



United Nations  
Educational, Scientific and  
Cultural Organization

# Scholarly Communication

Module

# 1

## Scholarly Communication

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# MODULE INTRODUCTION

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Researchers, scholars and scientists main business is scholarly communication. We communicate about our work to others, as we push the boundaries of what we know and the society knows. We question established notions and truths about science. We share our findings with others, and in a way that is popularly known as scholarly communication which emerged with the publication of first journal in 1665. However, the term gained popularity only in the 1970s, as access to peer reviewed and scholarly communication became difficult. This module has four units covering introduction to scholarly communication, peer reviewed journals, electronic journals and databases and the Serials Crisis. At the end of this module, the learner is expected to be able to:

- Explain philosophy, mission, and objectives of scholarly communication
- Describe the process of scholarly communication
- Identify different channels of scholarly communication
- Discuss the dysfunctioning of the scholarly communication

In **Unit 1**, *Introduction to scholarly communication*, we have discussed different aspects of scholarly communication – particularly its genesis, importance and ethics of academic publishing, and different communication channels available in academic publishing. Some of these channels are commonly described as primary sources as they provide first-hand testimony or direct evidence concerning a topic under investigation. Historically, scientific journals were initiated by learned societies and other scholarly communities for reporting results of concluded research works or scientific discoveries. Now many for-profit publishers have started publishing research journals.

**Unit 2**, *Communicating with Peer Review Journals*, covers two important academic publishing channels, namely peer reviewed journals, conferences and their proceedings. This Unit also highlights different methods and procedures of peer reviewing for publishing primary literature emanated from research studies. The peer reviewing is essential for validating quality of research findings conveyed by researchers, which are subject to fulfilment of ethical standards and appropriate research design, sampling and other methodological issues.

In **Unit 3**, *Electronic journals and databases*, we have discussed the emergence of electronic journals in academic and research environment due to wide proliferation of information and communication technologies (ICT) in research communications and academic publishing. Scientific communities and scientific communications from the global South are getting substantive attentions through adaptation of electronic journals and electronic academic databases in the process of research communications.

In **Unit 4**, the *Serials Crisis*, we discuss the cost of peer reviewed publications and the problems faced by researchers in developing countries. The focus of this unit is on highlighting the problems and discusses possible solutions including the emergence of open access as one of the solutions. Open access journal publishing helps in mitigating some of the problems associated with serials crisis.

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## UNIT 4: THE SERIALS CRISIS

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### Structure

- 4.0 Introduction
- 4.1 Learning Outcomes
- 4.2 Dysfunctioning of the Scholarly Communications
- 4.3 Serials Crisis Phenomena
- 4.4 Pricing and Economics of Journal Publishing
  - 4.4.1 Cost Effectiveness of Journals
  - 4.4.2 Problems with Predatory Open Access Journals
- 4.5 Accessibility, Delay and Other Issues of Journals
- 4.6 Let Us Sum Up
- 4.7 Check Your Progress

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### 4.0 INTRODUCTION

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The term serials crisis is commonly used to highlight the exponential increase in subscription cost of many scholarly journals, particularly, which are published by for-profit publishers. This crisis in academic publishing is "widely perceived", which is to do with the combined pressure of budget cuts at universities, increased costs of journals, unbearable economic recession and the global economic downturns in recent times. In many countries the funds available to the libraries for journals subscription have remained static or have declined in real terms. On the other hand, journals subscription prices for institutional access have been rising much faster than the Consumer Price Index for several decades. This causes the declining subscriptions to number of journal titles to accommodate price increase of the core essential journals to institutional research activities.

The serials crisis phenomenon led to initiation of global open access movement to help the researchers to come out of over-dependency on monopolistic corporate publishing companies. On the other hand, many open access journal publishers charge article processing fee or publishing fee from the submitting authors, as one of the major sources of revenue to self-sustain an open access journal publishing venture. No-fee open access journals are also in existence, which get cross-subsidy from the public exchequers or collective supports from scholarly societies' membership. Open access journals are nowadays getting attentions from predatory publishers as well. For every three 'recorded' open access journals, there is every possibility of having a 'predatory' open access journal. Usually, existence of open access journals is recorded in the Directory of Open Access Journals (DOAJ) which shows availability of about 9804 open access journals as on 15<sup>th</sup> January 2014.

In this Module, various reasons and solutions to mitigate serials crisis are discussed in details to help the researchers in understanding present day problems associated with the scholarly publishing, especially the journals.

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## 4.1 LEARNING OUTCOMES

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*At end of this unit, you are expected to be able to*

- Understand the impact of serials crisis on scholarly publishing;
- Explain the outcomes of serials crisis, most particularly the new methods of dissemination of contents of scholarly journals; and
- Describe the problems associated with the transition from print journal publishing to online journal publishing, and more particularly to open access journal publishing.

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## 4.2 DYSFUNCTIONING OF THE SCHOLARLY COMMUNICATION

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The nature of scholarly communication in the ICT-enabled era has changed significantly. In last twenty years period, many print journals have introduced their digital or online edition, popularly known as electronic journals. Many new scholarly journals were also launched purely in electronic format without any print edition. Electronic journals have many more functionalities than traditional print journals. These journals can be read 24X7 anywhere using desktop computers, laptops and now even hand-held mobile devices. An electronic copy can be downloaded, shared, archived or transmitted to anyone having internet accessibility. Problem of space for archiving back issues in libraries is over. Also there is no limitation of space to accommodate any number of articles in an issue. Print journals usually have regular International Standard Serial Number (ISSN), whereas electronic edition of scholarly journals have separate ISSN, known as e-ISSN. So, a scholarly journal usually has a regular ISSN for print edition and e-ISSN for electronic edition. However the number is only a registry of the publication and not necessarily a reflection on the scholarliness of the publication.

An online journal gateway or a publisher's site also offers many personalized services to its registered users, such as, Table of Contents (ToC) alert service for current issues of journals, call for papers in special issues, list of highly cited papers, list of highly downloaded papers, and list of highly saved papers in social bookmarking websites. They also allow registered users in commenting in article page, which is subject to editorial acceptance. These journals also offer appropriate options in article page for sharing an article's bibliographic details in social media and save its bibliographic record in social bookmarking websites.

Proliferation of academic journals is consequence of knowledge explosion since the twentieth century. This growth is exponential. Research literature available in today's world is manifold in comparison to the last decade. Every journal gets considerable number of articles submitted by new as well as experienced authors. Filtering out these manuscripts to choose right, qualitative and focused articles require editorial acumen, rigorous peer-review process and quality control. However, getting qualified peer-reviewers and

editorial board members is becoming a major challenge to existing as well as to new journals.

New career promotional principle of “Publish or Perish” (PoP) for scientists and academics, more particularly in the developing countries, forces many journals receiving poor quality manuscripts with errors in methodological, language, structural and theoretical frameworks. Unexperienced editors and peer-reviewers when allow these poorly written manuscripts to be published, the quality of journals is then compromised. The journal declines in ranking within its subject fields with respect to its scientific impact and popularity. Then another journal with tight quality control ascends to take a higher rank. While quality check is compromised in a reputed journal, due to aging of editorial board members or peer reviewers or other reasons, a new breed of highly promising scientists must be induced to keep pace with new developments in the fields.

On the other hand, new journals with backing from scientific networks, special interests groups or scholarly societies are also being launched around the world with new methodological approaches. Many of these journals have differentiated their approaches through innovations in delivery mechanism or in peer-reviewing process. Some of the journals have started open review system, inviting authors and reviewers in a common interactive platform for well articulation of arguments and two-way flow of ideas. Journal editors many a times become facilitators in mediating peer-review sessions, before accepting or rejecting submitted manuscripts. An example of such journal following open review system is *eLife* journal.

ICT-enabled scholarly communications environment also helps publishing of journals from developing countries. These journals have been traditionally distributed mostly through print subscriptions within the country and its neighbouring countries. But, when these journals are published in electronic format and are made available through online platforms of regional journal gateways or open access channel, they get worldwide visibility, readership and attract global authors contributing from other countries. Their print or online subscription in other regions can also be increased due to their increased global visibility and accessibility. For assuring international visibility and accessibility of scholarly journals, many publishers have started digitizing contents of back volumes and archiving digitized contents in online platforms, either subscription-based or open access. For example, Project MUSE<sup>50</sup> has archived digitized contents of back volumes of journals from non-profit publishers and more particularly from university presses in the United States and Canada. Project MUSE is a subscription-based service covering social sciences and humanities.

The scholarly communications have experienced many levels of dysfunctions in the last three-four decades, starting from reducing affordability of subscribed contents to reducing affordability of open access publishing charges

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<sup>50</sup> <http://www.muse.jhu.edu>

as well as now encountering with predatory open access publishers. Following Sections highlight global concerns in serials crisis and issues related to scholarly journal publishing.

### 4.3 SERIALS CRISIS PHENOMENA

The prices of scholarly journals have climbed sharply over last few decades. On the other hand, libraries are facing problem of annual budget cuts due to global economic downturns and inflation. Figure 8 highlights different causes of serials crisis. Four major reasons of serials crisis are namely, exponential price hike of journals, particularly which are published by for-profit publishers; library budget shrinkage; inflation and global economic recession post 2008; and fluctuations in currency conversion. Libraries in developing countries also face sharp reductions of library budget due to fluctuations in currency conversion or volatile nature of values of national currencies in those countries. Scientists in many developing countries and least developed countries (LDCs) have been worstly affected by disparity in access to subscribed contents due to unaffordability as well as non-availability of high speed internet connections to access these contents.

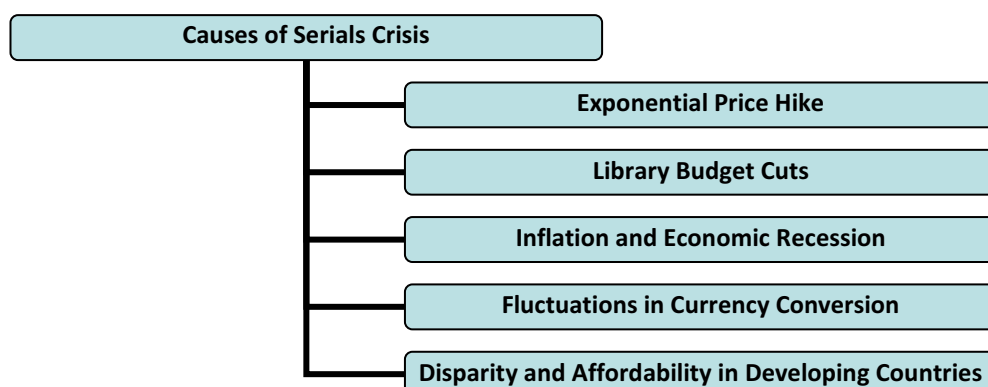


Figure 8: Dimensions of Serials Crisis

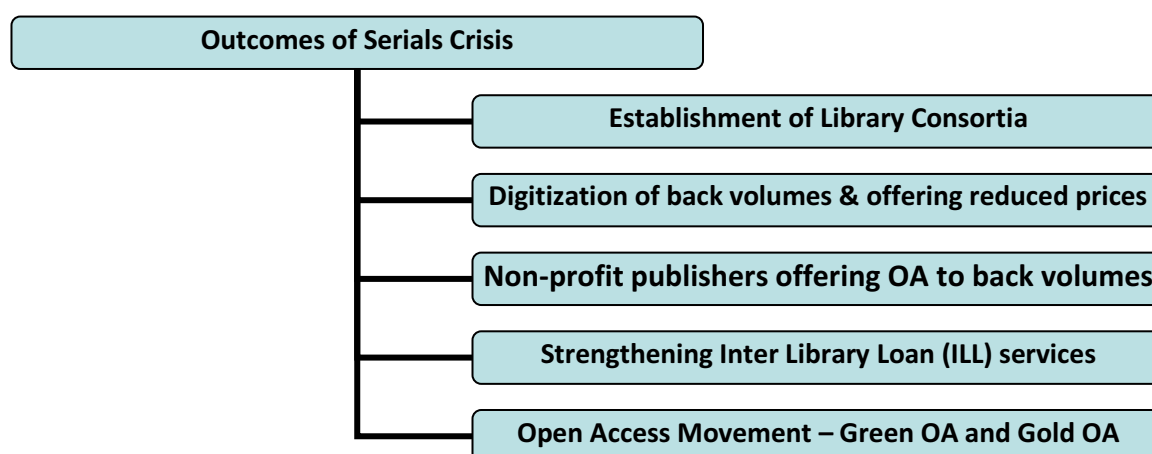


Figure 9: Outcomes of Serials Crisis

### Available Solutions to Mitigate Serials Crisis

A number of solutions are made available around the world to mitigate problems of serials crisis. Some of the widely available solutions or outcomes of serials crisis are shown in Figure 9. Some of the mentioned solutions or approaches to mitigate problems of serials crisis are briefly described below:

- **Launching of Library Consortium at Country-level, Regional-level, State-level or City-level:** These consortia are involved in cooperative procurement of scholarly journals at competitive rates from commercial publishers for members of these library consortia. Each publisher offers discipline specific bundles of journals, such as social sciences, physical sciences, biomedical sciences, applied sciences, technologies, and business management to each library consortium with differentiated pricing policies based on number of users, number of nodal access points and number of member institutions. Some of the globally known library consortia are OhioLINK<sup>51</sup>, INDEST-AICTE<sup>52</sup>, UGC-Infonet<sup>53</sup>, SANLiC<sup>54</sup>, etc. Many of them have become role models in the global South. Table 7 provides a representative list of library consortia around the world depicting their mission, objectives and functions. This Table also indicates that OhioLINK is the oldest library consortium, whereas INDEST Consortium has largest number of member institutions. All these library consortia are members of a global network – the International Coalition of Library Consortia<sup>55</sup>, which is an informal group established in 1996 currently comprising approximately 200 library consortia from around the world.
- **Providing special access to subscription-based research literature in least-developed countries (LDCs) and select developing countries:** The World Health Organization (WHO) launched the HINARI Access to Research in Health Programme<sup>56</sup> in 2002 to provide free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries. However, emerging developing countries, such as Brazil, Russia, India, China and South Africa (BRICS) are not eligible in this programme. Figure 10 shows a map of benefitted countries and institutions in HINARI Programme.

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<sup>51</sup> <https://www.ohiolink.edu/>

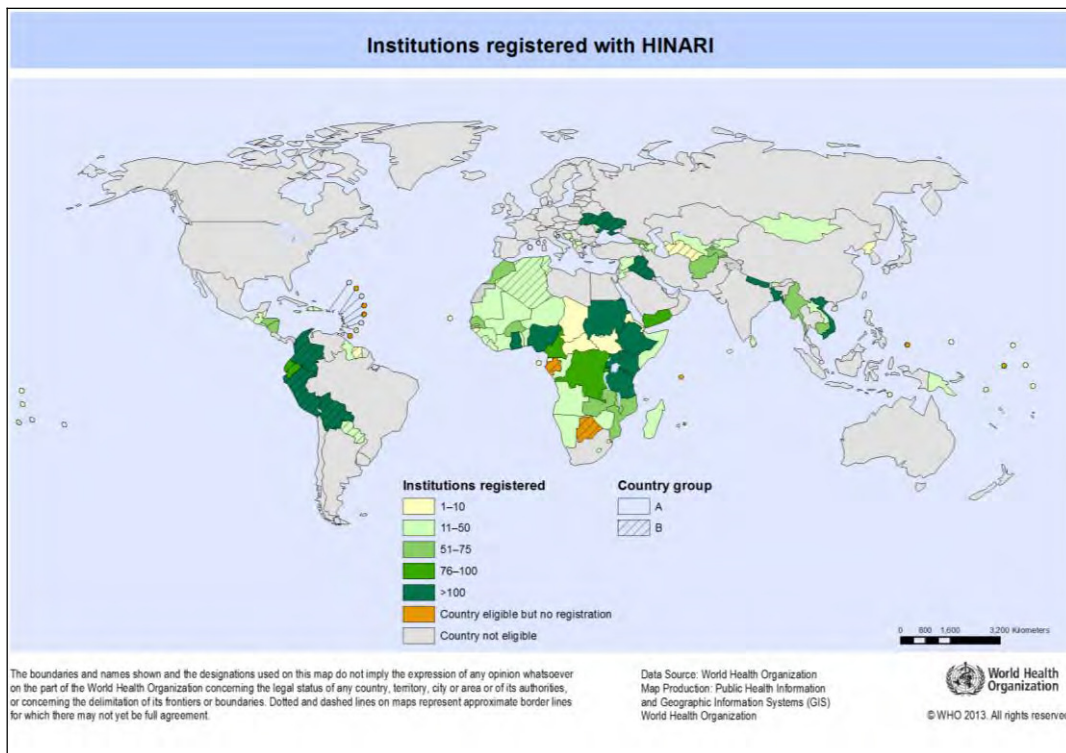
<sup>52</sup> <http://paniit.iitd.ac.in/indest/>

<sup>53</sup> <http://jccc-ugcinfonet.in/>

<sup>54</sup> <http://www.sanlic.org.za/>

<sup>55</sup> <http://icolc.net/>

<sup>56</sup> <http://www.who.int/hinari/en/>



**Figure 10: Beneficial Countries in HINARI Programme**

(Source: [http://www.who.int/hinari/Global\\_HINARI\\_registered\\_2013.png](http://www.who.int/hinari/Global_HINARI_registered_2013.png))

- **Digitization of back volumes of journals:** Many journals had undertaken digitization of back volumes of print journals and archived these contents in online platforms, such as, Project MUSE<sup>57</sup> and JSTOR<sup>58</sup>, which are offering subscription-based access to digitized print journals at much cheaper rates.
- **Subscription-based service to online full-text research databases:** These databases are providing contents from multiple publishers in multidisciplinary subject areas, available at relatively cheaper rates than publisher's journal subscription. Popular service providers include ProQuest<sup>59</sup>, EbscoHost<sup>60</sup>, and IngentaConnect<sup>61</sup>. These databases have certain embargo period, up to twelve months, for restricting hosting of current contents of scholarly journals after their novelty period.
- **Strengthening Inter Library Loan (ILL) services:** ILL service is oldest method of library cooperation, which operates on principles of cooperation and resource sharing. ILL service helps in reducing duplication of resources within network members. ILL service provides full-text contents to its end users, which is demand based. The end users first identify literature from bibliographic or citations databases, and then seek full-text contents of required literature from ILL network members. However, some

<sup>57</sup> <http://www.muse.jhu.edu>

<sup>58</sup> <http://www.jstor.org/>

<sup>59</sup> <http://www.proquest.com/>

<sup>60</sup> <http://search.ebscohost.com/>

<sup>61</sup> <http://www.ingentaconnect.com/>

copyrights provisions restrict ILL services, such as making multiple copies of a single article, or providing ILL service to a commercial entity.

- **Launching open access pre-prints, e-prints servers and institutional repositories:** Serials crisis led to encouraging authors in self-archiving their papers in pre-prints server. A number of institutions and academies have established different subject-based digital repositories and institutional repositories. ArXiv<sup>62</sup> is the oldest global open e-print archives launched in 1991 covering many scientific areas, viz., physics, mathematics, and computer sciences. Later in 2013 bioRxiv.org was established as the biologists' version of arXiv, covering biomedical and life sciences subject areas. Many library consortia started capacity development of their member institutions for building institutional repositories using open source software. The International Network for the Availability of Scientific Publications<sup>63</sup> (INASP), established in 1992 by the International Council for Science (ICSU), is working on the same principle of improving access to information and knowledge through a commitment to capacity building in emerging and developing countries.
- **Launching Global Open Access Movement:** The perceived serials crisis led to a global movement for open access (OA) to scholarly literature to provide universal online access to research literature emanated from the public funded research. Many public funded institutions and universities around the world have established green OA channels such as OA institutional repositories, subject repositories for self-archiving of research literature. The researchers affiliated with public institutions and universities also have started publishing research papers in OA journals. There is proliferation of OA journals published by non-profit scholarly societies, professional associations, academies, universities and research institutions. Of late, for-profit publishers have taken interest in publishing OA journals and OA articles in hybrid journals. For-profit publishers have introduced hybrid journals to accommodate OA articles in their conventional subscription-based journals. As on 1<sup>st</sup> April 2014, the Directory of Open Access Journals (DOAJ) shows availability of about 9709 journals. This ever-growing list indicates exponential growth of OA literature. There are also directories of other OA resources such as Directory of Open Access Repositories (OpenDOAR<sup>64</sup>) and Directory of Open Access Books<sup>65</sup>. These ever-growing directories point to success stories of global open access movement. We will learn more about global open access movement and different open access channels in Module 2 of this course.

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<sup>62</sup> <http://arxiv.org/>

<sup>63</sup> <http://www.inasp.info/>

<sup>64</sup> <http://www.opendoar.org/>

<sup>65</sup> <http://www.doabooks.org/>

**Table 7: Illustrative List of Library Consortia**

<b>Name of Consortium</b>	<b>Est. Year</b>	<b>Mission and Objectives</b>
<p>Ohio Library and Information Network (OhioLINK), U.S.A. (Ohiolink.edu) Total members: 89</p>	<p>1990</p>	<p>Vision: OhioLINK will lead in the provision of advanced strategic academic information resources and services that enable Ohio's scholars, students, and libraries to excel. Mission: OhioLINK creates a competitive advantage for Ohio's higher education community by cooperatively and cost-effectively acquiring, providing access to, and preserving an expanding array of print and digital scholarly resources; by efficiently sharing the collections of member libraries; and by centrally hosting digital content to advance teaching, learning, research, and the growth of Ohio's knowledge-based economy.</p>
<p>Indian National Digital Library in Engineering Sciences and Technology Consortium (INDEST), India (Paniit.iitd.ac.in/indest/) Total members: 1373</p>	<p>2003</p>	<p>The INDEST-AICTE Consortium has the following objectives:</p> <ol style="list-style-type: none"> <li>i) To subscribe electronic resources for the members of the Consortium at highly discounted rates of subscription and at the best terms and conditions;</li> <li>ii) To extend the benefit of consortia-based subscription beyond the core members to other engineering and technological institutions;</li> <li>iii) To impart training to the users and librarians in the member institutions on subscribed electronic resources with an aim to optimise the usage of subscribed electronic resources;</li> <li>iv) To find more avenues of cooperation and interaction amongst member libraries;</li> <li>v) To increase scientific productivity of member institutions in terms of quality and quantity of publications;</li> <li>vi) To help new engineering institutes and colleges to make the right choice of e- resources; and</li> <li>vii) To find more avenues of co-operation and interaction with other consortia.</li> </ol>
<p>UGC-Infonet Digital Library Consortium, India (Inflibnet.ac.in/econ/) Total members: 419</p>	<p>2003</p>	<p>The main objective is to provide access to qualitative electronic resources including full-text and bibliographic databases to academic institutions at a lower rates of subscription. The major aims and objectives are as follows:</p> <ul style="list-style-type: none"> <li>• to provide access to a high-quality and scholarly electronic resources to a large number of academic institutions including universities and colleges at substantially lower rates of subscription and at most favourable terms and conditions;</li> </ul>

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		<ul style="list-style-type: none"> <li>• to promote rapid and efficient access to scholarly content to the users and to create and promote use of ICT in teaching and learning in universities in India;</li> <li>• to extend the benefit of Consortium to its associate members including private universities and colleges;</li> <li>• to impart training to the users, librarians, research scholars and faculty members of the institutions in use of electronic resources with an aim to optimize their usage;</li> <li>• to promote use of e-e-resources with gradual decrease in print subscription;</li> <li>• to promote interaction and inter-library cooperation amongst the participating universities;</li> <li>• to evaluate the usage of the subscribed resources and to identify new resources that are required to be subscribed under the programme;</li> <li>• to bring qualitative change in teaching, learning and research with an aim to meet the ever growing challenges of globalization of higher education; and</li> <li>• to increase the research productivity of the institutions both in terms of quality and quantity of publications.</li> </ul>
<p>South African National Library and Information Consortium (SANLiC) (Sanlic.org.za) Total members: 25</p>	1999	<p>Vision: SANLiC is the leading facilitator of cost effective access to high-quality scholarly electronic information in support of research, teaching and learning in Public Higher Education and Research Institutions.</p> <p>Mission: SANLiC facilitates, on a non-profit basis, affordable access to scholarly electronic information in support of the learning, teaching and research activities of its members. This is achieved mainly through collective negotiations with publishers and aggregators. It also promotes the use of high-quality, open access electronic information resources.</p>
<p>Portal de Periódicos da Capes, Brazil (Periodicos.capes.gov.br) Total members: 400+</p>	2000	<p>This is the Brazilian National Electronic Library Consortium for Science And Technology that was created to make scientific knowledge more easily accessible in Brazil. It is a virtual library that aggregates high quality content, provided through publishers and international scientific associations.</p>

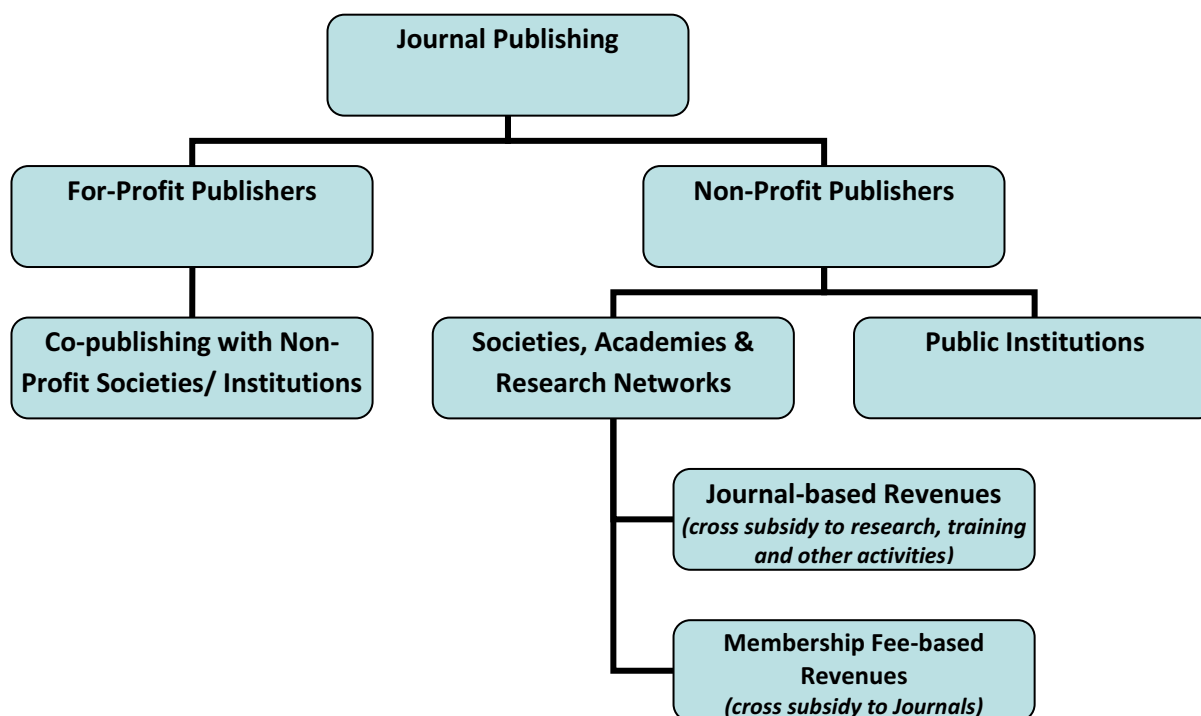


Figure 11: Schematic View of Academic Journal Publishing

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## 4.4 PRICING AND ECONOMICS OF JOURNAL PUBLISHING

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Publishing scholarly journals is a commercial affair of publishers that involves costs in pre- production, production and distribution processes. Some of the costs are recovered from the annual subscriptions, online subscription, sales of online articles, article processing charges (APC) or publishing fees, as well as from some advertisements in journal issues or journal websites. Since the beginning of academic publishing many non-profit societies are involved in journal publishing. They receive membership fee from the members. This membership fee usually includes annual subscription to the society's journal or proceedings. Since long for-profit publishers have stepped in publishing academic journals, either independently or jointly with non-profit societies or institutions. For-profit publishers obviously make profit by selling annual subscriptions to subscribers and sales of journal contents. They also have many other avenues of generation of revenues, such as selling rights of translation or republishing to online academic databases and reuse of contents, both current and retrospectively by other publishers. Their co-publishing venture with non-profit societies is a win-win situation for both the parties – publishers get ready to publish journal contents and societies receive a share from journals' sales revenue. Without getting into the hassles of printing, distributing and collecting subscription – all these are expensive and time taking processes. Figure 11 gives a schematic view of academic journal publishing. This Figure also indicates that non-profit publishers are sometimes fully dependent on journal-based revenues for providing cross subsidy to their research, training and other professional activities. On the other hand, a few non-profit publishers generate revenues from membership fees and other dues from their

members. They are ready to provide cross subsidy to journals, and even launching open access journals for the benefits of communities all over the world in their respective subject areas. Many public-funded research institutions and universities are also involved in journal publishing. They also have budgetary support to publish journals in their core areas of research. They also provide cross subsidy to journals from their research programmes and help in launching open access journals for the benefits of communities in their respective subject areas. The serials crisis started at the global level with unaffordable hike of subscription fee by some for-profit publishers and scholarly societies, who are fully dependent on journal-based revenues. Their whole motive is to generate high margins of profit from their journal publishing business.

#### 4.4.1 Cost Effectiveness of Journals

The eigenFACTOR.org website provides a unique indicator for measuring pricing of scientific journals – the journals which are indexed in the Web of Science (WoS) and its by-product Journal Citation Reports (JCR) on Web. This indicator is named as Cost Effectiveness (CE) Index. This index indicates prestige of a journal vis-à-vis its affordability by the scientific community. Highly popular journals based on a journal's Article Influence® score having relatively low subscription fee or author's fee are considered as top-rated. This index has two tracks, namely CE based on subscription fee and CE based on fee paid by the authors. Here the subscription fee refers to cost of institutional subscription to print or online edition of a journal. The author's fee refers to average article processing charge for publishing an OA article in OA journals. Cost Effectiveness<sup>66</sup> for open access journals is searchable by subject field, name of publisher, and journal title. Cost Effectiveness<sup>67</sup> for subscription-based journals is searchable by Eigenfactor category, ISI category, name of publisher, and journal title. Figure 12 depicts schematic view of measuring cost effectiveness of a scholarly journal using eigenFACTOR.org website.

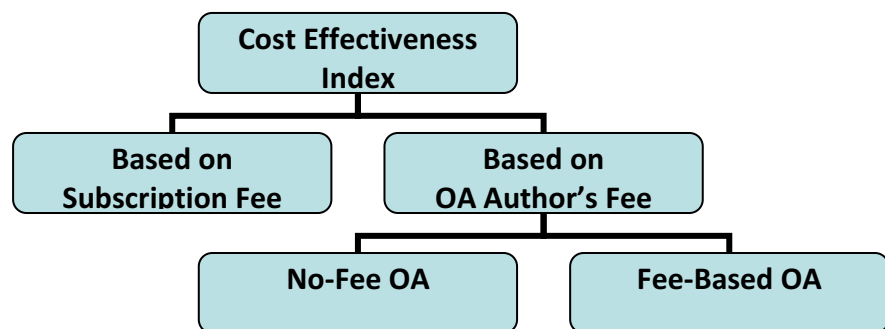


Figure 12: Measuring Cost Effectiveness of a Scholarly Journal

<sup>66</sup> <http://www.eigenfactor.org/openaccess/>

<sup>67</sup> <http://www.eigenfactor.org/costeffectiveness.php>

Similar to eigenFACTOR.org website, JournalPrices.com<sup>68</sup> is a very useful website for researchers and librarians. It provides a comprehensive detail of every journal indexed in the Web of Science (WoS) database. This online database can be searched by journal title, name of publisher, ISSN and subject areas. Its informative journal pricing details include journal's Profit Status, Price per Article, Price per Citation, Composite Price Index, and Relative Price Index. This website identifies three value categories of scholarly journals, viz., Good Value, Medium Value and Bad Value. A typical journal record looks like Table 8, searched by subject area Computer Science. Ted Bergstrom's Journal Pricing Page (Econ.ucsb.edu/~tedb/Journals/jpricing.html) provides additional inputs on economics of journal publishing.

**Table 8: A Record in JournalPrices.com database**

<p><b>Title:</b> ACM COMPUTING SURVEYS  <b>Publisher:</b> ASSOC COMPUTING MACHINERY  <b>ISSN:</b> 0360-0300  <b>Subject:</b> Computer Science  <b>Profit Status:</b> Non-Profit  <b>Year First Published:</b> 1969  <b>Price per article:</b> 36.59  <b>Price per citation:</b> 6.28  <b>Composite Price Index:</b> 15.16  <b>Relative Price Index:</b> 0.92</p>
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#### 4.4.2 Problems with Predatory Open Access Journals

The “Predatory Open Access” is a new concept and term conceived and coined by University of Colorado Denver librarian and researcher Jeffrey Beall. He maintains a regularly-updated online report named “Beall's List”<sup>69</sup> of potential, possible, or probable predatory scholarly open-access publishers. This is a list of questionable, scholarly open-access publishers, operating around the world and seeking manuscripts from prospective authors for publishing in their respective journals. These journals charge a publishing fee or article processing fee from authors and promise to publish the paper ‘instantly’. Text Box 4 shows Beall's criteria for determining predatory open access publishers. Most of these predatory journals are not indexed by abstracting and indexing services or covered by citation databases. Most of these journals are not even listed in the Directory of Open Access Journals (DOAJ.org).

John Bohannon (2013) in his paper titled “Who's Afraid of Peer Review?” reveals little or no scrutiny and peer reviewing in many open-access journals, which fraudulently claimed to be peer reviewed. This paper went viral in social media circles and got considerable attention of science writers, science

<sup>68</sup> <http://journalprices.com/>

<sup>69</sup> <http://scholarlyoa.com/publishers/>

bloggers and science administrators. Later in December 2013, five scholarly organizations – the Committee on Publication Ethics (COPE), Directory of Open Access Journals (DOAJ), Open Access Scholarly Publishers Association (OASPA), and World Association of Medical Editors (WAME) – have published a joint statement “Principles of Transparency and Best Practice in Scholarly Publishing” to be followed by their member publishers and OA journals. They have also introduced more stringent criteria of granting membership of OA publishers in these organizations and inclusion of OA journals in DOAJ.

**Text-Box 4: Beall's Criteria for Determining Predatory Open Access Publishers**

**A Predatory Publisher may ...**

- Publish papers already published in other venues/outlets without providing appropriate credits.
- Use language claiming to be a “leading publisher” even though the publisher may only be a startup or a novice organization.
- Operate in a Western country chiefly for the purpose of functioning as a vanity press for scholars in a developing country.
- Do minimal or no copyediting.
- Publish papers that are not academic at all, e.g. essays by laypeople or obvious pseudo-science.
- Have a “contact us” page that only includes a web form, and the publisher hides or does not reveal its location.

**Editor and Staff**

- The publisher’s owner is identified as the editor of all the journals published by the organization.
- No single individual is identified as the journal’s editor.
- The journal does not identify a formal editorial / review board.
- No academic information is provided regarding the editor, editorial staff, and/or review board members (e.g., institutional affiliation).
- Evident data exist showing that the editor and/or review board members do not possess academic expertise to reasonably qualify them to be publication gatekeepers in the journal’s field.
- Two or more journals have duplicate editorial boards (i.e., same editorial board for more than one journal).
- The journals have an insufficient number of board members, have concocted editorial boards (made up names), include scholars on an editorial board without their knowledge or permission, have board members who are prominent researchers but exempt them from any contributions to the journal except the use of their names and/or photographs.

### **The Publisher**

- Demonstrates a lack of transparency in publishing operations.
- Has no policies or practices for digital preservation.
- Depends on author fees as the sole and only means of operation with no alternative, long-term business plan for sustaining the journal through augmented income sources.
- Begins operations with a large fleet of journals, often using a template to quickly create each journal's home page.
- Provides insufficient information or hides information about author fees, offering to publish an author's paper and later sending a previously-undisclosed invoice.

### **Integrity**

- The name of a journal is incongruent with the journal's mission.
- The name of a journal does not adequately reflect its origin (e.g., a journal with the word "Canadian" or "Swiss" in its name that has no meaningful relationship to Canada or Switzerland).
- The journal falsely claims to have an impact factor, or uses some made up measure (e.g. view factor), feigning international standing.
- The publisher sends spam requests for peer reviews to scholars unqualified to review submitted manuscripts.
- The publisher falsely claims to have its content indexed in legitimate abstracting and indexing services or claims that its content is indexed in resources that are not abstracting and indexing services.
- The publisher dedicates insufficient resources to prevent and eliminate author's misconduct, to the extent that the journal or journals suffer from repeated cases of plagiarism, self-plagiarism, image manipulation, and the like.
- The publisher asks the corresponding author for suggested reviewers and the publisher subsequently uses the suggested reviewers without sufficiently vetting their qualifications or authenticity. (This protocol also may allow authors to create fake online identities in order to review their own papers).

(Source: <http://scholarlyoa.files.wordpress.com/2012/11/criteria-2012-2.pdf> )

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## **4.5 ACCESSIBILITY, DELAY AND OTHER ISSUES OF JOURNALS**

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There are many other concerns related to scholarly journal publishing. The business models of journal publishing have evolved over time, so are the diversity in publishing processes. ICT-enabled environment helps the journal publishers directly connecting to users' communities and other stakeholders. Now-a-days journal contents are accessible both in print format and electronic format. Online journal contents are accessible via desktop computers as well as mobile devices. This is a new development to make journal contents accessible

through mobile devices, which has not yet been adopted by non-profit publishers operating from developing countries.

The economically emerging nations, more particularly BRICS countries are now in focus as commercial publishing companies see their growth opportunities in terms of increased sales revenues in those countries.

While distribution of print journals is slow and costly to reach their subscribers, electronic journals offer much faster access or install access provisions. The electronic journals provide free ToC alerts through emails, RSS feeds and social media groups. ToC alerts help the prospective researchers to read and use relevant articles in their respective research areas.

Print subscribers often face the problem of missing issues, and after several reminders they may get some missing issues from the publishers or local distributors. If an old print issue of a journal is lost from the library, this becomes permanent loss for the researchers associated with that institution. In addition to let a library requires ample space to archive back issues of a periodical, it is a costly process.

On the other hand, online subscription also has several limitations. One such is that if a library does not continue subscription to a particular journal, the library may not have perpetual access to the old journal volumes for which the library had already paid subscription fee. The library also has no option to download all articles of a subscribed e-journal for lateral institutional use.

Some online journals allow authors in self-archiving of their published articles in their respective institutional repositories or in authors' personal webpages. Whereas, some publishers give certain embargo period for delayed self-archiving of their published articles. Many publishing companies have the journal-specific embargo periods to restrict authors in self-archiving, whereas some companies ask their authors to pay a gold open access fee for immediate self-archiving.

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## 4.6 LET US SUM UP

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In this Unit, you have learned about serials crisis and its different reasons and different solutions available to mitigate these problems. The library and researchers' communities have made many attempts to deal with problems associated with scholarly journal publishing, particularly of spiralling costs of journals subscription in the days of library budget cuts, global economic recession and unbearable economic inflation. Open access journal publishing apparently helps in mitigating some of the problems associated with serials crisis. But commercial interests of for-profit publishers sometimes spoil philosophy and spirit of open access to public funded research. They try to churn out higher profit margins from the authors by charging considerable amount of article processing fee. The informed choices are now made available to OA authors, through websites such as JournalPrices.com and eigenFACTOR.org. However, these websites don't cover wide spectrum of

available online or print journals. The researchers also need to know different publishing choices available to them while selecting qualitative and well-recognized journals as their publishing venue. The problems discussed in this Unit will help the researchers in taking informed decisions while publishing articles in journals.

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## 4.7 CHECK YOUR PROGRESS

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1) Identify five reasons of serials crisis.

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2) Identify five solutions to mitigate problems of serials crisis.

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3) Identify name of the person associated with a regularly-updated online report on predatory open access publishers.

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4) What is the name of online report on predatory open access publishers?

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5) Where can you find details of an open access journal?

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.....  
.....

6) Where can you find Cost Effectiveness (CE) index of scholarly journals?

- i) JournalPrices.com
- ii) eigenFACTOR.org
- iii) JCR on Web
- iv) JournalMetrics.com

7) Where can you find details of an open access repository?

- i) Directory of Open Access Books (DOAB)
- ii) Directory of Open Access Journals (DOAJ)
- iii) Directory of Open Access Repositories (OpenDOAR)
- iv) Scopus

- 8) Where can you find details of an open access book series?
  - i) Directory of Open Access Books (DOAB)
  - ii) Directory of Open Access Journals (DOAJ)
  - iii) Directory of Open Access Repositories (OpenDOAR)
  - iv) Web of Science
  
- 9) Which library consortium is operated in Brazil?
  - i) OhioLINK
  - ii) INDEST Consortium
  - iii) UGC Infonet
  - iv) Portal de Periódicos da Capes
  
- 10) Which library consortium is operated in India?
  - i) OhioLINK
  - ii) Aicte-INDEST Consortium
  - iii) Portal de Periódicos da Capes
  - iv) SANLiC

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## ONLINE VIDEOS TUTORIALS

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There are a number of video tutorials available on topics discussed in this Unit. Some of the tutorials were developed by the reputed institutions, libraries and scientists. These video tutorials will help you in understanding basic problems associated with academic journal publishing and more particularly on serials crisis.

- *Academic Publishing Crisis, Part 1* **Video**<sup>70</sup>
- *Academic Publishing Crisis, Part 2* **Video**<sup>71</sup>
- *Impact of New Technologies on Scholarly Publishing: The Serials Crisis and Beyond*, by Jorge Contreras **Video**<sup>72</sup>
- *Predatory Publishers*, by Jeffrey Beall **Video**<sup>73</sup>

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<sup>70</sup> <http://www.youtube.com/watch?v=S5fK-unZKOg>

<sup>71</sup> <http://www.youtube.com/watch?v=ki073AlulzE>

<sup>72</sup> <http://vimeo.com/69105703>

<sup>73</sup> <http://www.youtube.com/watch?v=v2WS9dulG9s>

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## ANSWERS TO CHECK YOUR PROGRESS

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### Unit 1

(1) a, (2) d, (3) a, (4) d, (5) b

### Unit 2

Q6. (a) iii, (b) iii, (c) ii, (d) i.

### Unit 3

(6) c, (7) b, (8) c, (9) c.

### Unit 4

Q.(6) ii, (7) iii, (8) i, (9) iv, (10) ii.

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## GLOSSARY OF TERMS

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<b>Term</b>	<b>Definition</b>
Academic Conference	It is a meeting for academicians and researchers to present and discuss their work. Together with academic or scientific journals, conferences provide an important channel for exchange of information between researchers.
Academic Database	It is a database of bibliographic records, an organized digital collection of references to published literature, including journal and newspaper articles, conference proceedings, research reports, patents, books, etc.
Academic Journal	It is a peer-reviewed periodical in which scholarship relating to a particular academic discipline is published. Academic journals serve as fora for the introduction and presentation for scrutiny of new research, and the critique of existing research.
Article Processing Charges	A central mechanism for funding Open Access (OA) scholarly publishing, by charging a fee from authors willing to publish in an OA journal.
Bibliographic Database	It is a database of bibliographic records, an organized digital collection of references to published literature, including journal and newspaper articles.
BRICS Countries	A group of emerging countries belong to broad category of developing countries. Represented countries are Brazil, Russia, India, China and South Africa.
Citation	It is a reference to a text or part of a text identifying the document in which it may be found.
Citation Index	It is a bibliographic tool in print or electronic format that lists all referenced or cited source items published in a given time span.

Copyright	An arrangement whereby software or artistic work may be used, modified, and distributed freely on condition that anything derived from it is bound by the same conditions.
Creative Commons license	It is one of the 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.
Database	It is an organized collection of data held in a computer, especially one that is accessible in various ways.
Gateway	It is a device used to connect two different networks, especially a connection to the Internet.
Gold Open Access	A term to describe when authors provide open access by publishing in an open access journal.
Green Open Access	A term to describe when authors provide open access by self-archiving their journal articles in an OA repository.
Hybrid Journal	It is a kind of journal which itself is not fully open access, but authors may pay a sum of money to make their articles open access. This type of open access articles is called "Gold OA". This is also known as hybrid open access journal.
Indexing & Abstracting Service	It is an alerting service that provides bibliographic data and abstracts of new and latest research.
Inter Library Loan	A service whereby a user of one library can borrow books or receive photocopies of documents that are owned by another library.
Least Developed Country	A country that, according to the United Nations, exhibits the lowest indicators of socioeconomic development, with the lowest Human Development Index ratings of all countries in the world.
Patent	It is a set of exclusive rights granted by a sovereign state to an inventor or their assignee for a limited period of time, in exchange for the public disclosure of the invention.
Peer Review	It is the evaluation of work by one or more people of competence to the producers of the work. It constitutes a form of self-regulation by qualified members of a profession within the relevant field.
Primary Sources	They provide first-hand testimony or direct evidence concerning a topic under investigation. They are created by witnesses or recorders who experienced the events or conditions being documented.
RSS Feed	It uses a family of standard web feed formats to publish

frequently updated information: journal contents, blog entries, news headlines, audio, video, etc.

Scholarly Journal	It is the same as academic journal.
Scopus	It is the world's largest abstract and citation database of peer-reviewed literature.
Secondary Sources	In scholarship, a secondary source is a document or recording that relates to or discusses information originally presented elsewhere. An indexing & abstracting database is a kind of secondary sources, so are annual reviews in the field.
Serials Crisis	A term to describe the exponential increase in subscription cost of many scholarly journals.
Symposium	It is an academic meeting for researchers to present and discuss their work.
USB Flash Drive	A data storage device that includes flash memory with an integrated Universal Serial Bus (USB) interface.
Web of Science	It is the world's second largest abstract and citation database of peer-reviewed literature.

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## LIST OF ABBREVIATIONS

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A&I	Indexing and Abstracting
AAAS	American Association for the Advancement of Science
ACM	Association for Computing Machinery
ACS	American Chemical Society
AICTE	All India Council for Technical Education
APC	Article Processing Charge
BRICS	Brazil, Russia, India, China and South Africa
CD-ROM	Compact Disc Read-Only Memory
CIOMS	Council for International Organizations of Medical Sciences
COPE	Committee on Publication Ethics
DOAB	Directory of Open Access Books
DOAJ	Directory of Open Access Journals
DOI	Digital Object Identifier
E-Science	Electronic Science
ETD	Electronic Theses and Dissertations
FAQ	Frequently Asked Questions
HINARI	Health Internetwork Access to Research Initiative
HSS	Humanities and Social Sciences

**Scholarly  
Communication**

I&A	Indexing & Abstracting
ICSU	International Council for Science
ICT	Information and Communications Technology
IEEE	Institute of Electrical and Electronics Engineers
ILL	Inter Library Loan
INASP	International Network for the Availability of Scientific Publications
INDEST	Indian National Digital Library in Engineering Sciences and Technology Consortium
ISBN	International Standard Book Number
ISSN	International Standard Serial Number
JCR	Journal Citation Reports
JOL	Journals Online project
LDCs	Least Developed Countries
M-Science	Mobile Science
OA	Open Access
OAJSE	Open Access Journals Search Engine
OASPA	Open Access Scholarly Publishers Association
OCS	Open Conference Systems
OhioLINK	Ohio Library and Information Network
OJS	Open Journal Systems
OpenDOAR	Directory of Open Access Repositories
OSS	Open Source Software
PKP	Public Knowledge Project
Q&A	Questions and Answers
R&D	Research and Development
RSS	Rich Site Summary or Really Simple Syndication
SANLiC	South African National Library and Information Consortium
SCI	Science Citation Index
SciELO	Scientific Electronic Library Online
STM	Science, Technology and Medicine
TOC	Table of Contents
ToC	Table of Contents
UGC	University Grants Commission, India
UNESCO	United Nations Educational, Scientific and Cultural Organization
USB	Universal Serial Bus

WAME	World Association of Medical Editors
WHO	World Health Organization
WoK	Web of Knowledge
WoS	Web of Science

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