A guide to journal publication

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Outline

- What is a publication?
- How do I publish?
- Why should I publish?
- What do I publish?
- Where should I publish?
- How do I publish ethically?

I have previously presented portions of this talk ("Publishing research outputs and refereeing journals," CODDCCAS V, UNC, Jul 13, 2015; "Types of academic publications," URC, ADNU, Sept 21, 2017; "Selecting high impact journals," URC, ADNU, Oct 5, 2017).

What is a publication?

- Does it depend on the author?
  (anonymous, organization, non-human)
- Does it depend on the content?
  (fiction, opinion, fake news)
- Does it depend on the medium?
  (electronic (online, offline), non-written (oral, audiovisual, visual), unrecorded)
- Does it depend on the purpose?
  (promotional material, editorial, thesis/dissertation)
- Does it depend on the audience?
  (institutional, confidential)
- Does it depend on the publisher?
  (self-published, predatory)
- What about other special cases?
  (letter, blog, advance online publication)

Publication

("Publication", 2017)

"To **publish** is to make content available to the general public."

"An author of a work generally is the initial owner of the copyright on the work. One of the copyrights granted to the author of a work is the exclusive right to publish the work."

"A work that has not undergone publication, and thus is not generally available to the public, or for citation in scholarly or legal contexts, is called an **unpublished work**."

When referring to academic documents, the term "original" usually means "previously unpublished."

"Publication" is the distribution of copies or phonorecords of a work to the public by sale or other transfer of ownership, or by rental, lease, or lending. The offering to distribute copies or phonorecords to a group of people for purposes of further distribution, public performance, or public display, constitutes publication. A public performance or display of a work does not of itself constitute publication.

("United States Code/Title 17/Chapter 1/Section 101", 2014)

To perform or display a work "publicly" means—

(1) *to perform or display it at a place open to the public or at any place where a substantial number of people outside of a normal circle of a family and its social acquaintances is gathered; or*

(2) *to transmit or otherwise communicate a performance or display of the work to a place specified by clause (1) or to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.*

("United States Code/Title 17/Chapter 1/Section 101", 2014)

A work of art that exists in only one copy, such as a painting or a statue, is not regarded as published when the single existing copy is sold or offered for sale in the traditional way, such as through an art dealer, gallery, or auction house. A statue erected in a public place is not necessarily published.

When the work is reproduced in multiple copies, such as in reproductions of a painting or castings of a statue, the work is published when the reproductions are publicly distributed or offered to a group for further distribution or public display.

*(*Copyright Registration for Pictorial, Graphic, and Sculptural Works, *2015)*

How do I publish?

Academic publishing

"Academic publishing is a system that is necessary for academic scholars to peer review [a] work and make it available for a wider audience." ("Research", 2017)

Academic publishing

("Academic publishing", 2017)

In academic publishing, a paper is an academic work that is usually published in an academic journal. It contains original research results or reviews existing results. Such a paper, also called an article, will only be considered valid if it undergoes a process of peer review by one or more referees *(who are academics in the same field) who check that the content of the paper is suitable for publication in the journal. A paper may undergo a series of reviews, revisions and re-submissions before finally being accepted or rejected for publication. This process typically takes several months.*

Academic publishing (continuation)

("Academic publishing", 2017)

Next there is often a delay of many months (or in some subjects, over a year) before an accepted manuscript appears. This is particularly true for the most popular journals where the number of accepted articles often outnumbers the space for printing. Due to this, many academics self-archive a 'pre-print' copy of their paper for free download from their personal or institutional website.

Scholarly peer review

(*Scholarly peer review*, 2017)

Scholarly peer review (also known as refereeing) is the process of subjecting an author's scholarly work, research, or ideas to the scrutiny of others who are experts in the same field, before a paper describing this work is published in a journal or as a book. The peer review helps the publisher (that is, the editor-in-chief or the editorial board) decide whether the work should be accepted, considered acceptable with revisions, or rejected. Peer review requires a community of experts in a given (and often narrowly defined) field, who are qualified and able to perform reasonably impartial review.

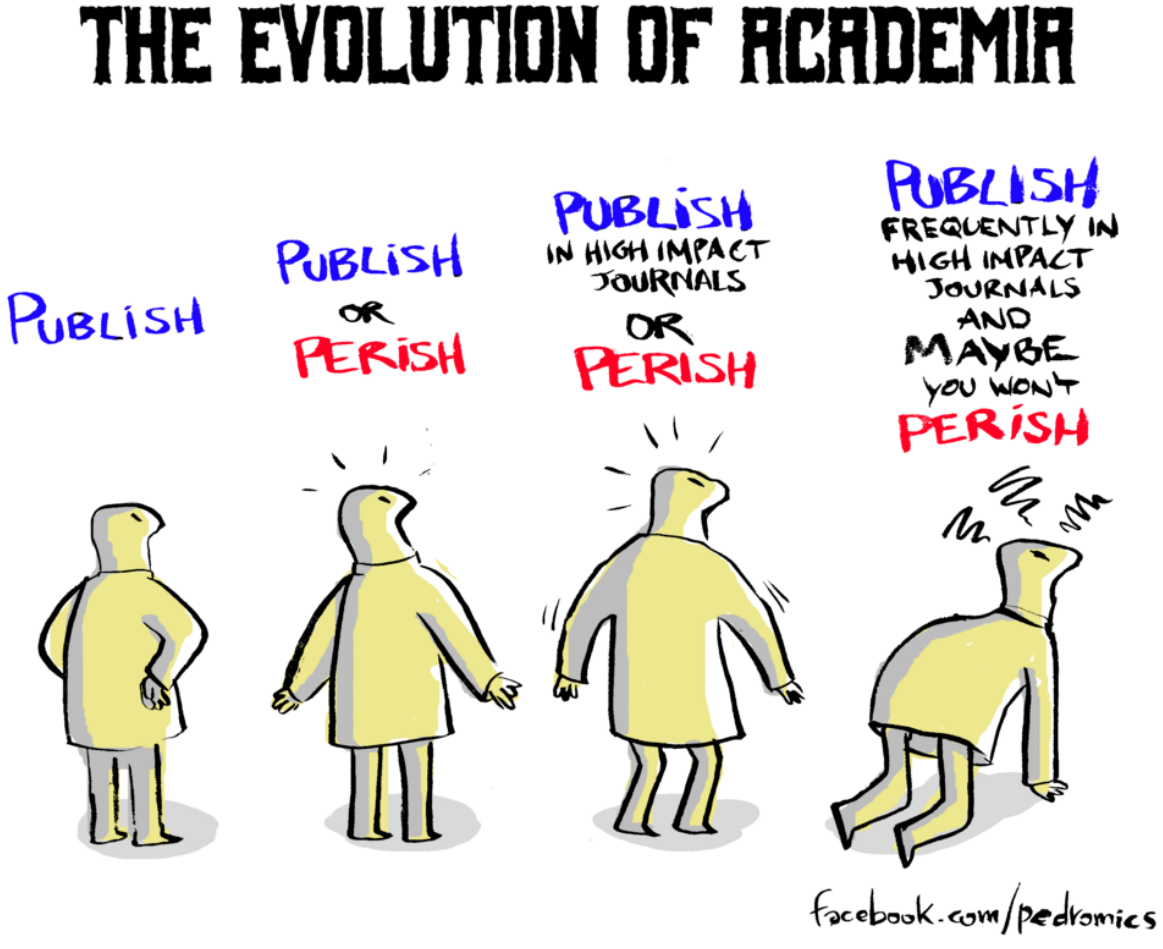
Scholarly peer review (continuation)

(*Scholarly peer review*, 2017)

Impartial review, especially of work in less narrowly defined or inter-disciplinary fields, may be difficult to accomplish, and the significance (good or bad) of an idea may never be widely appreciated among its contemporaries. Peer review is generally considered necessary to academic quality and is used in most major scientific journals, but it does by no means prevent publication of all invalid research. Traditionally, peer reviewers have been anonymous, but there is currently a significant amount of open peer review, where the comments are visible to readers, generally with the identities of the peer reviewers disclosed as well.

Why should I publish?

Publish so that other people will be able to use your work to improve the world.



https://velica.deviantart.com/art/Publish-or-Perish-645355248

Publish or perish

Merriam-Webster's (*Publish*, n.d.) second definition of PUBLISH as an intransitive verb is "to have one's work accepted for publication."

"There is a lot of pressure for professors to *publish* regularly."

" "**Publish or perish**" is a phrase coined to describe pressure in academia to rapidly and continually publish academic work to sustain or further one's career." ("Publish or perish", 2017)

CHED Research and Publication Awards

(CHED, 2013b)

The objectives of the CHED REPUBLICA Awards are to: recognize and reward outstanding research outputs of higher education faculty researchers, leading to significant advances in priority disciplines and contributing to national development at the same time, encourage research productivity and publication of research outputs in CHED accredited and internationally indexed journals. In order to encourage CHED research grantees and scholars to publish in refereed journals, the REPUBLICA Awards will be expanded to include 2 sets of awards: the Qualifier Awards as a special recognition of CHED-funded research outputs published in refereed journals, and the National Awards.

(CHED, 2013b)

REPUBLICA Qualifier Awards:

Cash Prize of P25,000.00 for a research paper that is published in CHED-accredited non-ISI/non-SCOPUS indexed journal;

Cash prize of P50,000.00 for a research paper published in internationally-indexed journal, i.e. ISI/SCOPUS-indexed journal.

REPUBLICA National Awards:

Trophy and cash prize of P300,000.00 for the awardee in each of the three major categories:

Agriculture and Natural Sciences
Mathematics, Engineering and Information Technology
Humanities, Social Sciences, Business and Teacher Education
Other categories may later be identified by the Commission

What do I publish?

Academic document types

- article or paper in a journal
- book review
- conference proceedings
- edited volume
- essay
- explication
- gray literature
- monograph
- preprint
- review article, survey article
- technical report
- thesis or dissertation
- translation
- white paper
- working paper

Academic publishing

("Academic publishing", 2017)

Academic publishing *is the subfield of publishing which distributes academic research and scholarship. Most academic work is published in academic journal article, book or thesis form. The part of academic written output that is not formally published but merely printed up or posted on the Internet is often called "grey literature." Most scientific and scholarly journals, and many academic and scholarly books, though not all, are based on some form of peer review or editorial refereeing to qualify texts for publication. [...]*

Article or paper in a journal

"In academic publishing, a paper is an academic work that is usually published in an academic journal. It contains original research results or reviews existing results. Such a paper, also called an article, will only be considered valid if it undergoes a process of peer review by one or more *referees* (who are academics in the same field) who check that the content of the paper is suitable for publication in the journal." ("Academic publishing", 2017)

Article or paper submissions may be solicited ("where an individual has been invited to submit work either through direct contact or through a general submissions call") or unsolicited ("where an individual submits a work for potential publication without directly being asked to do so"). ("Academic journal", 2017)

Book review

Academic book review:

"Reviews of scholarly books are checks upon the research books published by scholars; unlike articles, book reviews tend to be solicited." ("Academic journal", 2017)

Literary book review:

"A *book review* is a form of literary criticism in which a book is analyzed based on content, style, and merit." ("Book review", 2017)

Conference proceedings

("Proceedings", 2017)

"In academia and librarianship, **proceedings** or **conference proceedings** are a collection of academic papers published in the context of an academic conference or workshop. They are usually distributed in printed or electronic volumes, either before the conference opens or after it has closed. [...] In many fields, they may be considered grey literature."

Edited volume

("Edited volume", 2017)

"An **edited volume** or **edited collection** is a collection of scholarly or scientific chapters written by different authors. The chapters in an edited volume are original works (not republished works)."

"An edited volume is unlike an anthology, which is a collection of republished short literary works by different authors. It is also not a collected edition which brings together already published works by a single author and is edited by a publisher. It is different from a reader which contains collected texts for learning purposes. Finally, it is different from proceedings which contain articles written by different authors who presented them at a scientific conference."

Essay

("Essay", 2017)

"An **essay** is, generally, a piece of writing that gives the author's own argument—but the definition is vague, overlapping with those of an article, a pamphlet, and a short story. [...] Formal essays are characterized by "serious purpose, dignity, logical organization, length," whereas the informal essay is characterized by "the personal element (self-revelation, individual tastes and experiences, confidential manner), humor, graceful style, rambling structure, unconventionality or novelty of theme," etc."

Explication

("Academic writing", 2017)

An explication is "usually a short factual note explaining some obscure part of a particular work; e.g. its terminology, dialect, allusions or coded references."

Gray literature

("Grey literature", 2017)

Gray literature "are materials and research produced by organizations outside of the traditional commercial or academic publishing and distribution channels."

Examples are "reports (annual, research, technical, project, etc.), working papers, government documents, white papers and evaluations. Organizations that produce grey literature include government departments and agencies, civil society or non-governmental organisations, academic centres and departments, and private companies and consultants."

Monograph

("Monograph", 2017)

"A **monograph** is a specialist work of writing (in contrast to reference works) on a single subject or an aspect of a subject, usually by a single author."

Preprint

("Manuscript (publishing)", 2017)

"In academic publishing, a **preprint** is a version of a scholarly or scientific paper that precedes publication in a peer-reviewed scholarly or scientific journal. The preprint may be available, often as a non-typeset version available free, before and/or after a paper is published in a journal."

(*arXiv.org* (`https://arxiv.org/`) is an e-print service in the fields of physics, mathematics, computer science, quantitative biology, quantitative finance and statistics.)

Review article or survey article

("Review article", 2017)

"A **review article** is an article that summarizes the current state of understanding on a topic. A review article surveys and summarizes previously published studies, rather than reporting new facts or analysis."

"Review articles teach about: the main people working in a field, recent major advances and discoveries, significant gaps in the research, current debates, ideas of where research might go next."

Technical report

("Technical report", 2017)

"A **technical report** (also **scientific report**) is a document that describes the process, progress, or results of technical or scientific research or the state of a technical or scientific problem. It might also include recommendations and conclusions of the research. Unlike other scientific literature, [...] technical reports rarely undergo comprehensive independent peer review before publication. They may be considered as grey literature. Where there is a review process, it is often limited to within the originating organization."

Technical report (continuation)

("Technical report", 2017)

"Technical reports are often prepared for sponsors of research projects. Another case where a technical report may be produced is when more information is produced for an academic paper than is acceptable or feasible to publish in a peer-reviewed publication [...]. Researchers may also publish work in early form as a technical report to establish novelty, without having to wait for the often long production schedules of academic journals. Technical reports are considered "non-archival" publications, and so are free to be published elsewhere in peer-reviewed venues with or without modification."

Thesis or dissertation

("Thesis", 2017)

"A **thesis** or **dissertation** is a document submitted in support of candidature for an academic degree or professional qualification presenting the author's research and findings. In some contexts, the word "thesis" or a cognate is used for part of a bachelor's or master's course, while "dissertation" is normally applied to a doctorate, while in other contexts, the reverse is true."

Translation

("Translation", 2017)

"**Translation** is the communication of the meaning of a source-language text by means of an equivalent target-language text."

White paper

("White paper", 2017)

"A **white paper** is an authoritative report or guide that informs readers concisely about a complex issue and presents the issuing body's philosophy on the matter. It is meant to help readers understand an issue, solve a problem, or make a decision."

"The initial British term concerning a type of government-issued document has proliferated, taking a somewhat new meaning in business. In business, a white paper is closer to a form of marketing presentation, a tool meant to persuade customers and partners and promote a product or viewpoint. White papers may be considered grey literature."

Working paper

("Working paper", 2016)

A working paper in academia is a "preliminary scientific or technical paper. Often, authors will release working papers to share ideas about a topic or to elicit feedback before submitting to a peer reviewed conference or academic journal. Working papers are often the basis for related works, and may in themselves be cited by peer-review papers. They may be considered as grey literature."

An example of journal-specific article types

(*Instructions for Authors*, n.d.)

Papers published in Proceedings of the IEEE *provide a survey, review, or tutorial treatment of important technical developments in electronics, electrical and computer engineering, and computer science.*

Reviews	*critically examine a technology, tracing its progress from its inception to the present—and perhaps into the future.*
Surveys	*comprehensively view a technology—its applications, issues, ramifications, and potential.*
Tutorial	*papers explain a technology and may give practical information for implementing it. These papers are written for the purpose of informing non-specialist engineers about a particular technology.*

Where do I publish?

Publish in a highly ranked journal, one that is listed in a reputable citation index and is not from a predatory publisher.

Citation impact

Citation impact (or a citation metric) quantifies the citation usage of scholarly works. ("Citation impact", 2017)

Article-level number of citations and altmetrics (views, discussions, saves, recommendations) of individual articles ("Article-level metrics", 2017; "Altmetrics", 2017)

Journal-level impact factor, eigenfactor, SCImago Journal Rank, (journal-level) h-index, expert survey, publication power approach, altmetrics, diamScore, source normalized impact per paper, PageRank, JRank ("Journal ranking", 2017)

Author-level h-index, (author-level) eigenfactor, (author-level) impact factor ("Author-level metrics", 2017)

h-index

("h-index", 2017)

The **h-index** *is an author-level metric that attempts to measure both the productivity and citation impact of the publications of a scientist or scholar. [...] The index can also be applied to the productivity and impact of a scholarly journal as well as a group of scientists, such as a department or university or country. The index was suggested in 2005 by Jorge E. Hirsch [...] and is sometimes called the* Hirsch index *or* Hirsch number*.*

> *[A] scholar with an index of* h *has published* h *papers each of which has been cited in other papers at least* h *times. [...] The index works properly only for comparing scientists working in the same field; citation conventions differ widely among different fields.* *("h-index", 2017)*

- Allan A. Sioson's *h*-index
  ResearchGate (*Allan Sioson*, n.d.-a): 11 (10 if excluding self-citations)
  Google Scholar (*Allan Sioson*, n.d.-b): 10
- Menandro S. Abanes's *h*-index
  ResearchGate (*Menandro Abanes*, n.d.): 2 (1 if excluding self-citations)
  Google Scholar (*Menandro S. Abanes*, n.d.): 4

h-indices of selected journals

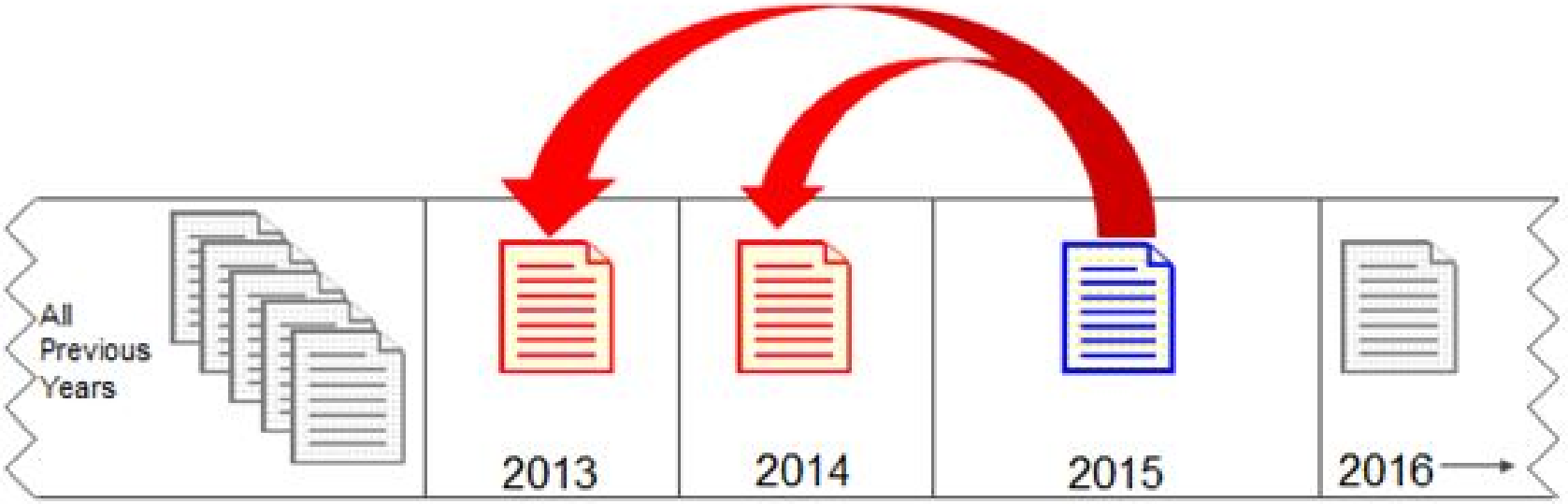
(*Scimago Journal & Country Rank*, n.d.)

Nature	1011
Science	978
CA: A Cancer Journal for Clinicians	131
Asian and Pacific Migration Journal	22
The Asia-Pacific Education Researcher	16
Philippine Agricultural Scientist	10
Philippine Journal of Science	9
Journal of Environmental Science and Management	5
Philippine Political Science Journal	4
Philippine Journal of Crop Science	none

Impact factor

("Impact factor", 2017)

The **impact factor** *(***IF***) or* **journal impact factor** *(***JIF***) of an academic journal is a measure reflecting the yearly average number of citations to recent articles published in that journal. [...] The impact factor was devised by Eugene Garfield, the founder of the Institute for Scientific Information. Impact factors are calculated yearly starting from 1975 for those journals that are listed in the* Journal Citation Reports*.*



Citations *captured from Web of Science journals during the IF publication year* **to any/all items published within a journal in the prior two years.**

divided by

The number of Articles and Reviews (citable items) published in a journal in the prior two years.

(Clarivate Analytics, 2017)

2016 Journal Impact Factors of selected journals

(*2017 Latest Impact Factors (2016 Journal Citation Reports, Thomson Reuters)*, n.d.)

CA: A Cancer Journal for Clinicians	187.040
Nature	40.137
Science	37.205
The Asia-Pacific Education Researcher	0.576
Asian and Pacific Migration Journal	0.357
Philippine Political Science Journal	0.333
Journal of Environmental Science and Management	0.323
Philippine Agricultural Scientist	0.248
Philippine Journal of Crop Science	0.115
Philippine Journal of Science	none

SCImago Journal Rank

SCImago Journal Rank *(SJR indicator) is a measure of scientific influence of scholarly journals that accounts for both the number of citations received by a journal and the importance or prestige of the journals where such citations come from.* *("SCImago Journal Rank", 2017)*

It expresses the average number of weighted citations received in the selected year by the documents published in the selected journal in the three previous years, –i.e. weighted citations received in year X to documents published in the journal in years X-1, X-2 and X-3.

*(*Scimago Journal & Country Rank, *n.d.)*

2016 SCImago Journal Ranks of selected journals

(*Scimago Journal & Country Rank*, n.d.)

CA: A Cancer Journal for Clinicians	39.285
Nature	18.134
Science	13.535
The Asia-Pacific Education Researcher	0.394
Asian and Pacific Migration Journal	0.334
Philippine Journal of Science	0.192
Philippine Political Science Journal	0.185
Philippine Agricultural Scientist	0.148
Journal of Environmental Science and Management	0.146
Philippine Journal of Crop Science	none

Citation indices

A citation index is a bibliographic database of citations among publications.

Available by subscription and cover only high quality journals:

- Web of Science (previously Web of Knowledge) by Clarivate Analytics (`http://www.webofknowledge.com/`) (previously the Intellectual Property and Science business of Thomson Reuters, and previously the Institute for Scientific Information (ISI))
- Scopus by Elsevier (`https://www.scopus.com/`)

Freely available online but do not screen articles for quality:

- CiteSeer^X (`http://citeseerx.ist.psu.edu/`)
- Google Scholar (`http://scholar.google.com/`)

Web of Science Core Collection (Testa, 2016)

- Science Citation Index Expanded (SCIE)
- Social Sciences Citation Index (SSCI)
- Arts & Humanities Citation Index (AHCI)
- Emerging Sources Citation Index (ESCI)
  (sciences, social sciences, arts & humanities)

Scopus ("Scopus", 2017)

"It covers [...] peer-reviewed journals in the scientific, technical, medical, and social sciences (including arts and humanities)."

Web of Science Journal Selection Process

(Testa, 2016)

- Basic publishing standards (peer review, acknowledgements, ethical publishing practices, publishing format, timeliness, international editorial conventions, full text English)
- Editorial content
- International focus (international diversity among the contributing authors, editors, and editorial advisory board members)
- Citation analysis (total citation counts, impact factor)

Scopus journal selection criteria

(Elsevier, n.d.)

- Consist of peer-reviewed content and have a publicly available description of the peer review process
- Be published on a regular basis and have an International Standard Serial Number (ISSN) as registered with the ISSN International Centre
- Have content that is relevant for and readable by an international audience, meaning: have references in Roman script and have English language abstracts and titles
- Have a publicly available publication ethics and publication malpractice statement

CHED Journal Accreditation Service

- Guidelines for CHED Accreditation of Research Journals and Providing Incentives Therefor (CHED, 2009a)
- Implementing Rules and Regulations (IRR) for CMO No. 13, S. 2009 "Guidelines for CHED Accreditation of Research Journals and Providing Incentives Therefor" (CHED, 2009b)
- CHED Accredited Research Journals (CHED, 2010)
- On-Line Publication of CHED-Accredited Research Journals (CHED, 2011)
- CHED Accredited Research Journals (CHED, 2012a)
- Revised Guidelines for CHED Accreditation of Research Journals and Providing Incentives Therefor (CHED, 2012b)
- Last Call for Submission of Research Journal for CHED Accreditation by December 31, 2013 (CHED, 2013a)

CHED Journal Incentive Program

(CHED, 2016)

The Journal Incentive Program, which supersedes the Journal Accreditation Service (JAS) created by CMO No 5, series of 2012, aims to sustain [initiatives to produce high-quality journals] to pursue quality, research integrity, and honesty, and ensure adherence to international standards.

There are two (2) categories of grants under the Journal Incentive Program: **Journal Challenge** *(***JC***) and* **Journal Incubator** *(***JI***). JC caters to Scopus/WoS-indexed journals and aims to support activities that will lead to an increase in scientific citation (excluding self-citation) and promote social media presence and public engagement profiles of scholarly articles in the journal. On the other hand, JI will support promising Philippine journals towards the path to meet the minimum generally accepted standards for Scopus/WoS-indexability. In so doing, CHED helps raise the recognition and credibility of Filipino scholars and scientists and contributes to the creation of a research ecosystem characterized by merit, productive and critical discourses, and collegiality.*

Philippine journals available online

- U.P. Diliman Journals Online (32 journals)
  (http://journals.upd.edu.ph/)
- Ateneo de Manila University Journals Online (7 journals)
  (http://journals.ateneo.edu/)
- Philippine Journals Online (43 journals)
  (http://www.philjol.info/philjol/index.php)
- Philippine E-Journals (161 journals)
  (http://www.ejournals.ph/)

Open access

https://commons.wikimedia.org/wiki/File:Open_Access_logo_PLoS_white.svg

Academic publishing is undergoing major changes, as it makes the transition from the print to the electronic format. [...] Currently, an important trend, particularly with respect to journals in the sciences, is open access via the Internet. In open access publishing, a journal article is made available free for all on the web by the publisher at the time of publication. It is typically made possible after the author pays hundreds or thousands of dollars in publication fees, thereby shifting the costs from the reader to the researcher or their funder. The Internet has facilitated open access self-archiving, in which authors themselves make a copy of their published articles available free for all on the web. *("Academic publishing", 2017)*

Open access

Unrestricted online access to peer-reviewed scholarly research

It comes in two degrees ("Gratis versus libre", 2017):

- *gratis*: Users are able to access and use the article texts, without a price-barrier.
- *libre*: Users are allowed allowed to modify and re-use the article texts, without a permission barrier.

It can be provided in two ways ("Open access", 2017):

- *gold*: Authors publish in open access journals, which provide immediate open access to all of their articles, usually on the publisher's website.
- *green*: Authors publish in any journal and then self-archive a version of the article for gratis public use in an open access website.

According to the Budapest Open Access Initiative

(as cited in "Open access", 2017):

> *There are many degrees and kinds of wider and easier access to this literature. By 'open access' to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.*

Directory of Open Access Journals

(DOAJ, n.d.-a)

DOAJ is an online directory that indexes and provides access to quality open access, peer-reviewed journals.

Open Access Journal: [...] journals that use a funding model that does not charge readers or their institutions for access. [The DOAJ supports] the rights of users to "read, download, copy, distribute, print, search, or link to the full texts of these articles" as mandatory for a journal to be included in the directory.

Quality Control: The journal must exercise peer-review or editorial quality control to be included.

Research Journal: Journals that report primary results of research or overviews of research results to a scholarly community.

Periodical: A serial appearing, or intending to appear, indefinitely at regular intervals and generally more frequently than annually, each issue of which is numbered or dated consecutively and normally contains separate articles, stories, or other writings.

Creative Commons

https://commons.wikimedia.org/wiki/Category:Creative_Commons_icons#/media/File:Cc_large.png

Creative Commons Licences

("Creative Commons license", 2017)

A **Creative Commons (CC) license** *is one of several public copyright licenses that enable the free distribution of an otherwise copyrighted work. A CC license is used when an author wants to give people the right to share, use, and build upon a work that they have created. CC provides an author flexibility (for example, they might choose to allow only non-commercial uses of his/her own work) and protects the people who use or redistribute an author's work from concerns of copyright infringement as long as they abide by the conditions that are specified in the license by which the author distributes the work.*

Creative Commons Licences (continued)

Attribution-NonCommercial-NoDerivs
CC BY-NC-ND

"This license is the most restrictive of our six main licenses, only allowing others to download your works and share them with others as long as they credit you, but they can't change them in any way or use them commercially." (*About The Licenses*, n.d.)

Creative Commons licenses or their equivalent are required for a journal to be included in the Directory of Open Access Journals. (DOAJ, n.d.-b)

Predatory publishers

(Karlsson, 2017)

> *A predatory publisher is a publisher that engages in deceptive methods that include publishing fake content, skipping peer review, pretending to have a more impressive credibility than they really have, picking journal names that are very similar to established journals to fool people, spam researchers to try to get them to submit papers and pay expensive fees. Because of little to no regulation, many predatory publishers are allowed to do their devious business in the open without much social or legal consequences.*

See also Beall (2012).

How do I publish ethically?

Do not be like

- Jan Hendrik Schön
- Igor and Grichka Bogdanov
- Hwang Woo-suk
- Haruko Obokata

Jan Hendrik Schön

(*Schön scandal*, 2017)

[...] soon after Schön [of Bell Labs] published his work on single-molecule semiconductors [in 2001], others in the physics community alleged that his data contained anomalies. Lydia Sohn [...] noticed that two experiments carried out at very different temperatures had identical noise. When the editors of Nature *pointed this out to Schön, he claimed to have accidentally submitted the same graph twice. Paul McEuen [...] then found the same noise in a paper describing a third experiment. More research by McEuen, Sohn, and other physicists uncovered a number of examples of duplicate data in Schön's work. This triggered a series of reactions that quickly led Lucent Technologies (which ran Bell Labs) to start a formal investigation.*

In May 2002, Bell Labs set up a committee to investigate [...]. The committee obtained information from all of Schön's coauthors and interviewed the three principal ones [...]. It examined electronic drafts of the disputed articles, which included processed numeric data. The committee requested copies of the raw data, but found that Schön had kept no laboratory notebooks. His raw-data files had been erased from his computer. According to Schön, the files were erased because his computer had limited hard-drive space. In addition, all of his experimental samples had been discarded or damaged beyond repair.

On September 25, 2002, the committee publicly released its report. The report contained details of 24 allegations of misconduct. They found evidence of Schön's scientific misconduct in at least 16 of them. They found that whole data sets had been reused in a number of different experiments. They also found that some of his graphs, which purportedly had been plotted from experimental data, had instead been produced using mathematical functions.

The report found that all of the misdeeds had been performed by Schön alone. All of the coauthors (including [...] the head of the team) were exonerated of scientific misconduct. This sparked widespread debate in the scientific community on how the blame for misconduct should be shared among co-authors, particularly when they share a significant part of the credit.

Igor and Grichka Bogdanov

(*Bogdanov affair*, 2017)

- Their book published in 1991 was said to plagiarize a book published in 1988. Their book's back cover stated that they had doctorates when they did not.
- Grichka got his Ph.D. in 1999. Igor failed his thesis defense, but got his Ph.D. in 2002 after publishing three peer-reviewed journal articles. Both got the lowest passing grade.
- In 2001 and 2002, they were able to publish five peer-reviewed papers in reputable journals. Experts later claimed that their papers were meaningless.

Hwang Woo-suk

(*Hwang Woo-suk*, 2017)

Hwang Woo-suk [...] is a South Korean veterinarian and researcher. He was a professor of theriogenology and biotechnology at Seoul National University (dismissed on March 20, 2006) who became infamous for fabricating a series of experiments, which appeared in high-profile journals, in the field of stem cell research. Until November 2005, he was considered one of the pioneering experts in the field, best known for two articles published in the journal Science in 2004 and 2005 where he reported he had succeeded in creating human embryonic stem cells by cloning. He was called the "Pride of Korea" in South Korea.

Soon after the first paper was released, however, an article in the journal Nature *charged Hwang with having committed ethical violations by using eggs from his graduate students and from the black market. Although he denied the charges at first, Hwang admitted the allegations were true in November 2005. Shortly after that his human cloning experiments were revealed to be fraudulent.*

On May 12, 2006, Hwang was charged with embezzlement and bioethics law violations after it emerged much of his stem cell research had been faked. The Korea Times reported on June 10, 2007, that Seoul National University fired him, and the South Korean government canceled his financial support and barred him from engaging in stem cell research. [...]

Haruko Obokata

(*Haruko Obokata*, 2017)

Haruko Obokata [...] is a former stem-cell biologist and research unit leader at Japan's Laboratory for Cellular Reprogramming, Riken Center for Developmental Biology. She claimed to have developed a radical and remarkably easy way to make stimulus-triggered acquisition of pluripotency (STAP) cells that could be grown into tissue for use anywhere in the body. Riken, however, eventually launched an investigation in response to allegations of irregularities in images appearing in several articles she authored, including the paper announcing the discovery of STAP cells. The ensuing scandal over STAP cells has since become one of the world's best-known scientific frauds alongside the Schön scandal and Hwang Woo-suk's cloning experiments.

Discussion

- What would you consider to be breaches of publication ethics?
- What should the response of the academic community be to cases of publication misconduct?
- Who should be held accountable for publications that are later found to be unethical?
- What should be done to reduce the incidence of publication misconduct?

Ethical issues ranked according to science journal editors' perceptions of their severity (from most severe to least severe)

(Wager, Fiack, Graf, Robinson, & Rowlands, 2009)

1. Redundant publication
2. Plagiarism
3. Duplicate submission
4. Undisclosed author conflicts of interest
5. Undisclosed reviewer conflicts of interest
6. Gift authorship
7. Disputed authorship
8. Falsified or fabricated data

9. Reviewer misconduct
10. Unethical research design or conduct
11. Undisclosed commercial involvement
12. Ghost authorship
13. Image manipulation
14. Concerns over supplements
15. Concerns over advertising
16. Editorial interference by journal owner

COPE guidelines on good publication practice

The Committee on Publication Ethics (COPE) was founded in 1997 to address breaches of research and publication ethics. A voluntary body providing a discussion forum and advice for scientific editors, it aims to find practical ways of dealing with the issues, and to develop good practice.

The 2003 COPE Report (COPE, 2005) is no longer available at their website (`http://publicationethics.org/`) and has been replaced by a set of more specific guidelines.

(COPE, 2005)

- *Study design and ethical approval*

  Good research should be well justified, well planned, appropriately designed, and ethically approved. To conduct research to a lower standard may constitute misconduct.

- *Data analysis*

  Data should be appropriately analysed, but inappropriate analysis does not necessarily amount to misconduct. Fabrication and falsification of data do constitute misconduct.

- *Authorship*

  There is no universally agreed definition of authorship, although attempts have been made [...]. As a minimum, authors should take responsibility for a particular section of the study.

(COPE, 2005)

- *Conflicts of interest*

  Conflicts of interest arise when authors, reviewers, or editors have interests that are not fully apparent and that may influence their judgements on what is published. They have been described as those which, when revealed later, would make a reasonable reader feel misled or deceived. They may be personal, commercial, political, academic or financial.

  "Financial" interests may include employment, research funding, stock or share ownership, payment for lectures or travel, consultancies and company support for staff.

(COPE, 2005)

- *Peer review*

  Definition

  Peer reviewers are external experts chosen by editors to provide written opinions, with the aim of improving the study.

  Working methods vary from journal to journal, but some use open procedures in which the name of the reviewer is disclosed, together with the full or "edited" report.

(COPE, 2005)

- *Peer review*

  Action

  1. *Suggestions from authors as to who might act as reviewers are often useful, but there should be no obligation on editors to use those suggested.*
  2. *The duty of confidentiality in the assessment of a manuscript must be maintained by expert reviewers, and this extends to reviewers colleagues who may be asked (with the editors permission) to give opinions on specific sections.*
  3. *The submitted manuscript should not be retained or copied.*
  4. *Reviewers and editors should not make any use of the data, arguments, or interpretations, unless they have the authors permission.*

(COPE, 2005)

- *Peer review*

  Action

  5. *Reviewers should provide speedy, accurate, courteous, unbiased and justifiable reports.*
  6. *If reviewers suspect misconduct, they should write in confidence to the editor.*
  7. *Journals should publish accurate descriptions of their peer review, selection, and appeals processes.*
  8. *Journals should also provide regular audits of their acceptance rates and publication times.*

(COPE, 2005)

- *Redundant publication*

  Redundant publication occurs when two or more papers, without full cross reference, share the same hypothesis, data, discussion points, or conclusions.

- *Plagiarism*

  Plagiarism ranges from the unreferenced use of others' published and unpublished ideas, including research grant applications to submission under "new" authorship of a complete paper, sometimes in a different language. It may occur at any stage of planning, research, writing, or publication: it applies to print and electronic versions.

(COPE, 2005)

- *Duties of editors*

  Editors are the stewards of journals. They usually take over their journal from the previous editor(s) and always want to hand over the journal in good shape.

  Most editors provide direction for the journal and build a strong management team.

  They must consider and balance the interests of many constituents, including readers, authors, staff, owners, editorial board members, advertisers and the media.

- *Media relations*

  Medical research findings are of increasing interest to the print and broadcast media.

  Journalists may attend scientific meetings at which preliminary research findings are presented, leading to their premature publication in the mass media.

- *Advertising*

  Many scientific journals and meetings derive significant income from advertising.

  Reprints may also be lucrative.

Dealing with misconduct (COPE, 2005)

- *Principles*
  - *The general principle confirming misconduct is intention to cause others to regard as true that which is not true.*
  - *The examination of misconduct must therefore focus, not only on the particular act or omission, but also on the* intention *of the researcher, author, editor, reviewer or publisher involved.*
  - *Deception may be by intention, by reckless disregard of possible consequences, or by negligence. It is implicit, therefore, that "best practice" requires complete honesty, with full disclosure.*
  - *Codes of practice may raise awareness, but can never be exhaustive.*
- *Investigating misconduct*
- *Serious misconduct*
- *Less serious misconduct*
- *Sanctions*

Glossary of retractions

(Gawrylewski, 2007)

- *Correspondence*

  Letters are often an opportunity for peers to raise concerns over the findings of others published in the journal. Errors raised by one author can stem from the inability to replicate findings, given the methods presented in publication. This often results in a response by the original authors, who might clarify the methods or explain, justify, or cast doubt on their own findings.

  Correspondence includes matters arising.

- *Editor's note*

  A minor point issued by the editor. The editor's note is not common in the major peer-reviewed journals; in most cases it is used when something does not warrant a full editorial at the beginning of an issue.

- *Editor's warning*

  An issued statement by journal editors eliciting concern over the validity of a given paper or study. This could be induced by suspicions of misconduct.

- *Errata*

  The most common entry in peer-reviewed journals, errata are published corrections issued either by the author(s) of a paper, or by the journal editors. The National Library of Medicine (NLM), which maintains the PubMed database, does not differentiate between errors that originated in the publication process and errors of logic or methodology in the papers themselves.

  Errata include corrigenda *and* corrections*.*

- *Expression of concern*

  A statement issued by the editor of a peer-reviewed journal, the Expression of Concern (EoC) calls attention to a specific paper, especially to question the validity of that paper or portions of that paper.

  EoC include editor's warning *and* expression of concern reaffirmed*.*

- *Partial retraction*

  The retraction of a portion of a paper, this classification was made official starting at the end of 2006 and is now searchable in Medline.

- *Retraction*

  This is the formal withdrawal of one or more papers by one or all of the authors. In most circumstances, retraction happens when new findings, or an inability by other groups to replicate results, spur the authors to withdraw a paper. According to the NLMs rules, only one signature is required to retract a paper, given either by the journal editor, one or more of the authors, or the sponsoring research institution (see Retraction Without Permission). The NLM does not differentiate between articles that have been retracted because of honest mistakes in the research process or interpretation, or those that are retracted because of misconduct. While it remains in searchable databases such as Medline, a retracted paper is accompanied by a retraction notice, which one or more authors or editors write, giving the reasons for the retraction.

- *Retraction without permission*

  The formal withdrawal of one or more papers by a journal editor, the institution where the study took place, or one or more of the papers authors. This type of retraction is distinct from a regular retraction in that one or more parties stands behind the paper and does not agree with the retraction.

Blogs about academic misconduct

- *Scholarly Open Access: Critical analysis of scholarly open-access publishing* (http://scholarlyoa.com/) by Jeffrey Beall contains Beall's List of potential, possible, or probable predatory scholarly open-access publishers and journals. The site is no longer active (Karlsson, 2017).
- *Retraction Watch: Tracking retractions as a window into the scientific process* (http://retractionwatch.com/) by Ivan Oransky and Adam Marcus
- *Copy, Shake, and Paste: A blog about plagiarism and scientific misconduct* (http://copy-shake-paste.blogspot.com.tr/) by Debora Weber-Wulff

A suggested website

- *Academia Stack Exchange* (`https://academia.stackexchange.com/`) is a question and answer site for academics of all levels.

2017 latest impact factors (2016 journal citation reports, Thomson Reuters). (n.d.). Retrieved October 2, 2017, from https://www.researchgate.net/publication/317639994

About the licenses. (n.d.). Retrieved September 20, 2017, from https://creativecommons.org/licenses/

Academic journal. (2017, August 30). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Academic_journal&oldid=798012960

Academic publishing. (2017, September 19). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Academic_publishing&oldid=801365146

Academic writing. (2017, September 9). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Academic_writing&oldid=799724517

Allan Sioson. (n.d.-a). Retrieved November 21, 2017, from https://www.researchgate.net/profile/Allan_Sioson/reputation

Allan Sioson. (n.d.-b). Retrieved November 21, 2017, from https://scholar.google.com/citations?user=WXiA6qQAAAAJ&hl=en

Altmetrics. (2017, August 3). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Altmetrics&oldid=793732412

Article-level metrics. (2017, September 14). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Article-level_metrics&oldid=800567729

Author-level metrics. (2017, August 27). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Author-level_metrics=797493180

Beall, J. (2012, September 13). Predatory publishers are corrupting open access. *Nature*, *489*.

Bogdanov affair. (2017, October 29). Retrieved November 21, 2017, from https://en.wikipedia.org/w/index.php?title=Bogdanov_affair&oldid=807720259

Book review. (2017, August 18). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Book_review&oldid=796124058

Citation impact. (2017, July 17). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Citation_impact&oldid=791007527

Clarivate Analytics. (2017). *Journal citation reports: The truth about journal impact.* Retrieved October 2, 2017, from http://images.mailinfo.clarivate.com/EloquaImages/clients/ThomsonReutersScience/%7B895babc2-257b-40d5-8de1-cd08a0e0d017%7D_JIF.JPG

Commission on Higher Education. (2009a, March 31). *Guidelines for CHED accreditation of research journals and providing incentives therefor.* (CHED Memorandum Order No. 13, Series of 2009)

Commission on Higher Education. (2009b, November 4). *Implementing rules and regulations (IRR) for CMO no. 13, s. 2009 "Guidelines for CHED accreditation of research journals and providing incentives therefor".* (CHED Memorandum Order No. 42, Series of 2009)

Commission on Higher Education. (2010). *CHED accredited research journals.* (CHED Memorandum Order No. 9, Series of 2010)

Commission on Higher Education. (2011, June 27). *On-line publication of CHED-accredited research journals.* (Memorandum from the Chairperson)

Commission on Higher Education. (2012a, February 2). *CHED accredited research journals.* (CHED Memorandum Order No. 4, Series of 2012)

Commission on Higher Education. (2012b, February 10). *Revised guidelines for CHED accreditation of research journals and providing incentives therefor.* (CHED Memorandum Order No. 5, Series of 2012)

Commission on Higher Education. (2013a, May 3). *Last call for submission of research journal for CHED accreditation by december 31, 2013.* (Memorandum from the Chairperson)

Commission on Higher Education. (2013b). *Reformulated guidelines for the CHED research and publication (REPUBLICA) awards.* (CHED Memorandum Order No. 23, Series of 2013)

Commission on Higher Education. (2016, October 3). *Guidelines for CHED journal incentive program (JIP).* (CHED Memorandum Order No. 53, Series of 2016)

Committee on Publication Ethics. (2005, June). Guidelines on good publication practice: The COPE report 2003. *Indian Journal of Pharmacology*, *37*, 199–203.

Copyright registration for pictorial, graphic, and sculptural works. (2015). Washington, DC: U.S. Copyright Office. Retrieved September 20, 2017, from `https://copyright.gov/circs/circ40.pdf` (Circular 40)

Creative commons license. (2017, September 16). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Creative_Commons_license&oldid=800972028

Directory of Open Access Journals. (n.d.-a). *Information for publishers.* Retrieved November 21, 2017, from https://doaj.org/publishers#definition

Directory of Open Access Journals. (n.d.-b). *Information for publishers.* Retrieved November 21, 2017, from https://doaj.org/publishers#licensing

Edited volume. (2017, February 3). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Edited_volume&oldid=763532942

Elsevier. (n.d.). *Content policy and selection.* Retrieved October 2, 2017, from http://www.elsevier.com/solutions/scopus/content/content-policy-and-selection

Essay. (2017, September 19). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Essay&oldid=801343879

Gawrylewski, A. (2007, March). Glossary of retractions. *The Scientist*, *21*(3), 37–38.

Gratis versus libre. (2017, September 18). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Gratis_versus_libre&oldid=801308975

Grey literature. (2017, September 8). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Grey_literature&oldid=799520636

Haruko Obokata. (2017, October 30). Retrieved November 21, 2017, from https://en.wikipedia.org/w/index.php?title=Haruko_Obokata&oldid=807937371

h-index. (2017, September 19). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=H-index&oldid=801426239

Hwang Woo-suk. (2017, November 4). Retrieved November 21, 2017, from https://en.wikipedia.org/w/index.php?title=Hwang_Woo-suk&oldid=808703241

Impact factor. (2017, September 21). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Impact_factor&oldid=801656766

Instructions for authors. (n.d.). Retrieved September 20, 2017, from http://proceedingsoftheieee.ieee.org/instructions-for-authors/

Journal ranking. (2017, May 25). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Journal_ranking&oldid=782213077

Karlsson, E. (2017, June 15). *We now know why Jeffrey Beall removed list of (allegedly) predatory publishers.* Retrieved October 2, 2017, from https://debunkingdenialism.com/2017/06/15/we-now-know-why-jeffrey-beall-removed-list-of-allegedly-predatory-publishers/

Manuscript (publishing). (2017, September 19). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Manuscript_(publishing)&oldid=801419892

Menandro Abanes. (n.d.). Retrieved November 21, 2017, from https://www.researchgate.net/profile/Menandro_Abanes/reputation

Menandro S. Abanes. (n.d.). Retrieved November 21, 2017, from https://scholar.google.com/citations?user=WvfwF84AAAAJ&hl=en

Monograph. (2017, July 9). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Monograph&oldid=789815734

Open access. (2017, September 7). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Open_access&oldid=799351095

Proceedings. (2017, August 29). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Proceedings&oldid=797813077

Publication. (2017, May 21). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Publication&oldid=781398670

Publish. (n.d.). Retrieved September 20, 2017, from https://www.merriam-webster.com/dictionary/publish

Publish or perish. (2017, June 26). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Publish_or_perish&oldid=787565385

Research. (2017, November 20). In *Wikipedia, The Free Encyclopedia.* Retrieved November 21, 2017, from https://en.wikipedia.org/w/index.php?title=Research&oldid=811216234

Review article. (2017, August 10). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Review_article&oldid=794855946

Scholarly peer review. (2017, October 30). Retrieved November 21, 2017, from https://en.wikipedia.org/w/index.php?title=Scholarly_peer_review&oldid=807859063

Schön scandal. (2017, October 29). Retrieved November 21, 2017, from https://en.wikipedia.org/w/index.php?title=Sch%C3%B6n_scandal&oldid=807611418

Scimago journal & country rank. (n.d.). Retrieved October 2, 2017, from http://www.scimagojr.com

Scimago journal rank. (2017, July 20). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from http://en.wikipedia.org/w/index.php?title=SCImago_Journal_Rank&oldid=791436389

Scopus. (2017, September 11). In *Wikipedia, The Free Encyclopedia.* Retrieved October 2, 2017, from https://en.wikipedia.org/w/index.php?title=Scopus&oldid=800089436

Technical report. (2017, July 7). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Technical_report&oldid=789516625

Testa, J. (2016, July 18). *Journal selection process.* Retrieved October 2, 2017, from https://clarivate.com/essays/journal-selection-process/

Thesis. (2017, September 17). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Thesis&oldid=800997754

Translation. (2017, September 19). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Translation&oldid=801471680

United States Code/Title 17/Chapter 1/Section 101. (2014, November 6). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikisource.org/w/index.php?title=United_States_Code/Title_17/Chapter_1/Section_101&oldid=5109685

Wager, E., Fiack, S., Graf, C., Robinson, A., & Rowlands, I. (2009). Science journal editors' views on publication ethics: results of an international survey. *Journal of Medical Ethics*, *35*.

White paper. (2017, August 27). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=White_paper&oldid=797475096

Working paper. (2016, May 2). In *Wikipedia, The Free Encyclopedia.* Retrieved September 20, 2017, from https://en.wikipedia.org/w/index.php?title=Working_paper&oldid=718300904