions of the author's manuscript, with the revision number appended to the PDF file name to allow easier differentiation between versions</td>
<td>—</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can view the author's response to their review, which is recorded by the system.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>References of manuscript can be automatically linked to PubMed and Crossref, and reformatted to the journal's preferred style.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>File uploading</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers can upload attachments with their recommendations.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Reviewers’ uploaded Word and PDF file properties are automatically sanitized to ensure reviewer anonymity.</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

OJS, Open Journal Systems; eSS@i, E-Submission Solution at Inforang; ACOMS, Article Contribution Management System; JAMS, Journal & Article Management System.

1JAMS’s weak points.

Table 5. Recommendations for improvements in the functionalities available to reviewers

<table>
<thead>
<tr>
<th>Classification</th>
<th>Detailed description of recommended features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>Allows the reviewers to specify their preferences through searching for their preferred fields. If a reviewer has not responded to a request after the initial invitation, it will automatically send a reminder e-mail. Allow the invited reviewers to accept or reject a review request through a secure deep link without logging in. In case of rejection, the reviewer will be able to recommend other reviewers to replace him/her.</td>
</tr>
<tr>
<td>Visualization and reporting</td>
<td>The reviewers can make an overall review report online, and the review opinion can be written in a separate file so that the author or the editor can select to view it. When authors upload a revised manuscript, the reviewers can check the author’s responses in the ‘Response to Reviewer’. The final review report can be sent to the editorial committee. If a revised manuscript is reviewed again, information from the previous editorial committee and the reviewer(s) will be shown.</td>
</tr>
</tbody>
</table>
Table 6. Comparative analysis of manuscript management systems from the editors’ point of view

<table>
<thead>
<tr>
<th>Selecting and communicating with reviewers</th>
<th>International</th>
<th>Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EVISE</td>
<td>ScholarOne</td>
</tr>
<tr>
<td>Editors can view and manage contributor identifiers such as ORCID, ISNI, Researcher ID, PubMed author ID and Scopus ID.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can search for candidate reviewers by creating custom searches that combine name, address, institution, classifications, manuscript keywords, or other criteria including available dates.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can easily register and invite unregistered users to review a particular manuscript.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can search and invite reviewers from the reviewer discovery database.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can select a group of candidate editors based on keyword matching and can automatically invite them to handle the submission according to configured schedule and preference.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>When searching for reviewers, editors can see reviewer activity on other co-operating journals.</td>
<td>–</td>
<td>○</td>
</tr>
<tr>
<td>Editors can quickly and conveniently invite reviewers who have been suggested or opposed by the submitting author (Appropriate warnings appear during Reviewer searching and selection).</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can easily identify manuscripts where reviewers have not yet responded to their invitation, as well as reviews in progress.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can select alternate reviewers who will be automatically promoted and invited if primary reviewers decline the reviewer invitation (configurable option).</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can rate reviewer performance.</td>
<td>–</td>
<td>○</td>
</tr>
<tr>
<td>Editors can view manuscripts with their prior decisions, grouped by decision (accept, reject, withdrawn, transferred).</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Peer review process</td>
<td>“Submit as an Editor” functionality allows editors to upload manuscripts quickly intended for publication without peer review.</td>
<td>○</td>
</tr>
<tr>
<td>Editors can make decisions concerning manuscripts at any time regardless of reviewer status.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can save their comments for later submission.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can display and print a complete layout of their comments before submission.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Convenience of editing</td>
<td>Editors can search manuscript by manuscript number, author name, keywords, notes, etc.</td>
<td>○</td>
</tr>
<tr>
<td>Editors can quickly display review status as an expandable column that includes detailed information and color coding.</td>
<td>○</td>
<td>–</td>
</tr>
<tr>
<td>Editors can release an accepted manuscript to an online journal site for pre-print publication (WebFirst).</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Editors can upload, download, and edit submission attachments.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Users can switch between reviewer, editor, and author roles without having to log out of the system.</td>
<td>–</td>
<td>○</td>
</tr>
<tr>
<td>Editors can submit author manuscripts to Similarity Check for plagiarism checking.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Editors can review the results of predictive bibliometrics reports.</td>
<td>–</td>
<td>○</td>
</tr>
</tbody>
</table>

OJS, Open Journal Systems; eSS@i, E-Submission Solution at Inforang; ACOMS, Article Contribution Management System; JAMS, Journal & Article Management System.

i). JAMS’s weak points.
Table 7. Recommendations for improvements in the functionalities available to editors

<table>
<thead>
<tr>
<th>Classification</th>
<th>Detailed description of recommended features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>Editors can check that the submitted paper meets the aim and scope of the journal and can immediately reject it if needed after judging the worthy of consideration. If a specific reviewer’s e-mail is bounced back, a warning message is displayed when searching for this reviewer. If the first reviewer rejects a review request within a certain period of time, the invitation email will be automatically sent to the second reviewer.</td>
</tr>
<tr>
<td>Link to external content</td>
<td>Crossref and Korea Citation Index will automatically link the references so that the editors and reviewers can check the bibliographic records and check that the references are entered correctly. Automatically link the submitted manuscript’s references to Crossref and Korea Citation Index and reformat them according to the style of the submitted journal. Provide easy searching for reviewers matching topics of interest by linking researcher information from the National Research Foundation of Korea and the Korea Citation Index, such as Scopus’s reviewer discovery tools. Connecting reviewers’ personal profiles (Korean Researcher Information, ResearchGate, Google Scholar, etc.) in order to see the results of the reviewers’ research at the invitation of the reviewers, so that the history of the reviewers can be grasped easily.</td>
</tr>
<tr>
<td>Visualization and reporting</td>
<td>Editors can get a complete overview of the review process and use a standardized report template or easily create reports by themselves. Quickly visualize and provide key data such as manuscript submission status by region or country. Submitted papers can be divided into new, review, revision, resubmission, and post-decision phases. Papers with an approaching deadline, that are past their deadline, or are new submissions will be displayed in yellow or red for the editor to identify easily.</td>
</tr>
</tbody>
</table>

the editors’ point of view and Table 7 shows recommendations for improvements in the functionalities available to editors.

**Discussion**

The advent of manuscript management systems has succeeded in achieving dramatic efficiencies in the publishing process, in contrast to traditional publishing procedures. From the 1970s mainframe project to the desktop systems of the 1980s, the advent of the internet in the 1990s, and to Web 2.0 solutions today, the evolving peer review process leverages today’s cutting-edge information technology to deliver more effective journal publishing solutions [2].

At a time when scholarly communication is transitioning to an online publishing environment, this study analyzed the current domestic manuscript management systems and suggested ways to improve these systems through benchmarking with representative overseas systems.

A new platform that extends throughout the research life cycle would advance the domestic publishing environment by clarifying the roles of authors, editors, peer reviewers, printing agencies, manuscript editors, and journal managers. The position of the researcher needs to be changed, so that researchers are not only seen as contributors to manuscripts, but also as subjects of research activities who read and write articles.

It is important to design the system intuitively by grasping the user’s requirements and usage patterns, to create visual displays that help users to easily recognize what should be done, and to facilitate manuscript management throughout the peer review process.

It is necessary to aim for an open platform that supports recent developments in the peer review process, which is changing to emphasize efficiency and transparency through steps such as post-publication peer review.

Implementing an open research platform that provides support throughout the research life cycle would improve web-based online manuscript management systems and enable them to reach the international level. Domestic journals should prepare an open platform that can support changes in scholarly communication, which is becoming more efficient and transparent.

**Conflict of Interest**

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

**Acknowledgments**

This work was supported by a research grant from the National Research Foundation of Korea (2017-24 Office of Knowledge and Information Services).

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Jan 19; Seoul, Korea.
Proposal of the S-score for measuring the performance of researchers, institutions, and journals in Indonesia

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Abstract

This study aimed to propose a tool for measuring the research performance of researchers, institutions, and journals in Indonesia based on bibliometrics. Specifically, the output of this measurement tool, referred to as the S-score, is described, as well as its implementation on the main database portal in Indonesia. The S-score was developed by a focus group discussion. The following evaluation items for journal accreditation were analyzed in the development process: journal title, aims and scope; publisher; editorial and journal management; quality of articles; writing style; format of PDF and e-journal; regularity; and dissemination. The elements of the S-score are as follows: number of journal article documents in Scopus, number of non-journal article in Scopus, number of citations in Scopus, number of citations in Google Scholar, the h-index in Scopus, and the h-index in Google Scholar. The S-score yields results ranging from S1 to S6. The above metrics were implemented on the Science and Technology Index, a database portal in Indonesia. The measurement tool developed through the focus group discussion was successfully implemented on the database portal. Its validity and reliability should be monitored consistently through regular assessments of S-scores. The S-score may be a good example of a metric for measuring the performance of researchers, institutions, and journals in countries where most journals are not indexed by Scopus.

Keywords

Academies and institutes; Accreditation; Bibliometrics; Focus groups; Indonesia

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Introduction

Universities in Indonesia are growing rapidly. As of February 6, 2017, there were 4,498 colleges with 268,322 lecturers (Table 1) [1]. The Ministry of Research, Technology and Higher Education, as well as most universities and research institutions in Indonesia, used the Scopus and Web of Science databases to evaluate the research performance of Indonesian researchers as of 2017 [2]. Indonesia has not developed its own measurement tool for research performance that can be used by policy-makers to evaluate researchers, institutions, researchers, and journals in various research fields [3]; therefore, a new measurement tool for assessing research performance in Indonesia is required. This study aims to propose a new metric, referred to as the S-score, to measure the research performance of researchers, institutions, and journals in Indonesia. This study proposes specific models, indicators, and metrics, and provides the results of the implementation of these metrics on a database portal. The results will be useful for countries where many journals are not indexed in international citation databases, such as Scopus or Web of Science.

Measurement Tools

This tool for measuring research performance was proposed through a focus group discussion in 2017. The expert group identified indicators based on the research products of researchers and their citation frequency in Scopus and Google Scholar. The indicators and evaluation items were proposed for measuring the performance of not only authors but also of institutions. Journals’ performance was measured by taking data from Indonesian journals indexed in Scopus, the Indonesia national journal accreditation system, and citation frequency in Google Scholar. Based on these evaluation items, the S-score was proposed.

Data on research products from all lecturers and researchers in Indonesia were collected and entered into the Science and Technology Index (SINTA, http://sinta2.ristekdikti.go.id/author) portal. The data collected from journals were matched through the Indonesian national accredited journal database (http://arjuna.ristekdikti.go.id/). The performance of researchers, institutions, and journals was presented in SINTA.

Indicators and evaluation items

Table 2 presents the following evaluation items, contents, and scores used for journal accreditation by the Indonesian government: journal title, aims and scope; publisher; editorial and journal management; quality of articles; writing style; format of PDF and e-journal; regularity; and dissemination [4]. An explanation of constants and how they are weighted to calculate the S-score is presented in Table 3: A, number of journal article documents in Scopus; B, number of non-journal-article documents in Scopus; C, number of citations in Scopus; D, number of citations in Google Scholar; and N, current divisor. The measurement items used to evaluate the performance of researchers, institutes, and journals are presented in Fig. 1.

S-score and metrics for performance measurement

The S-score, which incorporated metrics for authors and institutions, was formulated by weighting factors, as shown in Table 3. The indicators and items for measuring research performance were formulated in two scenarios, which were expressed as formula 1 and 2. The first scenario of the S-score formula for researchers, without the h-index, was as follows:

\[
\frac{(A \times 5) + (B \times 2) + (C \times 2) + (D \times 1)}{10} \tag{1}
\]

The second scenario of the S-score formula for researchers, with the h-index, was as follows:

\[
\frac{(A \times 40) + (B \times 15) + (C \times 4) + (D \times 1)}{N} \tag{2}
\]

The S-score formula for institutions was as follows:

\[
\frac{(A \times 40) + (B \times 15) + (C \times 4) + (D \times 1)}{N} \tag{3}
\]

If we use the maximum SINTA score of a researcher on

Table 1. Number of universities, students, and lecturers in Indonesia in 2017

<table>
<thead>
<tr>
<th>Universities</th>
<th>Students</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Universities</td>
<td>122</td>
<td>3,132</td>
</tr>
<tr>
<td>Religious universities</td>
<td>77</td>
<td>990</td>
</tr>
<tr>
<td>Service universities</td>
<td>177</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td>4,122</td>
</tr>
</tbody>
</table>

Data from Pangkalan Data Perguruan Tinggi. Kemenristekdikti [Internet]. Jakarta: Ristekdikti; 2017 [1].
January 31, 2017 as the divisor (N), its value would be 102. The corresponding graph is shown in Fig. 2. The results of the measurements of author performance for all authors and institutions can be accessed at http://sinta2.ristekdikti.go.id. The results of the performance measurement will dynamically depend on the author registration process and data verification. The S-score for measuring the performance of journals is classified into a range of S1–S6, as measured by the values of

<table>
<thead>
<tr>
<th>Evaluation item</th>
<th>Content</th>
<th>Maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal title, aims, and scope</td>
<td>Journal title is meaningful, precise, and short so that it is easily referenced. Aims and scope of journal should be lucid and unique. The research field should be indicated.</td>
<td>3</td>
</tr>
<tr>
<td>Publisher</td>
<td>The publishing institute (professional organizations, universities, research and development institutes, and/or institutes authorized for it) have the status of a legal entity, thus able to guarantee the continuity of funds and legal protection</td>
<td>4</td>
</tr>
<tr>
<td>Editorial and journal management</td>
<td>Reviewer Management of quality of articles Editorial board Author guidelines Quality of editing and formatting E-journal management system (e-submission system)</td>
<td>5</td>
</tr>
<tr>
<td>Quality of article</td>
<td>It fits the scope of the journal Regional boundaries (international, regional, national, local) Scientific originality of works Contribution to the advancement of science Citation Primary reference source (journal, proceedings) ratio to other resources Completeness of references Analysis method Conclusion</td>
<td>4</td>
</tr>
<tr>
<td>Writing style</td>
<td>Representative article titles (straightforward and informative) Inclusion of authors and affiliations (complete and consistent) Abstract Keyword Structured description Utilization of supporting documents (tables, figures, or supplements) Reference citation style Reference management (applications like Mendeley, etc.) Terminology and language</td>
<td>12</td>
</tr>
<tr>
<td>Format of PDF and e-journal</td>
<td>Format of PDF Layout Typography PDF document resolution Number of pages per volume Journal website design</td>
<td>8</td>
</tr>
<tr>
<td>Regularity</td>
<td>Regular publication System of publishing order (volume, issue) Page numbering Retrieval in journal website (article, author)</td>
<td>2</td>
</tr>
<tr>
<td>Dissemination</td>
<td>Count of unique visitors Indexed in international databases (Scopus, Web of Science, DOAJ, etc.) Unique identifier of articles (DOI)</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

DOAJ, Directory of Open Access Journals.
the 8 criteria used for the accreditation of Indonesian journals, as presented in Table 2. The results of the classification by scores (S1–S6) can be seen in Table 4.

**Integration of metadata into the model**

The emergence of electronic journals and open access publishing has improved accessing digital data for each article, so that
Proposal of the S-score for measuring the performance of researchers, institutions, and journals in Indonesia

Fig. 4. Model of performance mapping model in Indonesia.

Fig. 5. Mechanism of author verification and data collection in Indonesia.
such data can be measured and made interoperable with various databases and indexers such as Scopus, Web of Science, Google Scholar, and others. Currently, thousands of Indonesian journals have been published in electronic form, and most journals are open access [5]. This study proposed a new model for integrating existing data in the Scopus and Google Scholar databases to measure research performance in Indonesia through the Scopus API (application programming interface) data retrieval mechanism, which can be incorporated into SINTA as shown in Fig. 3. A model of mapping and visualizing research performance based on data already entered into SINTA databases can be seen in Fig. 4. Mapping performance evaluation results in such a way can show profiles and ratings of researchers, institutions, and journals.

Implementation and data verification
The resulting indicators, formulas, and models were then tested against registered lecturers with a national lecturer number (NIDN) at universities and researchers listed as functional investigators at research institutes. Lecturers and researchers simply fill out the registration form at SINTA (http://sinta2.ristekdikti.go.id/author/) by filling in the lecturer's identification number (NIDN/unique number of employee), name, title, Scopus identifier and Google Scholar identifier. Lecturers and researchers who sign up can correct any discrepancies in publication data and the impact after synchronization, metadata in Google Scholar and Scopus, as shown in Fig. 5. As of June 30, 2017, registered authors have verified as many as 32,218 publications based on 25,472 data points harvested from 1,424 institutions. The number of journals evaluated was 995 of the 1,807 journals registered through the Arjuna portal (http://arjuna2.ristekdikti.go.id/). Information on the implementation of journal performance metrics in SINTA is available from: http://sinta2.ristekdikti.go.id/journals. Journal profiles have been created on that site based on citation performance, with h-index values taken from Google Scholar; this information is available at http://sinta2.ristekdikti.go.id/journals/detail?id = 664.

Meaning of New Metrics and Its Limitations
This study proposed a new metric, referred to as the S-score, to measure the performance of researchers, institutions, and journals based on a set of evaluation items. The S-score was successfully implemented in SINTA as a way to present performance results. Most evaluation items were designed through a focus group discussion. The opinions of an expert group are an important component of the development of new metrics or a novel evaluation system in a country because the evaluation system should be based on that country’s academic circumstances. Most scholarly journals published in Indonesia are not listed in Scopus or Web of Science. Therefore, a new local system incorporating locally appropriate metrics is required. This is a good example of such a system, and it was possible to incorporate the S-score in the Indonesian portal system (SINTA). Therefore, these new metrics could enrich the Indonesian database portal.

There were some limitations to this study. It was difficult to identify and match researchers through Google Scholar because some researchers did not have photos and the author’s name in the profile was not always the same as that in articles. Affiliations in Google Scholar and Scopus were often different from the current affiliations. Therefore finding a precise number of publication from an institution is difficult and the data integrity should be pursued continuously. Another problem in the implementation of the S-score in SINTA is normalization; it is challenging to make comparisons among authors, disciplines, or institutions because research products vary according to the research category. Key items for evaluating performance were developed in this study and implemented in the SINTA portal based on a variety of items, including the number of citations in Google Scholar (Table 3); however, Google Scholar cannot be used as a key item because the quality of data was not consistent.

Conclusion
In the future, SINTA needs to adopt a normalized measurement method [6]. Normalization takes into account the following parameters: the average number of citations per publication (excluding self-citations); the percentage of publications without a citation, the average number of journal citations, and the performance of research units in related fields around the world. Measurements of research performance to be implemented within the SINTA must consider interdisciplinary and transdisciplinary areas, as some measures may not be adequate for such areas.

The h-index and some of its modifications are useful for quantifying the performance of researchers, similarly to the rankings of universities, and this is necessary in a global environment [7,8]. Rankings will be announced periodically (4 times a year) because real-time rankings may confuse policymakers if rankings serve as a tool for rewards and penalties based on research performance.

The journal classification (S1–S6) should be considered as a determinant of Indonesian journals. This ranking system may be adopted by other local countries. Table 2 contains broadly applicable items for journal evaluation. The S-score of researchers and institutions is also based on the number of publications, citations, and h-index; therefore, this system will serve as a model to be referred to by other countries.

A new metric, referred to as the S-score, for measuring the performance of researchers, institutions, and journals in Indo-
nesia was proposed and successfully integrated into the SINTA portal. Its validity and reliability should be monitored consistently through regular assessments of S-scores. This may be a good example of a metric suitable for measuring the performance of researchers, institutions, and journals in a country where most journals are not indexed in Scopus.

**Conflict of Interest**

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

**Acknowledgments**

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**References**

Writing a deadwood-free manuscript: tips from a Russian translator

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Introduction

Deadwood is “the unnecessarily difficult, unnecessarily long, or simply unnecessary phrases and words that clog the arteries of professional writing” [1]. Deadwood language is needlessly verbose, circumlocutory, and hedgy [2,3], and authors who use it decrease the impact of their work.

I am a Russian speaker of English who translates and edits for Russian researchers. I always strive to eliminate redundancy from my own writing and translations, and as an editor, I try to remove it from my clients’ manuscripts. Herein, I would like to share some of my experiences revising deadwood in Russian English scientific writing. Although the article is based on Russian examples, it may also be of interest to non-Russians, as deadwood is a problem for all writers, regardless of their culture [4].

The ability to identify superfluous words comes with time and effort. Anyone writing for publication, especially in a non-native language, should understand that the degree to which a writer acquires this skill depends directly on his or her will to improve. This article offers tips for such improvement.

Material

Most examples I cite were taken from drafts I had edited at my institute of employment. A minority came from randomly chosen Russian life science articles published between 1994 and 2017 in the English versions of domestic journals or in foreign English-language journals. None of those articles had been translated or edited by me. The examples were edited for length, grammar, and clarity. Russian words were transliterated online (www.translit.net) by using the Library of Congress system.

Problems and Remedies

Representative types of deadwood in Russian English are circumlocutions, wasteful sentence openers (e.g., It is established that), unnecessary descriptors (e.g., the method of . . . [name of method] or the process of . . . [name of process]), needless nominalizations, and tautologies. These are looked at below. In addition, a list of words and phrases that cause deadwood is included in Appendix 1.
Avoid circumlocutions
As journal space is limited, editors favor succinct writing. Style authorities, therefore, unanimously advise authors to write as directly and pointedly as possible. One way to do that is to avoid roundabout language, known as circumlocution.

Circumlocution per se is not as bad as it sounds; it is just one among many rhetorical devices [3]. But it does affect readability when used needlessly. Russian English is highly circumlocutory, partly through literal translation and partly through copy-pasting.

Here are some examples of how you can simplify circumlocutions: calluses competent for plant regeneration ➔ calluses able to regenerate plants; is characterized by the presence of ➔ has; reduce to disappearance ➔ eliminate; taking into account the fact that ➔ because; the investigation of this problem is in progress in our laboratory ➔ we are investigating this problem further; the method involves the measurement of ➔ the method measures; the possibility of efficient assessment of cell culture heterogeneity by direct methods is severely limited ➔ direct methods assess cell culture heterogeneity much more poorly than indirect methods; we examined 32 inbred lines . . . with regard to six isoenzyme systems ➔ six isoenzyme systems were examined in 32 inbred lines.

Once you have completed your manuscript, do not rush to submit it. Go over it line by line and think, how could I write that in simpler English? If the original has v znachitel’noi stepeni, do not write to a considerable degree; write considerably. Resist the temptation of sounding fancy in favor of being clear.

Delete introductory deadwood
Perhaps the quickest way to improve an English translation of a Russian manuscript is to delete wordy sentence openers (“introductory deadwood” [5]), for example, It is known (it is common knowledge) that; It should be noted (taken into account) that; It was (has been) shown (demonstrated, established) that; and It was found that.

The fewer such expressions, the better. They are not really needed to present findings and ideas. That can, and should, be done directly—just state what is known or has been found. Introductory deadwood is particularly inappropriate if a reference is supplied. Here is an example: Moreover, [it was shown that] fish tend to avoid microhabitats with a high abundance of argulids (Smith and Brown, 1998).

If you insist on including an introductory phrase to start a sentence, try to make it brief, as follows: According to the results of the conducted experiments it can be concluded that ➔ In conclusion (or: We conclude that); The results of the study give grounds to believe that ➔ We believe that. It should be noted that (or, preferably, the shorter Of note) may be allowed if what is called to the readers’ attention is indeed important.

Eliminate needless descriptors
By such descriptors, I mean words that unnecessarily identify other words (e.g., studied by [the method of] gas chromatography; the [process of] degradation of lignin was investigated). After all, it is self-evident that gas chromatography is a method or that lignin degradation is a process. Do your readers need to be told that? Further examples are as follows: [the phenomenon of] neoteny has been discovered; [the question (issue, problem) of] global warming is on the agenda; at [a distance of] ~142 bp upstream of AZOB_p1160045; at [a wavelength of] 278 nm; at [concentrations of] 0.3-1.0 μg/mL; P. polymyxa belongs to [the group of] plant-growth-promoting rhizobacteria; researchers in [the field of] photosynthesis.

Again, everyone knows that global warming is a problem or that 278 nm denotes a wavelength. The words in brackets convey no useful information; they merely increase your article’s word count. Therefore, do not hesitate to edit them out.

Needless descriptors also occur without the preposition of, for example, maize [plant] transformation; processed with [the program Microsoft Office] Excel 2010 (Microsoft Corp., USA); synthesis of cDNA by [the] reverse transcription [reaction]; tyrosinase [enzyme] activity.

Avoid unnecessary nominalizations
When a verb or an adjective is made into a noun, it is “nominalized” (e.g., implement ➔ implementation or applicable ➔ applicability). Scientific writing is heavily nominalized [6]; however, excessive nominalization breeds wordiness and leads writers to overuse of. Here is an example: Among the aims of this study was the optimization of the steps of film fabrication, sorption conditions, and sample volume, as well as the determination of the output characteristics of the developed sensor.

That sentence is anything but good English. It is long, awkward, and full of nouns. In addition, determination is imprecise here; a better choice would be measurement. Therefore, improve readability (and precision) by using the corresponding verbs. We sought to optimize film fabrication, sorption conditions, and sample volume, as well as to measure the sensor’s output characteristics.

In unedited drafts, the research object is often stated as The purpose of the present investigation was examination of . . . That is not proper English either. A careful writer would cut it down to We examined . . .

Like probably all non-native English speakers, Russians feel free to copy “acceptable” nominalizations from published descriptions of experiments. Here are some examples: Transfer of bacterial DNA was carried out; Bleeding of the animals was made; Construction of phylogenetic trees was performed.

Here, too, readability can be improved by using a verb that specifically describes the action of the sentence: Bacterial DNA
was transferred; The animals were bled; Phylogenetic trees were constructed.

Remove tautologies
Tautologies, or maslo maslianoe “buttery butter,” as they are colloquially called in Russia, are useless repetitions of a word or of the same concept in different words. Manifest tautologies are easy to repair, as follows: antifungal activity against phytopathogenic fungi \(\rightarrow\) (delete the antifungal); defense response reactions \(\rightarrow\) (change to either “defense responses” or “defense reactions”); genetic problems in the field of genetics \(\rightarrow\) (delete the genetic); produced an activating effect on the activities of the enzymes \(\rightarrow\) . . . activated the enzymes; the particle size also affects toxic effects \(\rightarrow\) . . . also affects toxicity.

Hidden tautologies are harder to spot. Consider these examples: [bacterial (microbial)] cells of *Pseudomonas putida*; [bio]available to plants; biofilm formation by *Azospirillum* is important in plant-[bacterium] interactions (change to “biofilm formation is important in plant-*Azospirillum* interactions”); gold nanoparticles were used as a [nano]carrier; [metabolic] pathways for the biodegradation of these compounds; nanoparticle [cyto]toxicity to cells; [phyto]toxic to rice; to detect deformed root hairs in [the root system of] this species.

All of the above are examples of tautologies, because there are no plant cells in the bacterium *P. putida*; all plants are biological organisms; *Azospirillum* is a bacterium; nanoparticles are inherently a nanocarrier; biodegradation pathways are by definition metabolic; cyto- indicates a cell, and phyto- indicates a plant; and root hairs are in the root system.

Nonetheless, hidden tautologies should be handled with care. For instance, soil phytoremediation with alfalfa is acceptable in the title of a report that includes phytoremediation among its keywords. On the other hand, soils phytoremediated with alfalfa calls for revision; use remediated or a synonym (e.g., cleaned up).

Conclusion
Becoming a concise writer takes a lot of learning. Maxim Gorky, the great Soviet writer, said, “I love learning more than I do teaching”; the same is true of me. I am a devoted learner. I love English, and I enjoy writing in English. I have written this article for like-minded people, who enjoy learning and are keen to improve their English writing skills just because they love English. Those people, I hope, will appreciate my comments and suggestions.

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

References
Appendix 1. Words and phrases that cause deadwood

These are too numerous to list comprehensively, but here is a selection.

**Action, effect, influence:**
- have a plant-growth-promoting effect on → promote the growth of
- minimize stress [influence] on cells
- protection from [the action of] extreme factors
- resistance to the toxic action of copper → resistance to copper toxicity

**Allow:**
- the statistical analysis of the data obtained allowed us to detect a pronounced correlation → statistical analysis showed a pronounced correlation
- these data allow one to suggest (conclude) → we suggest (conclude) (or just state your suggestion or conclusion)

**Amount, number:**
- a certain amount of bound water → some bound water
- an increasing number of studies → more and more studies
- large amounts of biomass → copious biomass

**Basis:**
- the basis for such a choice [of cells] was the finding that → these cells were chosen because
- constructed on the basis of the data published in → . . . from the data . . .

**Case:**
- in many cases → often
- in most cases → most often
- in several (some) cases → sometimes
- in the case of → with, for, in (depending on context)

**Conditions:**
- under [conditions of] severe nitrogen starvation
- under chronic cadmium stress [conditions]

**Demonstrate, exhibit, show:**
- demonstrate high adaptation to → adapt highly to
- other cultures . . . exhibited no biosynthesis of rugulovasines → . . . did not synthesize rugulovasines
- showed activity against → was active against

**One of the . . .:**
- growth and development of one of the relic strains, *P. variabile* VKM FW-806 → . . . of a relic strain, *P. variabile* VKM FW-806
- is considered to be one of the factors restraining progress in this field → restrains progress in this field
- one of the documented functions of plant phenols is the protection of tissues against . . . → plant phenols protect tissues against . . .

**Representative:**
- among [the representatives of] the Poaceae [family]
- representatives of the bacterial genus *Rhodococcus* → *Rhodococcus* bacteria
- these compounds have been detected in some representatives of the genus *Penicillium* belonging to two subgenera, *Penicillium* and *Biverticillium* → . . . detected in *Penicillium* and *Biverticillium*, two subgenera of the genus *Penicillium*
- were representatives of the genera *Rhodotorula*, *Sporobolomyces*, and *Cryptococcus* → were from the genera . . .

**Role:**
- a dynamic structure playing a crucial role in cell division → a dynamic structure crucial for . . . (or: to . . .)
- bacteria play an essential role in the adaptation of the plants to stress → bacteria are essential for plant adaptation to stress
- carbon plays an active role in → carbon is active in

**Stage:**
- at [the stage of] preclinical testing
- at the subsequent stages → subsequently
- culturing of somatic calluses *in vitro* is [an] important [stage] in
- in the early growth stages → early in growth, in early growth

**Study:**
- [Study of the] Regulation of . . . (article title)
- after 24 h, all the strains [under study] formed aggregates
- have been [studied and] reported
- interest in [the study of] processes occurring during plastic deformation
How to respond to and what to do for papers published in predatory journals?

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Introduction

Predatory publishing, a destructive phenomenon that has been highlighted and discussed since 2011, is the consequence of the gold (author-pays) open access publishing model [1]. Predatory journals are money-making stations characterized by charging publication fees and an absence of ‘true’ peer review [2]. These journals and publishers have grown to a very large number in recent years [2,3]. The general assumption is that the most common victims of such journals are young, naive, early career researchers, especially from developing countries, but this may not always be the case [3-5]. Recent evidences suggest that predatory publishing is a global phenomenon affecting authors from both developing and developed countries, and even experienced authors get duped [5,6]. How can we deal with these publishers and how can authors avoid getting duped by them? This essay presents a few incidents to build on for answering these questions.

Story of a Victim of a Predatory Journal

My first paper was published in December 2014 in a predatory journal without my approval. Although the journal was very new, it claimed to be an international, open access journal with a high impact factor, broad indexing, and a rigorous peer review. The title of the paper published in that journal was “Perceptions, practices, and use of Facebook: a cross-sectional survey on physiotherapy students in Pakistan.” Within 2 weeks of submission, the reviewer’s comments were received, which did not add anything to improve the content of the manuscript, and the article was accepted with an invoice for article processing charges. I did not agree to pay anything to the journal (since the fee was not disclosed ahead of time), nor did I sign a copyright agreement with them. Being unaware of this phenomenon, I was duped at the beginning of my publishing career, and the paper was published in the predatory journal without my consent. I asked myself, “Why did I get duped?” and I started to seek answers to this question. There were a variety of obvious reasons for this, including a lack of proper training and education about publishing, continuous rejections from legitimate journals, and pressure to have the study quickly published in an international, indexed, high impact-factor journal. So, how did I find out that the
journal was predatory? A few months later, I leaned about Beall’s list, which mysteriously disappeared in June 2017 [4]. The publisher was included in Beall’s list of potential predatory journals and publishers, and was widely known as a “predatory publishing giant.” That claim was further supported when I started learning about predatory publishers and realized that the journal met all the criteria to be termed predatory. In a country where there is a lack of supervision, guidance, and support in terms of research and scientific publishing, one has to struggle to reach one’s objectives. In Pakistan, this trend is very common, and government institutions and authorities are generally not concerned about the quality of research or the training of researchers [7]. Another reason for getting duped by the predatory journal was relying on metrics, such as the ResearchGate Impact Factor, that have no worth to the scientific community [8,9]. Many early-career researchers, who lack training in scientific publishing, may be victimized by predatory journals through email spams, invitations on social media platforms, and a lack of knowledge about legitimate indexing agencies, publishing practices, and scientometrics.

**What Can Be Done to Avoid Getting Duped by Predatory Journals?**

The current point system and the ‘publish to perish’ mantra have been the major reason for which predatory journals have flourished and succeeded in deceiving researchers [6]. The situation is exacerbated by the lack of training about and control over this issue in higher education institutions at any level [7]. However, it should be noted that not all researchers who publish in such journals are ‘prey,’ as some researchers deliberately publish in such journals and get credit and promotions by adding those papers to their curriculum vitae [10]. Recently, several ways have been proposed to assess the legitimacy of a journal [7,10-12]. In this context, a recent paper with revised terminology for differentiating between low-quality open-access journals and deceptive journals might be helpful [10]. According to this terminology, the term ‘predatory’ may be inappropriate, and such journals should instead be called ‘deceptive journals,’ characterized by stating false or misleading information about the peer review process, indexing agencies and journal-level metrics (e.g., impact factor), and article processing charges [10]. In general, such journals intend to dupe authors through deceptive tactics and lack of transparency. Authors, especially early-career and inexperienced researchers who are more likely to be victimized by predatory journals, should use these resources before submitting their work to any journal.

The editors of legitimate journals should also behave responsibly and avoid dubious practices such as unsolicited calls for papers or displaying questionable indexing agencies or journal metrics. I received an email from a legitimate journal from the developed world with a call for papers mentioning its ResearchGate 2015/2016 Journal Impact of 0.84. I have also recently noticed some other legitimate journals that mentioned ResearchGate as an indexing agency, which is not the case [8,9]. I contacted the editors of these journals and asked them to change those statements, and my request was accepted. Moreover, I read a paper about predatory journals in an African journal on June 10, 2018; when I checked the list of indexing services mentioned on the journal’s website, I found Scribd (https://www.scribd.com/) on the list—which is likewise not an actual indexing service. These practices might be misleading for new and inexperienced researchers and those from developing countries. Journal editors, whether from developing or developed countries, should therefore avoid any practices that could raise doubts about their legitimacy or place them on a list of journals using predatory practices [13]. Recent evidences suggest that pressure to ‘publish or perish,’ a lack of awareness and research proficiency, and the belief that reputable Western journals are prejudiced against authors from the developing world are among the most common reasons for publishing in predatory journals [6,14]. Therefore, more effort is needed by reputable journals, organizations, and higher education institutions to make researchers aware of the problem of predatory journals [14].

**What Should Be Done With the Literature Published in Predatory Journals?**

Some ways have been proposed to counter predatory journals ethically and legally [10,11], but such mechanisms are challenging to apply globally. However, the recent literature contains some concrete, logical examples and suggestions of how to deal with these journals, which may be generally acceptable to a wider audience. For instance, recent cases of journal phishing and journal hijacking/cybersquatting have been reported, and ways to respond to such practices have been discussed [11,15]. Another such case was reported, in which the authors wrote an official retraction letter to a predatory journal, the retraction letter was accepted, and the authors re-wrote their paper and published it in a legitimate journal, the Korean Journal of Chemical Engineering [16]. A recent paper reported a similar incident in which experienced researchers from a developing country mistakenly submitted their work to a predatory journal in 2015 [6]. However, the submission was withdrawn by the authors after a month. The manuscript was then submitted to a legitimate journal in May 2016 and published in February 2017. Months later, the authors came to learn that their manuscript had been mysteriously published in the 2015 issue of a
predatory journal of a different publisher. The authors sent a retraction letter to the predatory journal and the paper was removed. What did I do with my paper that I discussed earlier? That paper was published by a predatory giant, and I wrote an e-mail to them in March 2017.

The paper was published in 2014, so why did I retract it in 2017? The reason was to set an example. Papers published in predatory journals are considered “lost science” or “junk science” and I did not want such a paper to be cited in legitimate journals. Although the paper had already been cited in another paper, I did not want to be part of the crime any further, as it has been suggested that such papers should not be cited [17]. Thus, researchers are advised to follow the 5-point step-by-step approach given below.

First, authors should always check the journal before submitting an article and make sure that it is not predatory. Authors are advised to aim for journals indexed in legitimate and reputable databases. This not only ensures that their published work will be preserved, but also improves its visibility and dissemination. If a journal is new or has not been indexed in databases such as Medline/PubMed or Web of Science, there are ways to improve research visibility and dissemination. For instance, researchers can share their work on social networking sites such as Facebook (http://facebook.com), Twitter (http://twitter.com), ResearchGate (http://researchgate.net/), and other platforms to further enhance its visibility [18].

Second, if authors have submitted their work to a suspicious journal, they should not pay the publication charges without first confirming the legitimacy of the journal. The journal may claim that its office is in the USA or UK, while providing a bank account number in a South Asian country. Therefore, authors should be careful before paying anything to the journal.

Third, if a submitted paper has been accepted by a predatory journal, the authors should never sign a copyright agreement with the journal or publisher. In some cases, writing to the journal to withdraw the submitted or accepted manuscript before its publication may also be successful.

Fourth, if the paper is published online by a predatory journal even after the 3 measures listed above have been taken, the authors may write to the office of the predatory journal and ask them to withdraw the paper from their website. Although the authors are not guaranteed to get a response from a predatory journal, their paper might be taken down from the website. This advice is supported by the Committee on Publication Ethics and has proven to be successful [6,16,19]. The predatory journal, in some cases, may ask the authors to pay a withdrawal or retraction fee, but the authors should resist this and continue to insist that the journal retract their article.

Fifth, authors should never support predatory publishing. We must say “no” to predatory journals and publishers. This “no” applies both to publishing with them and to citing their work.

Conclusion

Authors from developing countries face many problems in scientific publishing due to a lack of funding, support, and training. Much work is ongoing to curtail predatory journals and publishers, but concrete situations, examples, and suggestions must be presented in order to train and educate young researchers and to make the existing community of scholars aware of these situations and ways to deal with them. Everyone must behave responsibly and ethically to restrict the spread of junk science. I hope that one day we will all be able to say “no” to these predatory journals and publishers. The story of the author’s journey from being a victim of predatory journals to taking steps to raise awareness against them can be found here: https://www.authoraid.info/en/news/details/1250/.

Conflict of Interest

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

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Why and how do we keep editing local medical journals in an era of information overload?

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Introduction

The joint convention of the Asia Pacific Association of Medical Journal Editors (APAME) and the fifth Asian Science Editors' Conference and Workshop 2018 was held on July 18–19, 2018 at the IPB International Convention Center, Bogor, Indonesia [1]. This was the first joint convention between these two well-known journal editors' associations in this region, APAME [2] and the Council of Asian Science Editors [3]. According to Komang G. Wiryawan, the chairman of the local organizing committee, a total of 254 participants from 21 countries attended the convention. There were 39 lectures and 6 poster presentations.

Two specific sessions that highlighted the geographic and social characteristics of countries in this region deserve special mention. One of these sessions discussed the status of scholarly journals from the following Association of Southeast Asian Nations countries: Vietnam, Singapore, Indonesia, Malaysia, Philippines, Thailand, and Myanmar. The other session involved group discussions among journal editors and researchers representing journals from different subject areas: agricultural and natural science journals, engineering journals, medical and health journals, and journals on social sciences and other disciplines. Journal editors and researchers specializing in the above subject areas were assigned to their respective discussion groups.

The overall theme for this group discussion was ‘How to develop science journals in Asia?’ The medical and health journal group specifically discussed 2 vital questions: why and how are we editing medical and health journals? Herein, we summarize the issues and solutions discussed by the participants in the medical and health journal group.

Fig. 1 presents the participants of the medical and health journal group, which comprised 35 journal editors and/or researchers from 8 countries. Twenty-five were from Indonesia and the remaining participants were from Korea, Japan, Mongolia, Philippines, India, Laos, and Malaysia.
Critical Issues in Scholarly Publishing

The journals represented by the participants had various specific issues. Therefore, it was important for the participants to identify critical common issues that their journals faced. The majority of the participants were concerned about worryingly low numbers of submissions to their journals. Most local journals are sponsored and published by a local institution or society, and members of that institution or the society are generally expected to submit their research for publication in the sponsored journal. The number of articles produced by members of the organization clearly depends on the size and capacity of the organization. However, even if there are relatively many members of those organizations who actively publish their research, or if the organizations produce a relatively high number of scholarly articles, the number of articles submitted to the journal published by the institution or society can still be limited.

With increasing pressure and incentives to significantly improve the international visibility of papers, authors often submit their articles to international journals published in foreign countries, making it difficult for local journals to attract quality submissions. As a result, some local journals do not receive enough submissions to publish issues regularly, which in turn jeopardizes journals’ status, indexing activities, and image. The participants felt that this was a serious threat to the value and sustainability of such local journals. The participants also raised concerns about the poor editing standards adopted by local journals and the lack of financial and human resources. It was also mentioned that independent or commercial publishers are only interested in supporting journals that are heavily dependent on a local institution or government for support.

While coping with these challenges, professionals involved in scholarly publishing are liable to ask fundamental questions about why we continue to confront these challenges. The participants unanimously identified the fundamental issue as a surplus of journals. The whole issue, however, is too complicated to explain in a short sentence. The current challenges started with the introduction of digital technology in writing and publishing [4,5]. Clearly, digital technology is beneficial for authors in that it enables them to produce more articles. Publishers also receive benefits through online publishing and e-journals. As digital technology emerged, publishers with sophisticated technology were able to produce better journals and publish more. However, the number of journal titles increased faster than the number of articles produced. Major international journals received more manuscript submissions, whereas journals published in less-served countries experienced a rapid drop in the number of submitted articles. In fact, commercial publishers founded many new journals that became black holes for manuscripts. After the introduction of
the open access concept, subscription journals were no longer expected to be major players. However, the surplus of new journals founded by commercial publishers has caused challenges for local journals. If local journals disappear, commercial open access journals will prevail and may obtain a monopoly [6]. In such a situation, the authors of scholarly articles may be forced to pay more money to publish their research than to actually conduct it. Therefore, it is important for local researchers to maintain their local journals as a platform for scholarly communication and to keep them as a gateway for global interactions.

The publishers, governmental organizations, and universities that sponsor local journals should encourage editors to improve the editing standards of these journals. Publishers should launch initiatives to support local journals that lack financial support and human resources.

**Why Do We Publish Local Journals?**

It is not easy to explain why we still publish local journals. It was evident in this session that the majority of editors of local journals are doubtful whether they will be able to continue publishing for more than 10 years without interruption. However, the participants identified many reasons to support the publication of local journals. Local journals are an important medium for teaching faculty to guarantee that their research is published quickly to meet requirements for promotion in faculty positions. Students and young researchers also had a similar opinion that local journals are needed for their early career development. They also admitted that it might be possible to get rid of local journals, but warned that the void will be replaced by predatory journals or other commercial journals. In either scenario, publishing in such journals may not be affordable for local researchers from developing or underdeveloped countries. Therefore, it is not appropriate to give in to the challenges of publishing local journals, since ceasing to publish local journals would not help solve these major issues in research and publishing.

**How Can We Improve Our Local Journals?**

If institutes or professional societies that publish a local journal do not launch initiatives to improve the quality of the journal, its editors should assume the responsibility to improve the editorial standards of the journal or they should find alternatives.

The participants identified 5 major approaches for improving local journals: (1) help researchers publish more actively; (2) encourage authors to submit their papers to the local journal; (3) strategically invite productive scholars to the governing and editorial boards; (4) diversify the document types; and (5) adopt advanced publishing strategies.

It has been observed that some researchers are very good at publishing their research findings, while others are not. Editors of local journals should focus on active researchers who usually do not publish their research findings and encourage them to write up their research outcomes. If researchers experience difficulties in drafting a research paper or in collating and contextualizing information, the editor or editorial members of the journal can mentor them or direct the researchers to seek professional support from experts. It is important for the editors to make researchers aware of the principle ‘publish or perish.’ Editors should encourage authors to develop conference abstracts into full-length research papers whenever possible.

In certain cases, there are legitimate reasons for potential authors to avoid publishing in local journals, including the quality of editorial work, editorial process, and response time. Editors should try to improve the editorial standards of the journal by having professional language experts edit the manuscripts and by setting up a transparent editorial process with defined timelines and clear communication.

Another approach to attract submissions is to invite active authors and reputed researchers to the governing and editorial boards. Editors should request quality submissions from these editorial members periodically.

In addition to publishing conventional research documents, the editorial team should implement innovative document types and diversify the scope of the dissemination of knowledge. These diverse document types will break away from the monotonous nature of publications. Such documents include, but are not restricted to, voices from the field, pictorial essays, and meeting reports. Editorial notes can be used more widely for research papers to provide a brief description of the context of the research to the reader, thereby enhancing the reader’s enthusiasm. Journals should also encourage letters to the editor from seasoned researchers and support healthy discussions and deliberations in the space provided by the journal.

It is also a good idea to leverage the scope of social media and advances in information technology to attract authors and readers. Busy researchers and authors will benefit from modular information produced in an effective and engaging way.

Adopting best practices in electronic publishing can enhance the readership of journals. Local journals should also try to deploy new publishing technologies, which will promote the indexation of articles in reputable databases, help in searching for and identifying published papers and authors, and assist in the archival and retrieval of published papers. Depending on the financial resources of the journal, in addition to the customary PDF format, XML, HTML and multi-
media formats can also be implemented to attract authors and readers.

**Participating in Coalitions of Journals**

Although an editor can improve the quality of a journal in various innovative ways, a single stand-alone local journal is always isolated to some degree. Therefore, it is always advisable to be part of coalition of journals to improve visibility. Therefore, the concepts of coalitions and alliances are considered from two perspectives: indexing databases, wherein journals are selected based on predefined criteria, and groups of journals published by a common publisher.

Although Web of Science, Medline, and Scopus are indexing databases for articles from selected journals, they also function as an alliance of standard journals. Being indexed in such prominent databases improves a journal’s visibility and confirms its quality and credibility.

The Western Pacific Region Index Medicus [7,8], Index Medicus South East Asian Region [9], Association of Southeast Asian Nations Citation Index [10], and Directory of Open Access Journals [8] are essentially indexing databases, but in effect they function as coalitions of journals. Science Direct and SpringerLink are journal groups supported by commercial publishers. E-Science Central and APAMED Central are similar to these digital journal groups, but without any link to commercial publishers. The Indonesian Association of Science Journal Editors (IASJE) [11,12], Indonesia Association of Medical and Health Journal Editors, the Korean Council of Science Editors [13], the Korean Association of Medical Journal Editors [14]), and Mongolian Association of Medical Journal Editor are examples of loosely bound journal alliances, and the SINTA (Science and Technology Index) [15] for IASJE/Himpunan Editor Berkala Ilmiah Indonesia [12] and KoreaMed for Korean Association of Medical Journal Editors function as strong facilitators of those alliances. Council of Asian Science Editors [3] and APAME [2] are international alliances led by editors, rather than by publishers or journals themselves. There is a case of cooperation in Indonesia. With the increasing use of social media, the members of the Indonesian Association of Medical and Health Journal Editors have created a group communication channel for editors of health journals through WhatsApp, thereby facilitating easy communication. This group is now referred to as Forum Jurnal Kesehatan (the Health Journal Forum). Through this WhatsApp group, members share information about editing problems, the lack of good articles, and seek reviewers with expertise specific to the topics of various articles.

How can these alliances or coalitions help? They can support their member journals and editors by conducting educational training and conference activities to improve journal formatting and editorial practices. Searchable databases operated by these alliances are highly advantageous. It is crucial for journals to produce high-quality metadata sets and aggregates of significant size and quality. These aggregated data sets can be further used by international aggregators, such as Google Scholar, Naver Academic, and Microsoft Academic.

**Constructive Restructuring of Journals**

Strategic and constructive restructuring of journals is a challenging task for editors and publishers. In this context, restructuring refers to merging different journals to create a single sustainable journal. Restructuring should be performed in multiple steps. The first step is to improve the quality of the journal with the help of alliances and coalitions. The next step is to identify partner journals with which the journal can be merged. This step, however, depends closely on the opinion of all stakeholders, including authors, readers, editors, publishers, governmental bodies, and institutions. The merger may be intranational or international, and it may be among journals with the same scope or focusing on the same scientific discipline, but it is advisable to make the scope relatively broad in order to benefit more readers and authors. When comparing the two likely scenarios for a journal experiencing major challenges to the point that it is non-sustainable—discontinuing it or creating a larger journal by merging it with suitable partner journals—the latter option is more advantageous to scholarly publishing as a whole.

Indonesia, for example, is a large country with tremendous resources for scholarly publication. It is the country in Asia with the highest number of journals (365 in 2017) indexed in Directory of Open Access Journals [5], and it has the fifth largest number of institutional repositories. However, only 30 Indonesian journals are indexed in Scopus [16]. This discrepancy can be attributed to the presence of many small journals in Indonesia. Although this is clearly the authors’ opinion, we nonetheless suggest that these small journals should be merged to create larger journals that would have a wider impact. There are 51,158 journals indexed in the national database, whereas only 7,817 journals are accredited [17]. The first challenge in merging journals might stem from concerns about losing institutional identification and reducing the opportunities for local authors to publish their papers. However, there are several good examples of older local journals being restructured to form international journals [18,19]. One example was told by Prof. Komang G. Wirayawan. “The government of Indonesia and IASJE have tried to improve journal quality and to have more journals indexed in Scopus or Web of Science. Based on my experiences as the chief editor of
Tropical Animal Science Journal (previous name: Media Pternakan), once our journal was indexed in Scopus in 2016, the number of submitted manuscripts increased substantially, to the point that the rejection rate increased to more than 60%. Some of the submitted manuscripts are still of poor quality, but we saw rapid progress in the quality of the submitted manuscripts. A short-term goal of IASJE could be to improve researchers' skills in writing scientific publications.”

Conclusion

The sustainability of local journals is the need of the hour. Local journals are the only affordable medium for early-career researchers and researchers from developing and underdeveloped countries to disseminate their findings. This group discussion effectively identified and proposed 5 basic strategies to improve the quality of local journals, and emphasized the importance of participating in alliances/coalitions and constructive restructuring of journals.

Conflict of Interest

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

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The 14th European Association of Science Editors Conference, Bucharest 2018

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Date: June 8-10, 2018
Location: Faculty of Law of the University of Bucharest, Romania
Theme: Balancing innovation and tradition in science editing
URL: http://www.ease.org.uk/ease-events/14th-ease-conference-bucharest-2018/

This year, I attended the biennial European Association of Science Editors (EASE) Conference for the fourth time. The previous conferences were held in Tallinn in Estonia, Split in Croatia, and Strasbourg in France. This year’s conference was held in Bucharest, Romania. As in previous years, approximately 130 people registered for the conference. Most attendees came from various countries throughout Europe, while some editors attended from Asia and North America. Some representatives of large publishing companies attended, but most attendees were editors of academic journals or manuscript editors. As this was the fourth time in a row that I attended the conference, I readily adapted to its friendly and welcoming atmosphere.

On June 8th, a workshop with Crossref’s Rachael Lammey was held from 9:00 a.m. to 2:30 p.m., with the theme of “XML for journal editors.” First, coding in Journal Article Tag Suite (JATS) XML was demonstrated on the screen. Then, we went over the roles of CSS and XSL. A JATS XML file was validated to confirm that it met the rules and was edited if it had any errors. Rachael Lammey discussed Crossref’s XML and various Crossref services. We had a total of 7 participants (Fig. 1); 1 participant did not attend the afternoon portion, so only 6 participants were captured in the photograph, along with the 2 lecturers. One participant was an IT specialist from Romania who shared with us the fact that JATS XML was used in Romania as well. The other participants were already using JATS XML for journal publishing but wanted to learn more, or were not using JATS XML yet but wished to implement it. All participants hoped to adopt JATS XML for journal publications, with the goal of implementing it on their websites and easily converting it to various other forms of XML. European journals used JATS XML less than expected. Of the 34 countries in Europe, 13 did not have a single journal indexed in PubMed Central (PMC), 8 had a single journal indexed in PMC, and 9 had 10 or fewer published journals indexed in PMC. However, the countries with open-access journal publishers, such as England, Switzerland, Netherlands, and Germany, published 675 PMC-indexed journals. Compared to the 116 PMC-indexed journals in South Korea, it can be said that most European countries have a low number of journals using JATS XML. Although PMC
only archives biomedical and life sciences journals, it is expected to be not very different from other fields regarding the use of JATS XML. Taking this into consideration, it can be assumed that European journal editors either do not understand that JATS XML is an international standard in designing journal websites or they know that it is standard practice but have insufficient financial resources to adopt JATS XML. In comparison, most of South Korea’s science journals use JATS XML and apply it to their websites, which indicates that South Korean journals are ahead of others in website design and/or the IT field. It was an exciting collaborative learning experience as a Korean editor to hold a workshop on an IT-related field for European editors. A workshop with the same theme was held at the previous conference in Split, Croatia with 12 participants. At the conference held in Strasbourg, France, the workshop was cancelled because only 4 people wished to attend, but it reopened this year. I anticipate that South Korean editors will be of great help to European editors in this field.

The EASE Annual General Meeting and the first plenary lecture were held at 3:00 p.m. on June 8. A fiscal report was presented during the general meeting. The EASE conference is held every 2 years and the greatest expenditure is journal publication. The theme of the first plenary lecture was “Challenges of running a traditional journal,” and examples from Czech and Romanian journals were presented. During a conversation with Eva Baranyiova, the editor of a Czech veterinary and biomedical science journal, Veterinarni Medicina (https://vetmed.vri.cz), I learned that Korean scholars submitted the most articles to the journal and that the journal limits the number of publications because many were case study submissions. The editor asked whether I could suggest to Korean veterinarians that they should submit more original work upon my return to Korea. Since so many papers in this field are written by Korean authors, they cannot all be published in the Journal of Veterinary Research, which is the only Korean veterinary journal that is indexed in SCIE. As such, it is logical for Korean veterinary researchers to seek out opportunities to publish original research in other international journals. The conditions of many journals published in Eastern Europe are not that different from typical Korean journals. The main differences are that the Korean journals’ websites more closely follow international journal standards and that European journals have a more multinational authorship, since article submissions come from many European countries.

Regarding the theme of innovations in journal publishing, Elisabeth Bowley presented on the open-access journal publisher model of Switzerland’s Frontiers. Frontiers is an open-access journal publisher that is well-known along with other
publishers, such as PLoS, BioMed Central, Hindawi, and Dove, that have successful models. In addition, Mark Hester from Kudos (https://www.growkudos.com) explained the application of Kudos tools and metrics that accelerate research impact. Kudos expressed their interest in working together with Korean journals. Kudos promotes published articles through various social networking sites and readily provide information on citations and other metrics, in order to easily visualize an article’s network. Pensoft & Arpha Publishing Platform (https://arpha.pensoft.net) from Bulgaria introduced a next-generation publishing platform in which the entire process of publishing is all-inclusive on the website; an author can write and submit an article, which is then reviewed, published and archived, all on the same website. Biodiversity Data Journal (https://bdj.pensoft.net) was given as an example, and it was evident that its various functions were implemented using JATS XML. South Korea needs to build a this kind of cloud-based system that enables an all-inclusive system for writing, reviewing, editing, publishing, and archiving. Since this is difficult to achieve in the current circumstances in the publishing industry, with many small-scale publishers, academic societies need to collaborate and develop a cooperative model to keep up with these trends and advances.

“Setting up or improving your journal” was held on Sunday, June 10th, discussing administrative practices. Frontiers presented about establishing a new online open-access journal. Balkan Medical Journal explained its process of publishing, and topics on developing journals in Iran and the background and reasons behind moving a journal to a new publisher were also discussed. These issues have not been widely discussed in Korea; therefore, these practical administrative aspects should be explored to a greater degree to make progress.

The newly appointed President, Pippa Smart, presented on the EU’s General Data Protection Regulation (GDPR) legislation, which recently went into effect in Europe on May 25th, and the “Principles of Transparency and Best Practice of Scholarly Publishing,” which was updated in January 2018. Many editors in Korea are aware of the Best Practice guidelines, as this topic was also widely discussed in Korea, but issues on how to deal with the GDPR have yet to be explored with Korean editors. Private information under the GDPR includes information that can identify an individual, such as names and addresses; therefore, if a citizen of a European country participates in a journal submission system or is included on a website, it needs to comply with this law. Conferences should also adhere to the law; therefore, conferences that handle the information of citizens of European countries must abide by this regulation. Of particular note, the GDPR includes the “right to erasure (right to be forgotten),” which is something Korea has not often considered. Therefore, Korean editors need to consult professionals to understand the precautions that must be taken when Korean conferences handle the information of Europeans and to learn how to compose data protection and privacy policies. In addition, there was a session on data citation, and the results of a report on open data policy were presented (https://figshare.com/articles/The_State_of_Open_Data_Report_2017/5481187/1). Additionally, the data deposit DOI (digital object identifier) of Crossref was introduced (https://www.crossref.org/blog/how-do-you-deposit-data-citations/). Furthermore, the data handling and ethics policies of Committee on Publication Ethics (https://publicationethics.org/data) and the open data policy of the publisher Springer-Nature were introduced. South Korean journals rarely provide their data openly, and most journals have not implemented open data policies. It is time to examine what it means to share data and how it could help in the advancement of journals.

The final and fourth plenary lecture, “Innovations in publishing: beyond the journal,” was delivered by Mark Patterson, the executive director of eLife Sciences, explaining how the various functions of journals have changed. During the lecture, Patterson discussed the introduction of preprinting, the emergence of an open-access mega journal that publishes tens of thousands of articles, the fact that over 1,000 journals are using the open journal system, and the development of ORCID (open researcher and contributor ID) and DORA (San Francisco Declaration on Research Assessment). Patterson also discussed how social changes influence the journal system by bringing along changes in many of its functions, except for unique features such as the peer-review evaluation system. He emphasized that when young scholars just embarking on their research are given the role of an editor or an editorial board member, the kind of motivation they receive is important. Patterson further discussed the future directions of journals based on his experience as a researcher and as someone who has played leading roles in multiple international journals, especially open-access journals. According to the content of this lecture, Korea’s journals are on the right track. The only additional matter for Korean editors to consider is finding a way to compete with large-scale commercial publishers, because Korean journals are currently operated by individual academic societies. Western publishers and companies have continually made new and diverse models or platforms available to the Korean market, and Korea has been busy trying to catch up. If the role of the researcher, reviewer, and editor is to improve the quality of each article, platform development and management is the role of the publisher. The advancement of publishers will be the key for Korean journals to grow in a way that enables them to become internationally leading journals. We cannot lead if we are con-
stantly trying to catch up with Western journal platforms.

Of the 12 posters, one that particularly stood out was a poster by Trakya University that analyzed the compliance of the 10 scholarly journals published by the University with the 16 items of “Principles of Transparency and Best Practice in Scholarly Publishing.” Interestingly, none of their journals met the following 3 items from the guideline: marketing, intellectual property, and data sharing. The overall compliance was 49%, indicating that the “Principles of Transparency and Best Practice in Scholarly Publishing” was relatively new to the journals published by the University and that measures could be taken to improve them. Although analogous research on Korean journals has not been conducted, the results are not expected to be very different from what that poster presented. Korean journals should be evaluated regarding these 16 items to make suggestions for additional improvements.

The EASE conference is held every other year for editors in Europe to share information with each other. The conference may be small, but it serves as a space for journals to make great strides in their development by inviting professionals from several fields, continuously providing new information, and enabling professionals to build close relationships with each other. It was nonetheless a superb chance to examine how European editors work on these issues. The date and location for the next conference has not been decided yet. I look forward to where I might be in 2 years.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.
2018 Asian-Pacific Conference of the International Society of Managing and Technical Editors

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I attended the Asian-Pacific Conference of the International Society of Managing and Technical Editors in Singapore on March 27 to 28, 2018. I had the opportunity to attend this conference, which provided an excellent venue for learning and exchanging ideas regarding current issues and technologies related to journal publishing, after passing the examination for the Korea Manuscript Editors Certification and completing the basic training course for manuscript editors organized by the Korean Council of Science Editors in 2017. The most notable topics discussed at the conference included the launch of a new platform, a preprint server, which is different from the traditional form of journal publishing; the development of new technologies in the journal review process to complement the traditional peer review system; and ways to promote research papers and journals to enhance their impact (Fig. 1).

A preprint is a scholarly article that is uploaded online before it is peer-reviewed and published in an academic journal. Preprint servers, distinct from academic journals, distribute preprint research papers. Previously, this system has been used in the fields of physics and mathematics, and interest has emerged in applying it in the medical field. However, some concerns have also been raised regarding the preprint system. At the conference, 3 speakers presented on their experiences and points to consider regarding preprint servers in their fields of study (biology, medicine, and chemistry), and a discussion ensued. Lastly, a discussion on the ethical issues regarding preprints raised by the Committee on Publication Ethics followed. The presentations were interesting, and it was productive to learn about various perspectives from each field of study.

In the fields of physics, mathematics, and computer science, the preprint server arXiv.org, was introduced in 1991 and has been active since then. In the life sciences, bioRxiv.org was launched in November 2013. Some journals, including those published by the American Society for Microbiology and the British Medical Journal, developed a bioRxiv journal submission system, in which authors post a research paper on bioRxiv first, and then submit it to a journal. Based on the bioRxiv model, medRxiv will be developed in the second quarter of 2018. John Inglis, the co-founder of bioRxiv and medRxiv, was the first speaker and discussed the launch of bioRxiv and plans for medRxiv.

In general, it takes a long time to publish a peer-reviewed paper. Therefore, the most promi-
nent benefit of the preprint system is that it enables authors to share their latest research findings immediately with the scientific community. Furthermore, authors can post and share their research findings for free, or only at a minimal cost, and receive feedback from many readers. However, there are many concerns about adopting the preprint system in the medical field. Since preprints are published without a formal peer review process, one main concern is that unverified information could be widely spread.

In order to minimize the risk of publishing articles without a peer review process, medRxiv is planning to strictly screen articles in accordance with standard criteria. In addition, a number of other related questions were brought up, including (1) whether preprints can be accepted as published research, (2) how to solve problems of copyright and citations of a preprint article once a research paper has been published in an academic journal, and (3) whether academic journals would accept preprint articles, which was a concern from the authors’ point of view. In the presentation, it was suggested that these concerns could be addressed at least in part by clearly indicating that preprints have not been peer-reviewed and by ensuring that preprint servers implement strict screening standards for preprints. Further discussion on preprints can be found on the Committee on Publication Ethics website.

I was surprised to learn that artificial intelligence plays a significant role in journal publishing. In fact, most journals have already been applying artificial intelligence to check for plagiarism. Since a human being has limitations in detecting plagiarism through memory, a system with an immense database has been checking for plagiarism by comparing submitted texts with existing publications. StatReviewer is a novel system that was developed by a statistician to check whether appropriate statistical methods have been properly applied in a research paper. It was also reported that StatReviewer can check whether mandatory items that should be reported in clinical trials have all been properly reported.

The significance of an article should still be evaluated by a human being, but using a computer system in parallel would improve the effectiveness of evaluating articles for plagiarism, whether various items were reported in accordance with guidelines, and whether appropriate statistical methods were used. Of course, a qualified human being would still need to check the findings generated by the system. StatReviewer has not yet been widely implemented. However, the beta version was said to be available, which made me want to use this system to check my own research papers. The Q&A session was flooded with enthusiastic responses from the audience. Just as plagiarism checking programs are widely implemented by most journals, StatReviewer may also be widely applied to check submitted manuscripts in the future.

As more and more articles and journals are inundating the world of research, one of the most important topics at the conference was how to better promote research papers or journals. A presentation about successful journal promotion using WeChat in China was particularly impressive. WeChat is one of the most popular social networking services in China; for example, the Chinese Journal of Natural Medicine has an official account on WeChat, and it promotes its latest arti-
cles and introduces journal editors via WeChat. The presenters reported that using this platform increased the exposure frequency and rank of the journal. Additionally, many journals are using Twitter to promote themselves.

Recently, many journals have started to provide figures that capture the content of their articles or video articles to communicate their findings more effectively and to make them stand out from other articles. A presentation on the experience of using data visualizations by the Korean journal, *Annals of Laboratory Medicine* was impressive. This journal provides video summaries to improve the readability of articles and uploads them on YouTube to increase exposure and to help readers easily grasp the contents of articles. From the readers’ point of view, graphical abstracts are helpful to understand the content at a glance.

Kudos (http://growkudos.com/) is a website that has been developed to effectively disseminate articles to the general public. The website provides accessible titles and content summaries, along with links to the original articles.

Research advances continuously. However, I initially thought that the publication process would not change dramatically in response to new technological developments, since the journal publication process—in which authors write papers about their new research findings, experts in the field review and select articles for publication, and the manuscripts are published in an academic journal—is simple and clear. By attending this conference, however, I learned that the journal publication process is constantly changing and stands at the forefront of the development of new technologies and improvements.

**Conflict of Interest**

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

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The 5th Asian Science Editors’ Conference and Workshop 2018

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Date: July 18-19, 2018
Venue: IPB International Convention Center, Bogor, Indonesia
URL: https://www.asianeditor.org/event/2018/

The Council of Asian Science Editors (CASE), a non-profit organization, was established in 2014 to improve the quality of scientific journals published in Asia through consulting and exchange of information on editing and publishing [1]. Since the inaugural “Asian Science Editors’ Conference and Workshop” in 2014 in Seoul, CASE has held international conferences in major cities of Asia every year. The 5th CASE conference was held jointly with the Asia Pacific Association of Medical Journal Editors on July 18 to 19, 2018 at the IPB International Convention Center in Bogor, Indonesia. The conference topic was ‘Digital standards and editors’ associations of Asia-Pacific scientific journals’ and over 270 participants from 22 countries attended. There were 44 presentations and six poster presentations.

I am a senior researcher at the Korea Institute of Science and Technology Information. Since this April I have served as a managing editor for the Journal of Information Science Theory and Practice (JISTaP), an international journal in the field of information science. I attended the conference to promote JISTaP, network with science editors, and examine international trends in the scholarly publishing community.

Through her interesting presentation, ‘What manuscript editors do,’ Jae Hwa Chang explained that a manuscript protocol that reflects the characteristics of individual journals should be developed. As a manuscript editor, she presented actual cases of editing in journals. Now, six years after the first issue of JISTaP, it is time for JISTaP to reorganize its manuscript guidelines. I have realized that it is necessary to establish JISTaP’s own consistent and detailed bibliographic principles while essentially following the APA (American Psychological Association) style. The most impressive presentation at the conference was ‘New content formats and new channels: communicating science effectively beyond the journal article’ by Basil D’souza from Editage. He presented examples of video, audio, and lay summaries while explaining that the articles’ new content format opens the door to new possibilities. D’souza also mentioned that the research news story as one of the research communication services would improve communication between journal editors and authors. I wondered if such service could be applied in traditional academic journals, and whether this service would enable young researchers to
access articles easily. On the other hand, I reflected on the role and scope of a journal editor, since I had to consider the content type and research communication service.

Through this brief but meaningful conference, I learned the following lessons as a newcomer to the scholarly publishing community, a researcher in the field of information science, and a journal managing editor.

The following summarizes what I learned as a newcomer to the scholarly publishing community. I obtained a general overview of publishing trends in Asian countries through eight countries’ individual reports. Each country’s report was presented for 10 minutes. In particular, Indonesia has developed a journal indexing system called SINTA to provide information in real time, and it has expanded and developed it into an international evaluation system. Additionally, I networked with attendees from Wordvice, Naver, Editage, and Aries Systems to understand the perspectives of each stakeholder in the scholarly publishing community.

Second, as an information service researcher, I gained the following insights. The conference covered various topics, with four plenary lectures, six workshops, three sessions, and four group meetings. In some cases, similar topics were presented, so I wondered how they related to presentations from previous conferences. Compared to the fourth international conference, which featured 12 sessions and 200 attendees [2], the conference’s scale increased in 2018. Presentations in diverse fields such as publishing, government, and non-profit organizations were offered. Thus, I learned that the scope of science editing has expanded.

I was also inspired to think up some new research ideas. First, as the academic and practical scope of the science editing field has expanded, it is necessary to set a specific subject category. If the subject category were defined, it would be possible to hold a discussion based on each topic and field and to collect relevant data in one place. In addition, this would enable session organization according to predetermined subject categories and networking between people with the same thematic interests in future conferences. Second, there needs to create a repository for the field of science editing. Given the potential difficulty of building a repository in a short period of time due to technical, financial, and policy issues, they may start by simply collecting data from the CASE website. In other words, the content presented at the conference could be archived according to subject category and related topic articles from science editing journals. Eventually, researchers may derive a new research topic or determine their conference presentation topics based on data in the corresponding subject category. I will extract and group journal keywords related to scholarly publishing and editing—such as Science Editing, Learned Publishing, Science Editor, European Science Editing, and Journal of Scholarly Publishing—to derive major topics. I will forward the extracted topics to the CASE Executive Office to help schedule the next CASE conference. Moreover, I had the idea to define terms related to scholarly publishing before developing the subject category and repository. Collecting and organizing the terms used by various stakeholders to create a glossary is a basic prerequisite for smooth communication among people engaged in the scholarly publishing community, which is an attractive and extensive field.

Third, as a managing editor who publishes journals, I learned the following lessons. I managed a JISTaP promotion booth for two days, which attracted many people’s attention. Therefore, it was a good opportunity to publicize Korea Institute of Science and Technology Information, a journal publisher as well as information research institute of Korea, and the journal itself (Fig. 1). JISTaP was listed on the Scopus in 2017, but one attendee asked me about the journal’s SCImago Journal & Country Rank [3]. Thus, it became evident that while Koreans evaluate journals based on Scopus listings, foreigners evaluate journals based not only on Scopus but also on SJR listings. Next to our booth, Wordvice—an English editing and proofreading company—operated a promotion booth. This company provides English proofreading and editing services and offers various video lectures and articles to help researchers write their manuscripts effectively and efficiently. Wordvice has various resources such as abstract writing tips, a cheat sheet of useful phrases for academic papers, and an article on five common reasons manuscripts are rejected [4]. These will be useful for researchers who submit papers to our journal if hyperlinked on our journal website.
What will I learn at the next conference? How will I be inspired by other people’s interests and ideas? I believe that the academic and practical scope of the science editing field will become deeper and wider at the next conference.

Conflict of Interest

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

References

Expect the unexpected: memorable experiences at the 2018 Council of Science Editors annual meeting

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The 2018 Council of Science Editors (CSE) annual meeting was held at the Hilton New Orleans Riverside, New Orleans, Louisiana on May 5–8, 2018. It consisted of 2 days of short courses (May 5 and 6) and 2 days of the main conference (May 7 and 8). The hotel where I stayed was the same location as the meeting venue, and it provided a unique view, as it was positioned against the banks of the Mississippi, so that one could watch the ships come and go.

At the meeting, I had the chance to closely engage with not only its overall program, including its content, speakers, and interactions between speakers (for oral and poster presentations) and the audience, but also subjects of my own interest—namely, ethical issues and related discussions. Moreover, as is always true at scientific meetings, it was a unique opportunity to meet and speak with organizers, speakers, poster presenters, and vendors. Indeed, it was extremely nice to see Patricia Baskin (immediate past president of the CSE) and Amy McPearson (director of publications for the Botanical Society of America and managing editor of the American Journal of Botany, 2018–2021), who visited the Korean Council of Science Editors in Korea in 2017 for the lecture on ethical issues. Seeing them was a pleasant surprise to me, since they were the only attendees and organizers I knew upon arrival; however, they were kind enough to introduce me to many of the people associated with the meeting.

The CSE short courses, composed of 5 parts (short course for journal editors, for publication management, on journal metrics, on publication ethics, and for manuscript editors), were held during the preconference before the CSE annual meeting. The objective of the short course on publication ethics was to introduce, address, and review the ethical issues outlined in the ‘CSE white paper on promoting integrity in scientific journal publications’ for those involved in the publication process, such as managing editors, publication managers, and journal staff. In this report, I would like to primarily focus on the short courses since only limited information about these courses is available on the conference website, whereas the main themes for previous years can easily be found (https://www.councilscienceeditors.org/events/previous-annual-meetings/cse-2018-annual-meeting/). The course covered a range of ethical issues, from basic to specific, for newcomers and editors or journal staff members using the ‘CSE white paper on publication ethics’ as a guide. It also dealt with conflicts of interest, duplicate publications, piracy and plagiarism, data misrepresentation, image fraud, authorship disputes,
editorial independence, research misconduct, and preprint issues. A particularly interesting talk addressed how research transparency should be carefully cultivated by promoting reproducible results and being vigilant for statistical errors and tainted research, as wrongdoing in research leads to ethical issues including fraudulent authorship, fraudulent data, and eventually fraudulent publications. Additionally, a brief but interesting discussion was held about the policy of ‘forced’ open access in Germany, wherein the government has launched an initiative to provide funding for the publication of all German research.

Christine Cassy gave a talk entitled ‘Journal editor 101: a survival kit’ and she recommended the following steps for new journal editors: (1) reading through the most recent year of the journal (and, importantly, its competitors); (2) knowing the history and mission of the journal; (3) reviewing the budget and the business model, and asking staff members about these issues and carefully listening to their responses; (4) asking for a standard operating procedure or work flow; (5) familiarizing oneself with the editorial policy; (6) putting benchmarks in place; (7) carrying out a mock-up of the author experience through a real or realistic process; (8) choosing to make changes immediately or to wait 6 months based on a careful consideration of one’s role (or the journal’s role); and (9) reflecting and writing about one’s entrance and exit, in a process of thinking forward and onward.

Patricia Baskin (the immediate past president of CSE and executive editor of Neurology journals, American Academy of Neurology) discussed how the journals of the American Academy of Neurology succeeded by becoming ‘niche’ journals and presented the following reasons and timing for pursuing such a strategy: (1) when a journal is at the stage of rejecting high quality articles; (2) if the open access space for a given field (i.e., Neurology: Neuroimmunology & Neuroinflammation) may receive more attention; (3) to provide authors and readers what they want; and (4) to add value constantly, as assessed using market analyses and publishing metrics. She also explained that the following aspects of a journal are useful for recruiting manuscripts: a suitable concept of the journal, impact factor, listing in PubMed Central and Medline, quick processing times, rapid and continuous publication, and a strong editor and/or editorial board. Ways to recruit content include calls for papers from the publisher, press releases and ads, mailings to members and departments, inviting researchers from meeting abstracts (annual meetings, international meeting, poster sessions, presentations, preprint servers), and social media promotions.

Denis G. Baskin gave a talk entitled ‘Using metrics to improve your journal’ based on author-level, article-level, and journal-level metrics. There was a spirited discussion after the talk about how the impact factor affects editors and their performance, and as well as issues involving the Declaration on Research Assessment (DORA, https://sfdora.org) in relation to diversity and alternatives in journal metrics (Eigenfactor, SCImago Journal Rank, and Altmetric) and author-level indices (e.g., h-index, Kardashian index, and Google Scholar h5-index) as follows:

DORA
On December 16, 2012, a group of editors and publishers of scholarly journals met at the Annual Meeting of the American Society for Cell Biology in San Francisco, CA, USA to discuss current issues related to how the quality of research performance is (and can be) evaluated and how the primary scientific literature is cited. This meeting led to the announcement of recommendations referred to as the San Francisco DORA, which intends to halt the practice of correlating a journal’s impact factor to the merits of a specific scientist’s contributions. It states that the impact factor should not be used as a substitute “measure of the quality of individual research articles, or in hiring, promotion, or funding decisions”. Furthermore, according to the DORA statement, this practice creates biases and inaccuracies in the appraisal of scientific research.

The second day was also exciting, and started with a session led by Elizabeth Blalock entitled ‘Ethics in the editorial office: tools and guidelines for daily use.’ She began by reviewing the authorship requirements of the International Committee of Medical Journal Editors as shown below (http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html):

**Authorship criteria recommended by the ICMJE**

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

Drafting the work or revising it critically for important intellectual content; AND

Final approval of the version to be published; AND

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.

She emphasized the role of editorial staff in policy enforcement and as advisors to editors. Then, she briefly touched on various ethical areas, including research ethics in animal and human trials, plagiarism, how Retraction Watch looks for publication problems, and image manipulation [1].

Patricia K. Baskin then gave a talk entitled ‘Clarifying ethics policies in the instructions to authors.’ She pointed out that some journals may only accept submissions from authors who use an institutional e-mail address, or may ask the corresponding author to add an institutional e-mail as a part of peer re-
view ethics. She further suggested that clinical data deposit should not be considered as publication. She emphasized that two-thirds of retractions are for research misconduct, and that the organizations that look for publication problems such as plagiarism include Retraction Watch, SciFraud, Science Fraud, and PubPeer. She also discussed some tough questions, such as how editors should handle anonymous claims and complaints. There are no obvious answers to this issue, and it must be dealt with on a case-by-case basis. However, she emphasized that journals should look into potential problems. It was also interesting that there were some concerns about the term ‘retraction,’ as it seemed to be a harsh word. During the question-and-answer session, this issue was further discussed, and a few new terms were proposed, such as ‘honest mistake’ or ‘partial retraction.’ However, those terms do not refer to the same issue as an actual ‘retraction.’ It was useful to learn that when journals publish retractions, it is important to declare that the work is no longer reliable due to the authors’ misconduct. The key issue here is that the retraction should be informative. Otherwise, Retraction Watch will point out that a retraction is not helpful. In this context, I was delighted to hear the proverb “An ounce of prevention is worth a pound of cure.”

This issue was further discussed after a talk by Christina Bennett (the American Physiological Society) on ‘Correcting the literature.’ Bennett explained that the options for correcting the literature are errata, acknowledgments of honest errors (which are handled through retraction and replacement), retractions (for non-reproducible or pervasive errors, duplicates, etc.), and expressions of concern. It was helpful to learn that when an unintentional, minor, and correctable error is made, journals should publish a corrigendum or correction letter with an apology.

I was impressed by the talk and demonstration by Eric Pesanelli (the American Physiology Society), entitled ‘Rules and tools for addressing image manipulation.’ He started the talk by showing case studies on image manipulation, demonstrating that since proactive regulation of images started in 2010, the number of ethics cases jumped from 134 to 251. Figure manipulation accounted for the most cases, he said. He showed actual cases using software tools such as Acrobat, Photoshop, and PowerPoint. The workflow when manipulation is identified is to notify the author(s) first, and then the editor(s).

Then, an exercise session was conducted, asking whether various cases were potential misconduct or wrongdoing, as follows: (1) if the wording and data are the same (yes, meaning potential misconduct); (2) if a different language is used (unlikely to be misconduct, but permission is needed); (3) if an item is drawn from an institutional repository (no, meaning that it would be acceptable); (4) if data are published from a public repository (no); (5) if items are extracted from articles and books (they should be used only with permission due to copyright issues); (6) if a paper has been previously published on an author’s blog (yes); (7) if the same exact wording is found in a paper but with completely different data (yes); (8) if the same exact wording is used in the Methods (rephrasing is recommended).

Collectively, although it was my first chance to attend an annual meeting of the CSE, I had a fantastic experience and was able to learn about recent advances in journal editing and publishing. Furthermore, I was glad to have the opportunity to communicate with other editors and editorial staff. Through conversations with colleagues, I came to understand the editorial process of large society journals in the United States. The next CSE annual meeting will be held at the Hyatt Regency in Columbus, Ohio, the United States from May 4 to 7, 2019. I would like to recommend that Korean and Asian editors should attend this meeting to broaden their horizons as scholarly editors.

Conflict of Interest

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Reference

Funding or article?

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The amount of funding received by a laboratory is closely related to the number of published articles. More funding yields more articles, and more articles lead to more funding in return. However, some laboratories get relatively more funding, and others publish relatively more articles. Applicants to graduate schools should consider which type of laboratory would be more helpful for them.
Scientists who seek out money and opportunities to publish articles are selfish, so they tend to be blamed. However, unless they are selfish, their scientific research will not materialize. In my case, egoism is the source of not only grants and articles, but also cartoons, like this episode.

Gutenberg developed a system of movable metal type in Mainz, which is located next to Frankfurt, Germany. Frankfurt has always been the center of commerce and trade in Europe. Thanks to this, Gutenberg’s metal type spread quickly and eventually triggered the information revolution. Where the invention took place is as important as what the invention actually was.
For me, drawing comics is easier than writing articles. That is because drawing comics is my hobby and writing articles is my job. I draw easy comics first, and then write difficult articles later if I do not have any comics left to draw. A clear and natural distinction spontaneously emerges between article-writing months and comic-drawing months.

Originally, the term “invisible hand” referred to the system that automatically determines wages and product prices among CEOs, employees, and consumers. This is a very important theoretical aspect of capitalism. Anyways, like the content of the cartoon, professors with lots of funding sources and papers can calmly wait for graduate students to join their labs, while professors with few cannot do so. In this sense, scientific labs follow the rules of capitalism.

Conflict of Interest

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Correction of the axis label in the figure

Editorial Office, Korean Council of Science Editors

In the published article, “Seo JW et al. Equality, equity, and reality of open access on scholarly information. Sci Ed 2017;4:58-69. https://doi.org/10.6087/kcse.97,” the axis label of the graph in Fig. 7 has been incorrectly given. The y-axis label 'No. of electronic journal' should be corrected as 'Expenditure of library resources.' The corrected figure is as below. The editorial office apologizes for any inconvenience it may have caused.

![Graph showing expenditure of library resources from 2002 to 2015.](image)

**Fig. 7.** Serials, monographs expenditure and sum of serials and article processing charges (APC) for open access article publishing at the Seoul National University Library in 2002 to 2015. KRW, Korean won.
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/4.0/ 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, Plagiarism 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. Submitted manuscripts are screened for possible plagiarism or duplicate publication by CrossCheck upon arrival. If plagiarism or 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 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 Human and Animal Right
Clinical research should be done in accordance of the Ethical Principles for Medical Research Involving Human Subjects, outlined in the Helsinki Declaration of 1975 (revised 2008), available from: http://www.wma.net/en/30publications/10policies/b3/. Clinical studies that do not meet the Helsinki Declaration will not be considered for publication. Human subjects should not be identifiable, such that patients' names, initials, hospital numbers, dates of birth, or other protected healthcare information should not be disclosed. For animal subjects, research should be performed based on the National or Institutional Guide for the Care and Use of Laboratory Animals, and the ethical treatment of all experimental animals should be maintained.

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.

7. 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.

8. Process for Handling Cases Requiring Corrections, Retractions, and Editorial Expressions of Concern
Cases that require editorial expressions of concern or retraction shall follow the COPE flowcharts available from: http://publicationethics.org/resources/flowcharts. If correction needs, it will follow the ICMJE Recommendation for Corrections, Retractions, Republications and Version Control available from: http://www.icmje.org/recommendations/browse/publishing-and-editorial-issues/corrections-and-version-control.html as follows:
- Honest errors are a part of science and publishing and require publication of a correction when they are detected. Corrections are needed for errors of fact. Minimum standards are as follows: First, it shall publish a correction notice as soon as possible detailing changes from and citing the original publication on both an electronic and numbered print page that is included in an electronic or a print Table of Contents to ensure proper indexing; Second, it shall post a new article version with details of the changes from the original version and the date(s) on which the changes were made through CrossMark; Third, it shall archive all prior versions of the article. This archive can be either directly accessible to readers; and Fourth, previous electronic versions shall prominently note that there are more recent versions of the article via CrossMark.

9. 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.

3. Peer Review Process for Handling Submissions from Editors, Employees, or Members of the Editorial Board

All manuscripts from editors, employees, or members of the editorial board are processed same to other unsolicited manuscripts. During the review process, submitters will not engage in the decision process. Editors will not handle their own manuscripts although they are commissioned ones.

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. Abbreviations 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 dif-
ferent 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 superscript letters 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, main text (introduction, text, and conclusion), acknowledgments, references, tables, figure legends, and figures. 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. Training Materials
Training materials are for training editors or publishers. If there are new standards, policies, technologies, guidelines or trends, they can be submitted for training editors or publishers. It may be unsolicited or commissioned. This publication type will be able to provide the practical information for the journal advancement. 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.

7. 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.

8. 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.

9. 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.

10. 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*. 
11. 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 1. Recommended maximums for articles submitted to *Science Editing*

<table>
<thead>
<tr>
<th>Type of article</th>
<th>Abstract (word)</th>
<th>Text (word)</th>
<th>References</th>
<th>Tables &amp; figures</th>
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<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>
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<tr>
<td>Training material</td>
<td>200</td>
<td>2,500</td>
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<td>10</td>
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<td>Editorial</td>
<td>No</td>
<td>1,000</td>
<td>10</td>
<td>3</td>
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<tr>
<td>Book review</td>
<td>No</td>
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<td>Correspondence</td>
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<td>Letter to the editor</td>
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<td>In reply</td>
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<tr>
<td>Video clip</td>
<td>No</td>
<td>30 MB, 5 min</td>
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Maximum number of words is exclusive of the abstract, references, tables, and figure legends.

7. FINAL PREPARATION FOR PUBLICATION

1. Final Version

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

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 postponed 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.

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**NOTICE:** These instructions to authors will be applied beginning with the February 2014 issue.
AUTHOR’S CHECKLIST

☐ 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.
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Print name

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Print name

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Date
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).

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**Corresponding author (name/signature)** __________________________  __________________________

**Date** __________________________