iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 6 **Issue:** III **Month of publication:** March 2018

DOI: http://doi.org/10.22214/ijraset.2018.3105

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 6 Issue III, March 2018- Available at www.ijraset.com

Open Access Initiatives: A New Horizon to Academic Libraries with Special Reference to India

Manas Das[1]
[1] *Librarian, Kabi Krittibas B. Ed. College, Chakdaha, Nadia, West Bengal*

Abstract: ***Application of information and communication technology is supporting various ways of scholarly communication. The transition from print to electronic and paid resources to open access resources has a great impact on information society and resulted open access movement. The article gives the meaning and definition of open access. It throws light on emergence and development of open access initiatives and various declarations in the world. The types of open access and their characters are given. The gradual increase of journals in Directory of Open Access Journals (DOAJ) is shown. The OA initiatives in India are also listed.***

Keywords: Open Access (OA), Academic Libraries, Journals, DOAJ, Scholarly Publishing.

I. INTRODUCTION

In the last two decades information technology has radically changed social communication pattern and information behavior. This transition has affected both scholarly communication and the forms of scholarly publications. Since the advent of scholarly journals in the mid of seventeenth century, scholars have been seeking better ways to disseminate their outputs. With the advancement of information and communication technology, the mode of access to scholarly information has changed from print to electronic. The concept of e-journals consortia emerged as a subscription model to journals during the time due to the high cost of access to e-journals. In parallel with this technological development the amount of research itself has increased exponentially, coupled with the desire for wider dissemination of research result. From this scenario open access has arisen as an alternative to subscriptions as a business model for scholarly journals and has attracted a great deal of attention in recent years. Academic librarians, especially those working in science roles have undoubtedly been following the open access conversation for many years. Librarians have heard the exhortations that they must take part in the open access movement and transform library practices to reflect new paradigms in scholarly communication. Librarians on the “front lines” may have wondered what effect a near total adoption of the principles of open access would have on the library itself, especially on daily work in public services and collection development. Librarians, many possessing skill sets honed over many years of professional engagement, may be casting a skeptical eye at those who would seem to be espousing radical change to the work of those in the library. It may be possible, at this juncture, to take stock and bring a more nuanced conversation to the library. Librarians may be eager to take action but have not been sure how to do so in roles that involve liaison work with faculty who have become entrenched in disciplinary traditions and cultures. Faculty members are toiling in an environment increasingly focused on assessment and accountability with a promotion and tenure bar that is set higher and higher. Librarians are also caught up in a whirlwind of increasing workloads and the changing priorities of institutions of higher education. Rather than setting out an overwhelming set of expectations, librarians may wish to examine all aspects of public services, collection development and technical services workflows to integrate open access practices in ways that will be welcomed by faculty, staff, students and the reading public. In an academic setup research is a very important component. Current information is very essential to researchers for being updated their field. Hence they depend on scholarly journals to meet their information requirements Library being the information provider have been subscribing journals in various disciplines in accordance with the thrust of the parent institution. But with the tremendous growth of specialization in various disciplines the number of journals to be subscribed has increased. The prohibitive factor for the library is the escalating cost of the journals and the stringent library budget. This has led to a phenomenon called “Scholarly Crisis” where the libraries on one hand have to meet the users growing demands and the journal prices (be it print / or electronic) are shooting up and on other hand the library budgets are shrinking. At this juncture “Open Access” resources have dawned as boon to both the academic users and the library managers.

A. Open Access Definition

Conventional fee-based publishing models fragment worldwide scholarly journal literature into numerous digital enclaves protected by various security systems that limit access to licensed users. What would it be like if, rather than being entangled in restrictive

©IJRASET (UGC Approved Journal): All Rights are Reserved

licenses that limited its use, journal literature was under a license that permitted any use as long as certain common-sense conditions were met? This is the promise of open access (OA). Needless to say, there are many challenges in involved in trying to achieve this bold vision, and it is not embraced, or even viewed as being feasible, by all parties in the scholarly communication system. Without question, open access has significant implications for libraries, especially academic libraries.

B. Budapest Open Access Initiative

Although there are important historical precedents that noted open access advocate Peter Suber outlines in his "Timeline of the Open Access Movement," the open access movement's "constitutional convention" was in December 2001 at a meeting in Budapest convened by the Open Society Institute. The resulting statement of this meeting, the "Budapest Open Access Initiative," was made public in February 2002. It still stands as the most important definition of open access. The key passage from the BOAI is:

The literature that should be freely accessible online is that which scholars give to the world without expectation of payment. Primarily, this category encompasses their peer-reviewed journal articles, but it also includes any un reviewed preprints that they might wish to put online for comment or to alert colleagues to important research findings. 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. To achieve open access to scholarly journal literature, there are two complementary strategies.

Self-Archiving: First, scholars need the tools and assistance to deposit their refereed journal articles in open electronic archives, a practice commonly called, self-archiving. When these archives conform to standards created by the Open Archives Initiative, then search engines and other tools can treat the separate archives as one. Users then need not know which archives exist or where they are located in order to find and make use of their contents. Open-access Journals: Second, scholars need the means to launch a new generation of journals committed to open access, and to help existing journals that elect to make the transition to open access. Because journal articles should be disseminated as widely as possible, these new journals will no longer invoke copyright to restrict access to and use of the material they publish. Instead they will use copyright and other tools to ensure permanent open access to all the articles they publish. Because price is a barrier to access, these new journals will not charge subscription or access fees, and will turn to other methods for covering their expenses.

C. Open Access Movement

Open Access Movement is more about growing consciousness among public towards having access to research results which are mostly supported by public money collected in the shape of taxes and other forms. The question arises, why should public pay for those things which already have come up with public money and making available research results to public is more of a matter of right, if it is supported by public money. The Open Access Movement was formally initiated by the “Budapest Open Access Initiative” on February 14, 2002 and further supported by “Bethesda Statement on Open Access Publishing” in June 2003 and “Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities” in October 2003.

In Bethesda Statement, open access was redefined and again in Berlin Declaration the definition was refined and declared that open access contributions must satisfy two conditions: The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards, will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use. A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well established organization that seeks to enable open access, unrestricted distribution, inter operability, and long-term archiving.

1) Other declarations on open access are

a) Association of College & Research Libraries (ACRL) Principles and Strategies for the Reform of Scholarly Communication, August 28, 2003. (http://www.ala.org/acrl/publications/whitepapers/principlesstrategies)

©IJRASET (UGC Approved Journal): All Rights are Reserved

b) UN World Summit on the Information Society (WSIS) Declaration of Principles and Plan Action, December 12, 2003. (http://www.itu.int/wsis/docs/promotional/brochure-dop-poa.pdf)
c) Organisation for Economic Co-operation and Development (OECD) Declaration on Access to Research Data from Public Funding, January 30, 2004. (http://www.oecd.org)
d) IFLA Statement on Open Access Scholarly Literature and Research Documentation, December 5, 2003. (http://archive.ifla.org/V/cdoc/open-access04.html)

D. Types Of Open Access

Open Access can be delivered in three ways:

1) *Green Route:* the author can self-archive at the time of submission of the publication (the 'green' route) whether the publication is grey literature (usually internal non-peer4 reviewed), a peer-reviewed journal publication, a peer-reviewed conference proceedings paper or a monograph. The 'green' route makes publications available freely in parallel with any publication system but is not, itself, publishing.
2) *Gold Route:* the author or author institution can pay a fee to the publisher at publication time, the publisher thereafter making the material available 'free' at the point of access (the 'gold' route). The two are not, of course, incompatible and can co-exist.
3) *Hybrid Route:* some times called Paid Open Access, refers to subscription journals with open access to individual articles usually when a fee is paid to the publisher or journal by the author, the author's organization, or the research funder. Some universities or libraries have a pool of funding available for hybrid journal publications or sometimesfunding is written into grant applications for open access in hybrid journals, though these are not common instances. Some examples of hybrid open access are: iOpenAccess by Taylor Francis, Online Open by Wiley, or Sage Open by Sage. For a full list visit Publishers with Paid Options for Open Access from SHERPA/RoMEO .

E. Characteristics Of Open Access

The main characteristics of OA are:

1) It is free availability of scholarly publication
2) It is free of copyright and licensing restrictions
3) Materials are available online or on the internet
4) Efficient archiving and availability
5) Metadata can be harvested
6) Guaranteed sustainable storage and accessibility
7) Provision to link publication to any research dataset used in producing the paper
8) Material is full text
9) Material can be accessed by anybody from anywhere without any discrimination.
10) Material can be freely used by anyone.
11) Open Access contents can be in any format from texts and data to software, audio, video, and multi-media, scholarly articles and their preprints
12) Open Access Journals perform peer review like their conventional counterparts and then make the approved contents freely available to the world.

F. Open Access And Libraries

For libraries, open access offers a variety of new opportunities and challenges. In the long-term, open access may help shrinking materials budgets by mitigating costs for resource purchase and access. It may also reduce some of the headaches involved in negotiating electronic journals and database licenses. Many open access advocates are optimistic that it will enhance scholarly communication by making content broadly available and by providing relief to libraries from continuing large price increases of subscription journals. There is no doubt, open access has enhanced scholarly communication and library users are getting unrestricted and free access to scholarship. It is always not possible for a library to purchase or access to full range of research literature on payment basis while open access publishing model has added a lot to library collection indirectly. Libraries play an essential role in open access developments by their expertise in building infrastructure, in creating user-friendly services of high quality and in securing long-term access. Academic libraries have played an active role in the expansion of the OA movement by promoting it in a variety of ways:

©IJRASET (UGC Approved Journal): All Rights are Reserved

1) including records for OA journals in their public catalogues and e-journals lists
2) collaborating with their institutions to establish institutional repositories
3) participating in, and at times, leading institutional initiatives to encourage
4) faculty to deposit their work in the institution's repository
5) digitizing historical collections and providing OA
6) becoming active OA journal publishers

G. Open Access And Role Of Librarians

As new models of scholarly communication emerge, librarians are situated to play a key role in the development of these models for academic publishing and dissemination. In 2007, the working group of the National Knowledge Commission on 'Open Access and Open Educational Resources' recommended in their report to increase Open Access content from India, in order to increase the public awareness and utilization of OA material. Now it is the duty of librarians to do efforts for creating an environment for open access and make aware to the academic community to maximize the usage of open access resources available either in Institutional repositories or otherwise. Librarians have shown their support for open access by signing open access initiatives and petitions. They have educated faculty and administrators about evolving scholarly communication environment. Libraries have partnered with faculty and research managers to set up open access repositories and to help faculty and students to deposit their research outputs. Librarians have provided support in research data curation and sharing. They have helped scholarly publishers to publish open access journals and books, and they have worked with educators to produce open educational resources ensuring the quality of digital content, its reuse and sharing. Open access has thus changed the profile of academic and research libraries. The librarians' desire to acquire, organize, preserve and disseminate the information available freely is the need of the hour. It is a challenge to generate the interest of the librarians in providing greater access to the masses at lower cost. The librarians must be positive and they must always be eager to adopt new techniques to cope with the changes and ready to do adjustment with the rapidly evolving conditions.

H. Academic Libraries And Open Access Initiatives

Academic libraries are at the forefront of OA revolution, wishing to control their financial destinies. Shifting from the traditional model of scholarly communication to open access is a significant move, perhaps even a revolutionary one. There are numerous ways in which open access might impact an academic library. Libraries might go about the task of publishing scholarly material in a number of ways, among which are cultivating and managing their own electronic journals, and supporting an institutional repository. A single point of access, search, and organization of scholarly materials within the institution would be of value to the communities served by academic libraries, and there are certainly other values of institutional repositories. One such value is digital preservation, as "libraries are in a better position than individual academics to guarantee that the collection is systematically available even after decades" (Björk, 2004). The implementation of institutional repositories may be the easiest step; academic librarians "also must be able to persuade faculty, many of whom are for a variety of reasons quite reluctant, to contribute their prime research output" (Antelman, 2004).

A study was made on the major contributors to DOAJ. For this those countries contributing more than 200 journals in 2017 were selected this formed top 10 list.

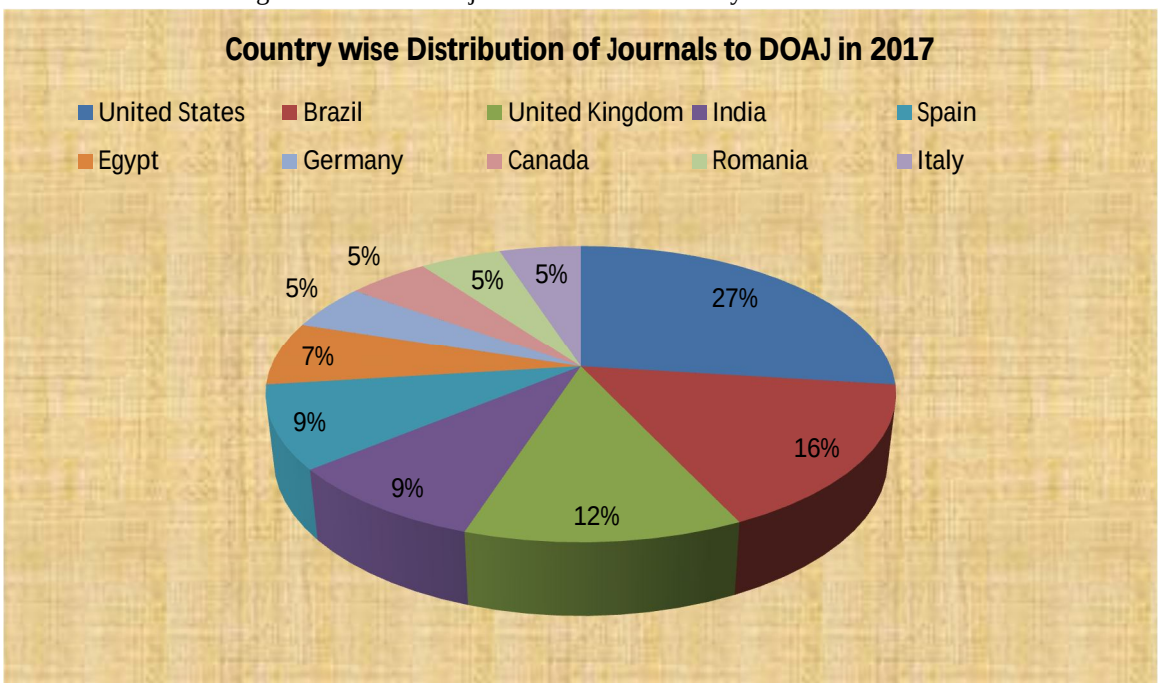
The table shows top 10 contributors to DOAJ in 2017

Sl. No	Country	No of Journals
1.	United States	1231
2.	Brazil	754
3.	United Kingdom	564
4.	India	428
5.	Spain	417
6.	Egypt	318
7.	Germany	249
8.	Canada	239
9.	Romania	229
10.	Italy	215

©IJRASET (UGC Approved Journal): All Rights are Reserved

The Table shows the top ten countries in 2017 contributing to journals to open access through DOAJ. Those countries contributing more than 200 journals were selected. India ranks 4th with a contribution of 428 journals which showing the acceptance of OA concept among Indian authors and academicians. It opened its account only in 2003 with 14 journals; this growth is a positive trend in the field of OA.

DOAJ has contribution from various parts of the world with a total of 8013 journals are available through it. Everyday new journals are being added to it. An attempt has been made to know the major contribution to DOAJ. The pie chart below shows the contribution of those countries who give more than 200 journals to DOAJ in the year 2017.



United States has the major contribution with 1231 (27%) journals followed by Brazil with the 754 (16%), United Kingdome with (546 12%), India with 428 (9%), Germany with 249(5%), Canada with 239 (5%), Romania with 229(5%), Italy with 215 (5%).

The graph clearly shows that the contribution from U.S which has the major share of 1231 journals. U.S being one of the most developed countries, where scientific research receives highest thrust is the major contributor. This indicates that OA has been taken up as a major vehicle for communication research results.

There are many more countries contributing to DOAJ the details of which can be had from the site www.doaj.org, DOAJ is just one OAI, there are many others where a wealth of information is available at the tip of fingers.

I. Reference And Collection Development Librarians And Open Access

In reference work, whether traditional or virtual, librarians may often be focused on delivering service based on the content of the individual library's collections. Librarians may have had training in the reference encounter, and may use a traditional approach based on existing library collections. Librarians may have been attracted to working in the libraries with the most highly regarded collections, and reference librarians in research libraries, especially, may see little need to offer scholarly materials outside of the resources traditionally available. Reference librarians may not have many models of change available to them. Most of all, reference librarians may see their work as a reflecting a service profession and may be responding to the stated needs of faculty and students for access to traditionally considered collections.

Collection development may still be focused on purchasing outright (or licensing) scholarly content. Although there is talk of support for open access to publications, librarians involved in collection development roles may be working to build excellent collections in traditional ways. Assessment of collection strength relies on established "core" indicators and ranking tools. Librarians working in the disciplines endeavor to build collections that include the materials most desired by faculty and students. Accreditation or librarian reputation may be affected by changes to collecting practices such as taking on large journal cancellation initiatives. Librarians may not have found the existence of article versions on the web in repositories, or new open access journals

©IJRASET (UGC Approved Journal): All Rights are Reserved

adequate substitutes for high-priced commercial offerings. The institution's teaching faculty may see the librarian role as one that will continue to teach the value of "library resources" over free web resources. Often, professors ask students to use the library's collections, rather than what may be found on the web. Librarians also wish to make clear what the library collection represents. Otherwise, the library as it exists in the minds of faculty and students may be in jeopardy.

As part of their liaison work, many academic librarians are being asked to focus on engaging more deeply with scholars, to "embed," to "turn out" into the community. Librarians will need support for these new conversations, whether discussion will be focused on research data management, the promotion of green open access, or the movement away from traditional metrics such as impact factor. Librarians may not feel they have enough information or motivation to engage in these conversations with sometimes reluctant researchers. One challenge is pointed out in published reports of what faculty and other researchers want from libraries [Schonfeld, 2010]; results that many experienced front line librarians do not find surprising. New roles may require conquering a steep learning curve and a willingness to struggle through the likely delay in real result or change in the scholarly communication system. Librarians working in collection development, instruction and reference roles may not be sure what level or type of knowledge that taking on these new roles will require. Librarians also may need ways to measure "success" in terms of scholarly communication initiatives. They will want to have a real idea of mission and goal when it comes to changing what is done in the library.

Librarians may have to begin by showcasing open access materials in various ways. Including open access materials and resources in library catalogs, discovery systems, research guides, and lists of indexes and databases is a place to start and a value add for the library. Adding Directory of Open Access Journals (DOAJ), Open J-Gate, and Google Scholar, for instance, into the library web list of indexes is a common strategy for aiding discovery of open access articles. Integrating "free to reader, free to library" books, journals, media, indexes, databases, documents and other

materials into library collections will show the extension the library's reach out onto the open web. These materials will all require vetting and organization in order to realize robust usage. Scholarly materials may all be integrated regardless of business model or method of acquisition or access. Librarians don't have to "reinvent the wheel" but can model openness by creating guides, such as LibGuides (or open source equivalent research guides) on specific open access materials and initiatives to share with other interested librarians. Each library will need to develop strategies and discuss parameters. Seeing the library with amorphous boundaries will be increasingly necessary.

J. The Repository And Its Success Integration With The Library

Libraries hosting institutional repositories will find that all librarians will need to be conversant on issues of faculty and student deposit of scholarship as well as all of the other potential initiatives that can be built on the capabilities of the repository. With more marketing by all public services librarians, the repository can be seen as the epicenter for open access initiatives for the institution. It will be important to leverage its potential to be considered the "place to go" for innovative scholarly communication. The repository cannot be seen as a silo with mixed content and mission. If it is not integrated into all the discovery tools of the library, it may be considered "off the radar" to the institution's scholars and students. Not only a place of content, but of service, the success of the repository depends in part on the public services and collections librarians marketing it value by exposing and indexing practical and desired services like open access ETD(Electronic Theses and Dissertations) programs. If all librarians interact more meaningfully with the repository, remembering to include it in all discussions of public services and collections, it will be more likely to become a successful implementer of open access initiatives. Reference and collections work

may not be adequately interacting with the repository in many institutions.

The interplay between disciplinary and institutional repositories must be studied and action taken to maximize the potential for collective public good. The mission of each repository must be clear to librarians so that they may discuss this potential with their constituencies. Librarians, search experts, can assist repository development by engaging with the discovery aspects. Subject librarians may wish to provide assistance with metadata issues, and public services librarians may be invaluable to the marketing of open access journal publishing programs. Interlibrary loan librarians are well positioned to speak with researchers while evaluating issues of versioning, and

will decide what to offer library users when they may not expressly accept alternate versions of branded publisher articles. All public services librarians are uniquely positioned for conversation and collaboration. Library administration can be tasked with moving the conversation throughout the organization, making sure that training and open discussion are available to librarians in every role.

©IJRASET (UGC Approved Journal): All Rights are Reserved

K. Open Access And Traditional Library Materials And Buildings

Librarians need to understand the whole publishing ecosystem and the stresses on that system. Library budgets may not present growth areas for publishers, and there will be constant change in what is available to libraries. Libraries will need to focus on the availability of quality scholarship. Libraries will need to take advantage of the growth of open access in the commercial publishing sector by integrating freely available articles. At the same time, collection development librarians will have to make sure to recoup any savings promised by the reaching of that tipping point where authors (or funders) are paying more of the costs inherent in the system.

Librarians may wonder that a heavy reliance on an open access message may render the library irrelevant. The "library as place" is important to many in the institution and librarians wish to preserve the role of the library as it exists as the "intellectual heart of the university." Libraries can use their busy library buildings to promote information access in many exciting ways. With a move away from print collections on shelves, space has opened up for real engagement and discussion of both web and traditional materials for student and faculty research. Online open access "reference shelves" combined with traditional electronic reference materials will provide expanded reference collections. In order to showcase open access, librarians can plan activities for Open Access Week, and promote initiatives such as the SPARKY awards. For instance, Faculty of 1000 (F1000) is even providing open access to posters, a great service to students working on projects. [F1000, 2011] Students will benefit from the continuing evolution of open access textbook solutions. Librarians will add value by assisting students with evaluating information from all sources and by organizing those materials for discovery. Open source solutions will provide excellent results for organizing course materials going forward, and the library will have to emphasize a role here. Teaching use of open source citation managers such as Zotero will be welcomed and may allow libraries to get away from commercial solutions.

L. Challenges

There are still many unresolved challenges in open access. Play a critical role in scholarly communication, the open access impact on libraries is evident. Although the open access model has become irresistible, the authors are optimistic that commercial and nonprofit publishers will be able to overcome the obstacles and remain competitive with open access in order to promote access to scholarly research. It is predicted that a mixed open access (MOA) model will eventually emerge where traditional publishing and open access models coexist; they may even become interdependent. The most challenging issue facing those who develop and manage library collections is how they will keep track of open access sources. Given the growing number of open access sources already out there, collection builders may struggle to bootstrap themselves by introducing such sources to their collections. Most academic libraries will need to confront the important issue of adding open access sources to their collections if they wish to serve their communities in the long-run, and indeed, if they wish to stay relevant. Should the open access revolution continue to grow much longer at the speed it is now, it may yet have greater impacts on academic library collections. Some supporters of open access believe that it is possible to create equilibrium in a mixed publishing environment where open access and non-open access co-exist. Challenges in developing countries like India erupt in the form of lack of adequate funding for building and upgrading ICT infrastructure. All the institutions of higher learning are not equally enthusiastic about establishing and maintaining institutional repositories. Though publicity is being given to OA resources, still many pockets lack total awareness regarding exploiting maximum benefit from them.

M. Open Access Initiatives In India

India has done fairly well in the OA area. Some of the initiatives taken up in India to promote OA are listed below. Apart from these many newspapers both in English and regional languages are available in OA. Similarly a large number of government reports National Knowledge Commission reports (NKC) and Supreme Court opinions are also available on OA. Some of the important OA initiatives are:

N. Directory Of Open Access Journal (Doaj)

http://www.doaj.org/doaj?func=findJournals&hybrid=&query=india DOAJ: Free, full text, quality controlled scientific and scholarly journals, covering all subjects and many languages. India is contributing journals to this initiative since 2003.

O. Indian Academy Of Sciences

http://www.ias.ac.in/ The Academy, founded in 1934, aims at promoting the progress and upholding the cause of science in pure and applied branches. Major activities include publication of scientific journals and special volumes, organizing meetings of the

©IJRASET (UGC Approved Journal): All Rights are Reserved

Fellowship and discussions on important topics, recognizing scientific talent, improvement of science education, and taking up other issues of concern to the scientific community.

P. Indian National Science Academy

http://insa.acpservers.com/html/home.asp; Indian National Science Academy, a premier Science Academy in the country, plays crucial role in promoting, recognizing and rewarding excellence. Another important task is to publish journals, organize scientific discussions and bring out proceedings and monographs.

Q. Indian Journals.Com

http://www.indianjournals.com/ijor.aspx;IndianJournals.com is a vast collection of interdisciplinary Indian Journals and Research Publications, providing: A pan-global web exposure for your Journals, A chance to preserve your research online, an international door to knowledge-sharing, a mode to generate interest in your field.

R. Indian Medlars Centre

http://medind.nic.in/ One point resource of peer reviewed Indian biomedical literature covering full text of IndMED journals. It has been designed to provide quick and easy access through searching or browsing.

ePrints@IISC

http://eprints.iisc.ernet.in/ ; ePrints@IISc repository collects, preserves and disseminates in digital format the research output created by the IISc research community.

S. Indian Statistical Institute

http://www.isibang.ac.in/~library/ ; The ISI Bangalore centre library was established in the year 1976 to meet the academic and research interests of the students, scholar, teachers and others. It has one of the best collections of literature on Statistics, Mathematics, Quality Engineering/ Management and Library & Information Science in India.

T. Open J-Gate Informatics (India) Limited

http://www.openj-gate.com/ ; Open J-Gate is a free database of open access journals, launched in February 2006, hosted by Informatics (India) Ltd. Open J-Gate currently aggregates metadata from more than 4,000 OA journals published in the English language around the globe.

U. The National Academy Of Sciences, India

http://www.nasi.org.in/ ; Founded in the year 1930, the National Academy of Sciences, India is the oldest Science Academy of the country. The main objective of the Academy was to provide a national forum for the publication of research work carried out by Indian scientists and to provide opportunities for exchange of views among them.

II. CONCLUSION

There isn't a shadow of a doubt that open access is a significant contributor to innovation and, growth and development. It has the potential to deliver critical information to change the lives of people. Open access provides a new paradigm for libraries and librarians. It provides unprecedented opportunities for librarians to deliver rich content in the quest to ensure that there is growth and development. It has the potential to deliver opportunities to loosen the noose of those communities that are strangled because of the lack of critical information.

A positive role for the academic librarian requires more than having a vision and articulating apposition. Librarians have extensive skill sets often developed over many years. Librarians may notbelieve that "scholarly communication" or "open access" has much relevance to their busy roles in the library. Librarians may be becoming fatigued with the rhetoric of the open access movement without clear direction on how to change how everything is done every day in the library. Practical information may be lacking. Open access had not saved most libraries money, or delivered them from the "serials crisis." After many years of promotion, many libraries have not seen repositories fill with articles; green open access has not taken off where it has been voluntary. Librarians want to promote open access, but may not be sure what that means in practice. Open access terminology may cause confusion. Academic librarians look to scholarly communication committees and library organizations to provide information that may assist

©IJRASET (UGC Approved Journal): All Rights are Reserved

them in promoting the agenda in the academy. Library education programs may not be preparing new library professionals with the background to effect change in the library of the future. It may be difficult to identify the library leaders that will help transform existing systems. For all of the emphasis on open access, there may not be much actual change in the library. Further research, collaboration, and discussion are needed for libraries to truly realize the potential of the open access movement to transform the academic library's everyday practices to the benefit of all.

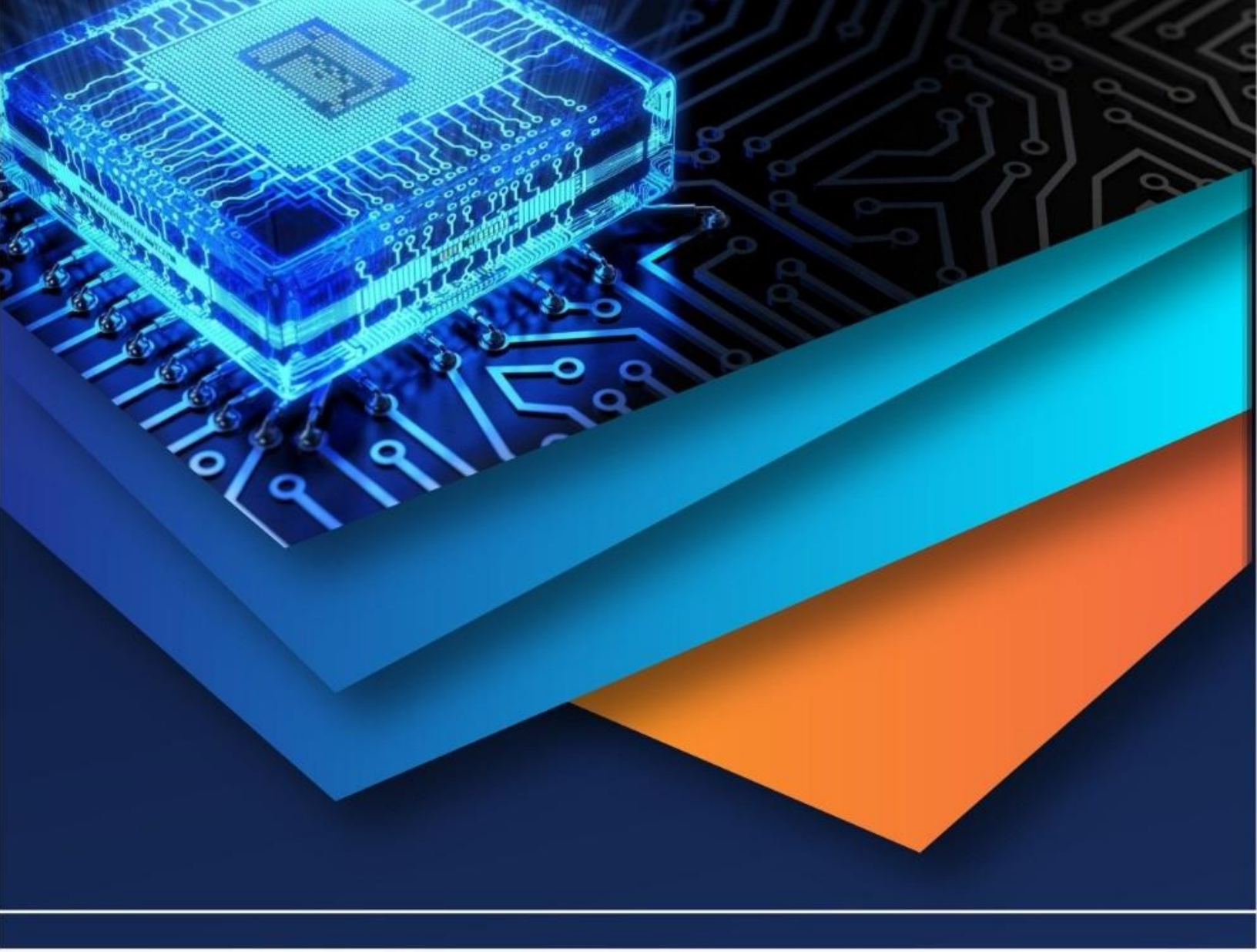
OA facilitates information dissemination and has helped libraries in terms of meeting decreasing subscription costs, and managing difficult negotiations with publishers, particularly when these publishers monopolize the intellectual market and tighten copyright limitations. Universities and libraries need to assess institutional needs and priorities based on the strengths and weaknesses of the open access initiative in their decision-making process.

OA is the outcome of old and new ideas. The old idea is the willingness of the scholars to publish the fruits of their research in scholarly journals and the new is the use of internet in the libraries. This has made possible worldwide distribution of the peer reviewed journal literature completely free and with unrestricted access to all curious minds of the academic community.

REFERENCES

[1] Mullen, Laura Bowering. (2011). Open Access and the Practice of Academic Librarianship: Strategies and Considerations for "Front Line" Librarians. Retrieved on 2017-10-11 from http://docs.lib.purdue.edu/iatul/2011/papers/34
[2] Tise, Ellen R. Open access: a new paradigm for libraries and a new role for librarians. Retrieved on 2017-10-17 fromhttp://www.kb.se/dokument/Aktuellt/utbildning/ifla%20OA%202010/IFLA2010_EllenTise.pdf
[3] Bailey, Charles W. (2006). Open Access and Libraries. Retrieved on 2017-10-28 fromhttp://digital-scholarship.org/cwb/OALibraries2.pdf
[4] Joshi, Anupama N. (2012). Open Access Initiatives: A Boon to Academic Libraries. Retrieved on 2017-11-10 from https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1913&context=libphilprac
[5] Corrado, Edward M. (2005). The Importance of Open Access, Open Source, and Open Standards for Libraries. Retrieved on 2017-11-21 from http://www.istl.org/05-spring/article2.html
[6] Alam, Intekhab. (2014). Changing Role of Academic Librarians in Open Access Environment. Retrieved on 2017-12-07 fro https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2650947
[7] Engeszer, Robert J. and Sarli, Cathy C. (2014). Libraries and open access support: New roles in the digital publishing era. Retrieved on 2017-12-19 fro https://digitalcommons.wustl.edu/cgi/viewcontent.cgi?article=1051&context=becker_pubs
[8] The Role of Libraries in Open Access. (2014). Retrieved on 2018-01-08 from www.ingenta.com/blog-article/the-role-of-libraries-in-open-access-2/
[9] Giarlo, Michael J. The Impact of Open Access on Academic Libraries. Retrieved on 2018-01-12 from http://lackoftalent.org/michael/papers/532.pdf
[10] Branin, J. (2011). College & Research Libraries goes fully open access (editorial). College &Research Libraries, 72(2). Retrieved on 2018-02-05 from http://crl.acrl.org/content/72/2/108.full.pdf

©IJRASET (UGC Approved Journal): All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)