

Quality and Scholarly, Science and Technology Open Access E-Books by InTechOpen: A study

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***Abstract-** The present study is conducted to know the Science and Technology and Social Science and humanitiess-e-books by InTechOpen. Study is presents geographical contribution of e-books, and there are 13 major categories and 68 sub-categories of subject e-books contributed by research institutions, scholars and authors in InTechOpen Publisher. Author traced out the majority of the e-books contributed in 'health sciences'.*

Keywords: InTechOpen, Open Access Books, E-Books, Science and Technology e-books,

Introduction

The Internet came up live in 1974, but the electronic book was started in 1971, with the first steps of Project Gutenberg. Internet quickly spreaded worldwide from 1994 onwards, now internet has a huge impact on our day to day life and brought several changes in the education and other sectors. The term e-book was coined by Andries Van Dam while working on a Hypertext Encoding System and FRESS project at Brown University in 1960. Merriam Webster's Dictionary defines e-book as, 'a book composed in or converted to digital format for display on a computer screen or handheld device'

E-Books

An electronic book (or e-book) is a book publication made available in digital form, consisting of text, images, or both, readable on the flat-panel display of computers or other electronic devices. Gardiner (2010) e-Books are increasingly occupying a large portion of any discussion that involves publishing or publishers nothing but transition from print to e-book readers such as the Nook and the Kindle. While many of us are told that eBooks (and e-Publishing, the process of publishing eBooks) are an inevitable part of the future landscape of publishing and, therefore, must receive due attention from publishers that do not wish to be driven to extinction, very little information about it is readily available. eBooks in its most basic form consist of PDF files that the reader can read on a PC or a laptop. However, these eBooks can also be "enhanced" to make them engaging and entertaining. This is done by incorporating voice and visuals within the context of the eBook. A medical textbook may, thus, explain a disease using a video clip or a children's book may contain a series of animations to depict a situation. eBooks thus become more attractive to the average reader

Open Access

The term 'open access' refers to the removal of price and permission barriers to scholarly research. Peter Suber(2012). Open access means peer-reviewed academic research work that is free to read online and that anybody may redistribute and reuse, with some restrictions.

“Open access contributes to scientific excellence and integrity. It opens up research results to wider analysis. It allows research results to be reused for new discoveries. And it enables the multi-disciplinary research that is needed to solve global 21st century problems. Open access connects science with society. It allows the public to engage with research. To go behind the headlines. And look at the scientific evidence. And it enables policy makers to draw on innovative solutions to societal challenges.” Carlos (2016).

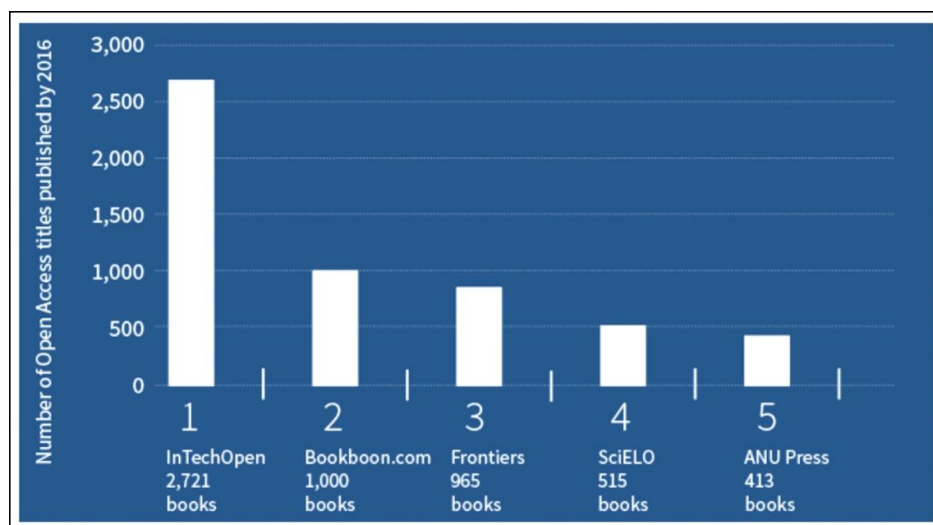
InTechOpen

InTechOpen is the world's largest Science, Technology and Medicine Open Access book publisher. With a goal to provide free online access to research since 2004, InTechOpen has published 3,108 books and 47,322 scientific works total by 103,285 international scientists. InTechOpen's born to promotion of Open Access publishing is more than a decade strong, with a goal to remove the barriers that prevent free access to scientific content. So far InTechOpen has 3,108 Open Access books published, which is the world's largest Open Access book collection.

It translates more than 44,760 scientific chapters are openly available worldwide for other researchers to read, download, share, reuse and serve as inspiration for new, potentially groundbreaking discoveries. Citations are considered the most significant measure of a publication's relevance within the scientific community. All the citations indexed in Web of Sciences.

The main subject area covered by InTechOpen publications is Engineering, followed by Health Sciences, Life Sciences and Social Sciences and Humanities, as represented below. Physical Sciences, Engineering and Technology.

The below graph, adapted from the report, shows comparison of the number of Open Access books published by 2016 by the top five international publishers.



*Note that the number of InTechOpen books has risen to 3,204 titles since the publication of the report in October 2016. Source ©2016 Simba Information.

Source: <https://www.intechopen.com/news/intechopen-profiled-in-the-open-access-book-publishing-2016-2020-simba-information-report>

Related Studies:

Rajkumar (2014) The present study is conducted to know the research trends on open access in social sciences and humanities. Interestingly, the research was accelerated after 2002 and total 1913 (86.3 percent) papers were published between 2002 to 2012. The research has been published in 160 journals. United States with 748 (33.7 percent) papers is identified the leading countries in OA research, followed by United Kingdom 305 (13.8 percent). Top 15 countries collectively produced the 80 percent of the research. **Bharat (2013)** The study focuses on the Investigation and analysis of open access journals of access and dissemination of scholarly communication in research activities for medical science. It also highlights the open access has been an important catalyst for changing models in Scholarly communication system. It further explains how open access benefits the scholars, and libraries, thereby giving scholars barrier-free access to the literature they need, and giving authors larger reader-base and greater impact. It benefits the scholars and the libraries, they should work together to bring open access to the mainstream. This paper scholarly communication examines open access journals from medical science.

Objectives:

There are 13 categories of subject in InTechOpen publisher site, the major categories of subject are Chemistry, Computer and Information Science, Earth and Planetary Sciences, Engineering, Materials Science, Mathematics, Nanotechnology and Nanomaterials, Physics, Robotics, Technology, Life Sciences, Health Sciences, and Social Sciences and Humanities. The study aims to analyse the current trends of the open access e-books available through InTechOpen.

Methodology:

. The scope of the study is limited to the open access e-books in Science and Technology available through DOAB. Hence the findings can't be generalised across disciplines and directories.

Methodology

The **InTechOpen** was selected as a source for data collection whereas Science and Technology and Social Sciences and Humanities were selected as the fields of study. The required data was collected online during the month of September 2017 and recorded in an excel file and analysed.

Geographical contribution of Open Access Books

There are more than 3,292 research institutions from 160 countries are contribution OA Books. Below figure.1 shows the percentage of geographical contribution.

Fig.1: Geographical contribution of Open Access Books



Source: www.intechopen.com

Subject Coverage

Table-1 shows the total 3204 e-books are available on Science and Technology and Social Sciences and Humanities through InTechOpen covering 13 major subject areas. Maximum e-books are available on 'Health Sciences' 1038 (32.40%), following 595 (18.57%) books in 'Engineering'; 494(15.42%) in 'Life Sciences'; 344(10.74%) in 'Computer and Information Science'; 158 (4.93%) in 'Materials Science'; 103 (3.21%) in 'Earth and Planetary Sciences'; 94 (2.93%) in 'Social Sciences and Humanities'; 90 (2.81%) in 'Chemistry; 80(2.50%) in 'Robotics'; 79(2.47%) in 'Physics'; 66(2.06%) in 'Nanotechnology and Nan-materials'; 43(1.34%) in 'Technology' and the minimum number 20(0.62%) books available in 'Mathematics'. The majority of the books are available in 32.40% in 'Health Sciences'.

Table-1: Subject-wise coverage of e-Books

Physical Sciences, Engineering and Technology			
S.No.	Subject	No. of Books	Percentage
1	Chemistry	90	2.81
2	Computer and Information Science	344	10.74
3	Earth and Planetary Sciences	103	3.21
4	Engineering	595	18.57
5	Materials Science	158	4.93
6	Mathematics	20	0.62
7	Nanotechnology and Nano materials	66	2.06
8	Physics	79	2.47
9	Robotics	80	2.50
10	Technology	43	1.34
11	Life Sciences	494	15.42
12	Health Sciences	1038	32.40
13	Social Sciences and Humanities	94	2.93
	Total	3204	100

Sub-Categories of Subjects

Table-2 indicates the sub-categories of major subjects which is shown in table-1, there 68 sub-categories of subjects OA Books in InTechOpen publishers the majority books available in 'medicine'; Energy Engineering (108), Numerical Analysis and Scientific Computing (115), Electrical and Electronic Engineering (129), Biochemistry, Genetics and Molecular

Biology (168), Agricultural and Biological Sciences (183) and remaining less than 100 books available.

Table:2: Sub-Categories of Subjects

Chemistry and Physics	No of Books	Earth and Planetary Sciences	No of Books
Analytical Chemistry	29	Astronomy and Astrophysics	16
Electrochemistry	18	Geology and Geophysics	51
Inorganic Chemistry	10	Oceanography and Atmospheric Sciences	23
Nuclear Chemistry	12	Soil Science	13
Organic Chemistry	12	Total	103
Physical and Theoretical Chemistry	9	Materials Science and Other	No of Books
Biophysics	13	Biomaterials	16
Optics and Lasers	68	Ceramics	21
Plasma Physics	8	Composite Materials	15
Total	179	Fluids	16
Computer and Information Science	No of Books	Metals and Nonmetals	56
Artificial Intelligence	44	Polymers	28
Communications and Security	45	Semiconductors	6
Computer Graphics	24	Mathematics	20
Computer Science and Engineering	27	Nanotechnology and Nanomaterials	66
Human-Computer Interaction	38	Robotics	80
Information and Knowledge Engineering	32	Technology	43
Multimedia	6	Total	367
Numerical Analysis and Scientific Computing	115	Life Sciences	No of Books
Theory of Computation	8	Agricultural and Biological Sciences	183
Web Engineering	5	Biochemistry, Genetics and Molecular Biology	168
Total	344	Environmental Sciences	85
Engineering	No of Books	Immunology and Microbiology	29
Aerospace Engineering	16	Neuroscience	29
Biomedical Engineering	41	Total	494
Chemical Engineering	32	Health Sciences	No of Books
Civil Engineering	16	Medicine	986
Control Engineering	46	Pharmacology, Toxicology & Pharmaceutical Science	42
Electrical and Electronic Engineering	129	Veterinary Medicine and Science	10
Energy Engineering	108	Total	1038
Environmental Engineering	79	Social Sciences and Humanities	No of Books
Industrial Engineering and Management	36	Business, Management and Economics	63
Mechanical Engineering	71	Psychology	8
Vehicle Engineering	21	Social Sciences	23
Total	595	Total	94

Conclusion

InTechOpen is committed to disseminating all published research without restricting access to anyone or anywhere in the world it is totally free of charge, because free access it most popular publisher in OA environment. Above analysis reveals that the open access e-books are available on almost all branches of Science and Technology through InTechOpen. There is a need to aware the academic, scientific and technological communities about these e-books in workshops, orientation courses, refresher courses and training programmes for their optimum utilisation. Library and information managers have to play a leading role in this direction. The open access movement is growing fast in all directions overcoming the regional barriers and surpassing the disciplinary boundaries. e-books also have been started to flourish in all fields of knowledge.

The present study is witness to the steady growth of open access e-books in S&T. The emerging e-books revolution offers many opportunities for institutions to enhance teaching, learning and research processes along with enriching the collection of their libraries without

any budgetary concerns. In preparation for these opportunities, copyright rules, preservation problems, safety concerns, technological issues, cultural challenges, plagiarism and other such matters need to be addressed thoroughly along with the developmental stages so that institutions can successfully expand their adoption and use of e-books. International organisations, national bodies, academic institutions/associations/societies, funding agencies, policy planners, authors/researchers/readers and other open access advocates need to join hands in this regard and to make the e-books revolution a real success.

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