COLLECTION BUILDING TREND AMONG THE INSTITUTES OF HIGHER LEARNING IN INDIA: A PREFERENTIAL RACE BETWEEN PRINT AND ELECTRONIC RESOURCES

ABSTRACT

Purpose: - The present study aims to assess the resource procurement preferences among the leading academic libraries of the institutes of higher learning across India. The study analyses the amount and percentage of budget spent by the institutions under study during the period 2012-13, 2013-14 & 2014-15 on the procurement of print and electronic resources in their libraries. The study also discusses about concerns with regard to the subscription of e-resources and the reasons for weaning interest among the Indian academicians towards the print resources.

Scope: - By and large the scope of the study is limited to Institutes of higher learning across India, but reflects a great deal of relevance to the global higher education practices.

Methodology: - The study has been undertaken on the 20 leading institutes each from Universities, Institutes of Management and Institutes of Technology in India, based on the ranking list released by the Ministry of Human Resource Development Govt., of India on April 04, 2016.

Findings: - The electronic documents are the dominant forms of present day library procurements in India, with the print struggling to retain its readership. The Institutes of Engineering & Technology and Management have almost similar procurement preferences, spending almost three fourth of their library budgets on the procurement of e-documents. On average, the University libraries in India have spent 43.54% percent of their budget on the procurement of print resources and 56.46% of their budget on the procurement of electronic resources during their period of study. Similarly, on average, each Institute of Engineering & Technology has spent 24.04% of their library budget on the procurement of print documents and 75.96% towards the procurement of electronic resources, while as 27.51% of their library budget by the Institutes of Management in India is being spent on the procurement of print resources and 72.49% towards the procurement of electronic resources.

Key Words: - India, Higher Education, E-documents, Print documents, Rankings, Collection Building, Budget Spending Pattern

INTRODUCTION: - Libraries are known as the jugular veins of the academic and research institutions. These sub-institutions supply the necessary oxygen to the other parts of the institution for sustenance. No institution of whatsoever size, cannot sustain in the absence of a good library. S Radhakirshanan[1], the first Vice-President and the second President of India has rightly said, that library is the heart of any educational institution.

Procurement of reading material irrespective of the form is the first and foremost activity of any library. Until recent past or before the digital revolution, the libraries associated with academic and research Institutions used to be spent a major portion of their library budget on the procurement of print documents, which mostly consisted of Text Books, General Books, Reference Books, Proceedings, and Reports etc. These were supplemented with the subscription of print periodicals in the form of Journals, Magazines, Newspapers, Standards, and Serials etc. with the result, print used to be the dominant forms of library collection building till recent past.

The Information and Communication Technology has unfolded a new dawn, whereby each activity of modern day man in day to day life is being handled by technology and libraries are no exception to it. The kind of promise Information Technology has shown in the field of library profession, has not just enhanced the services and activities of the libraries, but has given a new lease of life to the library profession. Publication of electronic documents is being seen as one of the blessings, which Information Technology has unfolded. The significant espousal among the user community towards the e-documents has left libraries with no choice except accepting the e-documents in their fold as one of the most preferred forms of document procurement. Within the span of two to three decades, e-documents have become an integral component of the library documents collection building. Whatever documents we are able to procure in the print form are also available in the electronic form, be they, Books, Journals, Magazines, Newspapers, Reports, Serials etc.

In the present study, an attempt has been made to examine the document procurement trend among the libraries associated with the institutions of higher learning and research in India. In the undergoing part we shall be discussing about the library budgets and their spending patterns among the leading academic and research institutions across India. Since print and e-documents are the two main forms of document procurement in the libraries these days, as such we shall try to find out the portion of budget being spent on the procurement of electronic and print documents by these leading libraries. With these findings, we can draw an overall generalization about the practice of resource procurement in the libraries of academic and research institutions across the world in general and India in particular.

EARLIER STUDIES: - Drawing comparison between the procurement & the subscription of electronic and print resources in academic libraries has been studied by researchers all across the world. The studies' concerning to collection development practices among libraries serves as a rejoinder in the missing link of library collection development. Some of the earlier works undertaken in the field of library collection development and fund spending patterns have been reviewed hereunder to give a better idea about the subject under study. In a study undertaken at Dresel University's W.W Hagerty Library on the fund spending pattern of the university library **(Montgomery & King, 2002)**[2] found that there is a constant shift towards the procurement of electronic resources. The authors observed that after considering all the cost, subscription of online journals is more cost effective. Round the clock availability and accessibility of online journals is considered as a major advantage, whereby library professionals no more route

journals among information seekers. Keeping in view the demand for both the types of resources, libraries are somewhat impelled to make allocations for the procurement of both the type of resources. In a similar study undertaken on expenditure involved in the procurement of resources and extending services in a conventional library to that of digital libraries **(Connaway & Lawrence, 2003)**[3] found that, labour, space requirement are more in paper than in a digital library. The authors even pointed out the practice of maintaining both paper and digital library simultaneously, incurs an extra expenditure.

Production, subscription, and usage of electronic sources of information are not limited to any particular subject field or to a specific discipline. Electronic documents are being published in each area of study. **Agboola (2010)**[4] undertook a survey study to understand the use of print and electronic resources by the students & faculty of Nigerian Agricultural Universities and found that 42.1% respondents replied of using print textbooks, while as 52.2% respondents replied of using TEEAL (The Essential Electronic Agricultural Library) as the most preferred electronic resource. However, the author showed concern towards the infrastructure & lack of skill to use e-resources as an impediment towards their effective use. In a six month study on the use of electronic and print resources in an academic biomedical library **(Morse & Clintworth, 2000)**[5] observed that users accessed e-resources ten times more than the print resources. **Tenopir, et al (2004)**[6] while comparing the use of print and e-resources among the medical faculty and the scientists, observed that compared to scientists, medical faculty reads more and 30% of their readings are mostly to support their research. The authors further observed that 70% of their reading comes from print resources.

Wu (2005)[7] in his discussion, the essentialities of print and electronic documents in the law library, questioned about the sustainability of the print in this increasingly dominating digital world and thereon the dangers involved with the relying so heavily on the technology, which is still developing. However, Wu concludes by saying that abandoning any of the two would account for failure of services on the part of libraries to their patrons.

Kapoor (2010)[8] studied the usage of print and electronic resources at Guru Gobind Singh Indraprastha University Library and found increasing use of e-resources has not affected the use of print resources. The author observed increase in the number of printouts and photocopy requests by the users. Electronic resources have a significant impact on the use of print resources **(Liu, 2006)**[9]**.** Liu further observed that there are varying degrees of the use of electronic and print resources among the students of different disciplines, while as hybrid use is quite popular among students viz. both print and online. To study the impact of electronic journals on the information seeking behaviour of users and their research activity **(Sathe, Grady & Giuse, 2002)**[10] undertook 69 surveys on the use of electronic and 90 surveys on the use of print journals. The authors observed that faculty members more often use print journals than students, fellows and residents, who prefer to use electronic journals.

ICT has broken the monotony of print documents & has paved way for electronic documents as one of most preferred sources of collection development in the modern day academic libraries **(Anunobi, 2008)[11].** Both print and electronic documents have given a choice to the users to consult a particular form of the document and so have these sources given choice to the library professionals, while making procurements for the library. Library professionals are supposed to keep in view different considerations while making a choice between the two, which **(Stewart, 2008)[12]** termed as the selection dilemma. Some of the considerations are mainly related to the user's choice, availability of infrastructure, budget, cost effectiveness and many other interests are supposed to be taken care of, while making the choice.

The digital age has offered enhanced library services, be it providing quality learning spaces, creating metadata, information literacy, choosing and managing resources, collecting material, creating electronic bibliographical database to digitization offering digital archives of the institutional repositories, observed **(Campbell, 2006)[13]. Hurd et al., (1996)[14]** while surveying the faculty members of the University of Illinois at Chicago mostly from different sciences and technology fields, observed that 78% scientists and the 54% engineers prefer to read journals in the library. The authors further observed that a good lot of these scientists and engineers preferred to have photocopies of the material of their interest for further readings at home and other places. **Pandita (2012)[15]** in his survey study observed that there is a growing trend towards the use of electronic sources of information, especially among the younger generation.

OBJECTIVES OF THE STUDY: - To analyze the collection building trend across the libraries of leading Institutes of Management, Engineering & Technology and Universities in India.

To analyze the percentage of budget spent on the procurement of electronic and print resources in the libraries associated with academic institutes across India.

MATERIALS AND METHODS: - The present study is based on the ranking list released by the Ministry of Human Resource & Development, Govt., of India on April 04, 2016. Accordingly, from the ranking list, 20 leading institutes each were chosen from the Institutes of Management, Institutes of Engineering & Technology and Universities and the data was retrieved from the official website of the Ministry of Human Resource & Development, Govt., of India which can be accessed at https://www.nirfindia.org/Ranking.[16] The identified institutes were put under three different groups as per their ranking list. Given the top rankings of the institutes under study, presumably these institutes meet the set standards & norms and so should we hold true about their libraries. The analysis has been undertaken on the data retrieved for the period 2012-13, 2013-14 and 2014-15.

SCOPE: - The present study is limited to the geographical confines of India, the country which has over 1.25 billion population, with 65% population below 35 years of age, having more than 750 institutions of higher learning spread across the length and breadth of the country. Since the

study reflects the trend among institutions of higher learning in India, as such the outcome of the study can be generalized, especially among the countries, which belong to the same League of Nations, in terms of development.

RESULTS:- The retrieved data has been tabulated as per the objective of the study and to perform the simple mathematical expressions like addition, subtraction, division or drawing percentage, the data was put to MS excel. Percentage at most of the places has been drawn up to two decimal places and has not been rounded off, as such may show slight variation while computing figures for 100%.

Table- 1 Fund utilization on procurement of print and e-resources by twenty leading university libraries in Indian

The E-resources and the Print documents are equally preferred in the university libraries across India. During the period of study, on average, the University libraries in India have spent 43.54% percent of their budget on the procurement of print resources and 56.46% of their budget on the procurement of electronic resources. Indian Institute of Sciences, Bangalore has spent only 1.37% of its budget on the procurement of print resources and 98.63% on the procurement of electronic resources. On the other hand Aligarh Muslim University has spent as low as 0.88 % of its library budget on the procurement of electronic resources and 99.12% on the procurement of print resources. This considerable difference between the two leading institutes is not exactly understandable, but owing to nature of these two institutions, the former is purely scientific in nature, while as the lateral is purely academic. North East Hill University, Goa University, Jamia Hamdard, New Delhi are the other leading universities of the country which have spent more than 90% of their library budget on the procurement of print resources. On the other hand, Banaras Hindu University, Jawaharlal Nehru University, and Birla Institute of Technology have spent up to 82% of their library budget on the procurement of electronic resources. The Rest of the university libraries have almost spent almost proportionately on both the electronic and print resources.

Table- 2 Fund utilization on procurement of print and e-resources by twenty leading Institute of Technology libraries in Indian

The procurement preference among the Institutes of Engineering & Technology is quite different from that of the University libraries. On average, each listed Institute of Engineering & Technology has spent 24.04% of their library budget on the procurement of print documents, whiles as 75.96% of their budget has been utilized for the procurement of electronic resources.

Indian Institute of Technology, Patna has spent 77.32% of its library budget on the procurement of print resources and 22.68% on the procurement of electronic resources. IIT (BHU), Varanasi, National Institute of Technology, Nagpur (DU) & NIT, Rourkela are the other institutes, which have spent a major portion of their library budget on the procurement of print resources. IIT, Bombay has spent 95.63% of its library budget on the procurement of e-resources and 4.37% on the procurement of print resources. IIT, Gandhinagar, IIT Ropar, IIT Mandi, Birla Institute of Technology, IIT Kharagpur & IIT Madras are the other technology institutes, which have spent more than 90% of their library budget on the procurement of electronic resources. The major portion of the library budget of the rest of the institutions has almost been spent on the procurement of electronic resources.

Table- 3 Fund utilization on procurement of print and e-resources by twenty leading Institute of Management libraries in Indian

The Institutes of Management seem to be having similar procurement preferences as that of Institutes of Engineering & Technology. On average the 20 listed institutes of management have spent 27.51% of their library budget on the procurement of print resources and 72.49% towards the procurement of electronic resources. S. P. Jain Institute of Management & Research has spent the maximum 77.02% of its library budget on the procurement of print resources. IIM Kozhikode, International Management Institute, Kolkata & Thiagarajar School of Management are the other management institutes, which have spent more than 50% of their library budget on the procurement of print resources. On the other hand, IIM Udaipur has spent 96% of its library budget on the procurement of electronic resources. IIM Bangalore, IIM Lucknow, IIM Indore, IIM Truchipalli are the other management institutes, which have spent more than 90% of their library budget on the procurement of electronic resources. More than 50% of the library budget of the rest of the institutes has spent on the procurement of e-resources.

DISCUSSION: - From the overall data analysis, it emerges that the library document procurement preferences in the institutions of higher learning and research in India has changed considerably. Even though there is no uniform trend which we may say emerged from the overall analysis, hence varies considerably from institution to institution, mostly depending upon the information need of that particular institute. This gets corroborated by the fact that, most of the Institutes of Engineering & Technology and Institutes of Management have spent major portion of their library budgets on the procurement of e-resources, but there are some Institutes, which have given more preference to print resources. Similarly, a good number of universities have either shown preference towards procurement of print resources or electronic resources. Still more, the document procurement preference among Institutes of Engineering & Technology and Management is more towards e-resources, while as print is still the preferred source of information among the university libraries. The procurement preference among institutions under study varies considerably from institution to institution. Although there is no specific reason for this considerable difference in the procurement preferences, but still the factors which play their

part in deciding the procurement preferences are, age of institution, infrastructure, richness & resourcefulness of the institutional library in terms of print or electronic documents, access to internet facility, skillfulness of human resource towards the exploitation of e-resources and many more.

India is one of the fastest growing economies in the world[17] and this growing economic strength has helped the country to show its prowess in other spheres as well and so holds true about the higher education, R&D & Academic sectors of the country. In the year 2014, India emerged as the 6th largest research country in the world by publishing 114449 research articles in the SCImago indexed journals, which is a SCOPUS database[18]. As per the royal society of UK report, As on date India spends more than 66.5 billion US dollars annually on the R & D activities and has spend 39.37$ per capita on R&D in the year 2015[19].

As per nature index, a database of 68 high quality science journals, India ranked 13th in 2014 global index with its considerable surge in the share of global high quality scientific publications[20]. The report also pointed out that this significant improvement in the ranking of India despite facing stagnation in fund spending on R&D activities. The report also confirmed about, despite India spending less than 1% of its GDP on research, produced better research results than countries like, Russia, Brazil, Italy, Australia, Singapore and South Korea which spend more than 1% of their GDP on R&D activities of the country.

Even one can infer that the libraries having rich print collection, show more interest towards the procurement of e-resources. The Jawaharlal Nehru University and the Banaras Hindu University have rich print collection in their respective libraries as such corroborate this argument, by spending major portions of their library budgets on the procurement of electronic resources. Although, Institutes of Engineering & Technology and Management have spent major portion of their budgets on the procurement of electronic resources, but from the procurement preferences of institutes like, S. P. Jain Institute of Management & Research, International Management Institute, Kolkata & Thiagarajar School of Management, Indian Institute of Technology, Patna IIT (BHU) Varanasi etc. it appears that these institutions have poor print collection, as such intend to strengthen their libraries with the print collection.

The institutes spending major portion of their library budgets on the procurement of e-documents, generally make this spending on the subscription of electronic journals. It is being constantly observed that science and technology institutes all over the world have reflected greater demand for electronic journals. Same is the case with most of the management institutes across India. Given the fact these institutes prefer to use their resources the way they actually need them. Since most of the university libraries in India are having access to e-Shodhsindu (a consortia based e-journal subscription), where by access to electronic journals is provided to most of the Govt., aided institutions across the country, hence such institutions show slightly

lesser interest towards the subscription of e-resources, as their demand for such e-resources is easily fulfilled.

In fact, consortia's have emerged as cost effective mediums to subscribe the online journals. It is always advisable to a group of institutions having similar interests to access all such e-journals of their interest through consortia. These consortia's apart from saving money, do give a wider and broader choice to the user community to access a wide array of journals in their area of interest. Even though it would be more appropriate for the government, that instead of providing so much liberal funding & grant to these institutions for e-subscriptions, it should work out a mechanism, whereby such resources can be made accessible to all such institutions free of cost on the national I.P on the pattern on Cochrane library, accessible to all the medical institutions across the country, an Indian Council of Medical Research initiative.

University Grants Commission, New Delhi in 1991 established Information and Libraries Network (INFLIBNET) in Ahmadabad, Gujarat, with many objectives, but the primary aim of the centre was to modernize the Universities Library System of the country by weaving them into a common network[21]. Since then there is no looking back for INFLIBNET and as on date the centre provides access to e-content all across the country to as many as 360 universities & other national institutes under e-shodhsindu programme and more 5300 colleges under N-List. INFLIBNET as on data has signed MoU with over 25 leading global publishers, whereby it provides access to more than 11200 journals to member institutions. Each year new publishers and new journals are added to the consortia database. The complete list of such publishers and the resources provided to member institutions can be accessed at http://www.inflibnet.ac.in/ess/eresources.php. During the financial year 2014-15, INFLIBNET Centre, Gandhinagar has alone spent over 27.94 $ million USD on the subscription of e-content for the institutions of higher learning in India [22].

Electronic documents have their own advantage over the print, resulting into their growing popularity among the masses in general and academia in particular. Time is supposed to be the greatest constraint in the research and academic worlds. E-documents have overcome this time constraint in its own way. Within no time of its publication a research journal or research article can be accessed by the user community, perhaps one of the greatest constraints involved with the conventional means of publishing. Given the fact, it is said that by the time a print journal reaches an information seeker, the information published in it becomes obsolete, such is nature of the modern day information production, dissemination, and exchange. Subscription of e-journals eliminated the option of subscription of multiple copies, as was prevalent with print subscription; there is no need to do routing of journals, no need to waste time in the issue & return of journal from library, as per the conventional practice. All these advantages of e-resources have somewhere weaned the interest towards print documents among the user community. Gone are the days when the scientific community of any country used to suffer at

the hands of times delivery of information and their research projects used to get bogged down. Subscription of e-journals has helped in the timely delivery of information, which has resulted into manifold growth in scientific inventions and progress of the society as a whole.

Ownership and access **(Mahesh, 2016)**[23] are the two different aspects, which are emerging as the subjects of debate, while subscribing the e-resources, however, it is the access which is being rated more important than the ownership **(Eisenbergh, 1990)**[24]. In the case of procurement of print matter, it is the libraries, which enjoy the ownership of the material they have paid for. Besides, each individual library has a defined preservation policy. On the other hand, subscription of e-journals is mostly based on access, with no defined policy on the preservation & ownership of e-documents subscribed by the institute or for that matter by the libraries. Although digital archives are very much there, but question of ownership remains unanswered as, whether it is the publisher who is the owner of this digital archive or the institute, which may have subscribed journals and have paid for it. Although, concept of perpetual access has almost already been discussed threadbare, enabling institutes to enjoy continuous access to the subscribed journals upon their discontinuation. It would be equally ideal to put in place a policy, whereby the understanding is to be reached between the publishers and the subscribing institutes that upon discontinuation of subscription by the institutes, publishers apart from offering perpetual access, should also handover a digital copy of the subscribed material/issues to the respective institutions for preservation and in-house access. This practice can also be undertaken on annual basis or on the volume basis. This way subscribing institutions can have their own preservation policy for such digital documents. In this regard University Grants Commission (UGC), New Delhi, the governing body of higher education in its guidelines for UGC-INFONET Digital Library Consortium issued during its 11th plan period has clearly stated about the archival policy has clearly stated about the perpetual access of the content subscribed during a particular period. The guidelines clearly mention that on termination or expiry of agreement, the licensor/publisher shall provide full text of e-resources on CD-ROM/DVD-Rom to the INFLIBNET Centre for access on the network [25].

With the view to promote the creation, preservation and access to e-content among the information seekers of the country at all levels, the Ministry of Human Resource & Development, Government of India, has initiated National Mission on Education through Information and Communication Technology (NMEICT), where under, Indian Institute of Technology, Kharagpur has been entrusted with to host, coordinate and to setup National Digital Library (NDL) [26]. The project will focus on integration of all the digitized & digital content created in the country by all academic institutions. The project is aimed to provide a single window access system to e-learning from primary to post graduate level. The digital content created through NDL will be hosted on serves and shall be made available to one and all free of cost throughout the country. Besides, it has also become almost a norm across the leading institutes across the country to have their own institutional repositories for hosting and accessing

the e-content created by the institution itself. Shodhganga is a similar project, launched by UGC, though its inter university centre INFLIBNET, where under each UGC recognized higher education institution awarding doctoral degree in any subject field has to upload a soft copy of the thesis on this national repository for free access [27]. As on date more than 280 universities have signed MoU with the INFLIBNET and the portal as on date hosts nearly 1.00 Lakh doctoral theses on its web portal, full texts of which can be accessed by anybody all across the globe.

CONCLUSION: - There is no denial in the fact that both print and electronic documents have equal importance, but both do not enjoy the same level of readership. Given the readership priorities of library clientele and some advantages which e-documents have over print, the institutional libraries are somewhat impelled to procure more electronic documents. Both print and electronic documents enjoy readership of their own kind, but that does not mean preference of form of information source consulted or not consulted by a specific group of people doesn't make them anyway more or less informed. Fact of the matter, it is only the form of document which varies and not the content, which altogether is same in both the forms of document.

The procurement of e-documents; especially the subscription of e-journals is the preferred form of document procurement in the academic libraries across India. University libraries are somewhat still striking balance between both the print and the electronic forms, but still it is the e-resources, which get the major share of the library budget in the collection building. Three fourth of library budgets in the Institutes of Engineering & Technology and Management also implies that three fourth of library collection in these institutes is in the form of electronic documents. This collection development practice also corroborates the fact that the reading habits among the students and the faculty members of the institutes of higher learning in India is drastically changing from print to electronic. Subscription of e-resources in the institutional libraries is still somewhere more seen as fulfilling the role of quality parameter for ranking and other purposes, forgetting the actual purpose for which these resources are being otherwise subscribed for. Still more, the irony is, the academic and research institutions across Indian still fail to establish the true utility of all such resources over which public money is being spent in millions of dollars. Subscription of e-resources in the libraries should not end up for the name sake. The institutions must ensure that necessary infrastructure be put in place to enable the users to access the e-resources as and when required & to exploit them to their optimum.

REFERENCES:-

1 Bhatt, R. K. (2010). University libraries in India: Issues and challenges. *Journal of Library and Information Science.* 35(1), 51.

2 Montgomery, C. H. and King, D. W. (2002). Comparing library and user related costs of print and electronic journal collections. *D-Lib magazine.* 8(10), 1-14.

3 Connaway, L. S. and Lawrence, S. R. (2003). Comparing library resource allocations for the paper and the digital library. *D-Lib magazine. 9*(12), 1082-9873.

4 Agboola, I. O. (2010). Use of print and electronic resources by agricultural science students in Nigerian universities. *Library & Information science research. 32*(1), 62-65.

5 Morse, D. H. and Clintworth, W. A. (2000). Comparing patterns of print and electronic journal use in an academic health science library. *Issues in Science and Technology Librarianship. 28*(26.04), 2008.

6 Tenopir, C., King, D. W. and Bush. (2004). A., Medical faculty's use of print and electronic journals: changes over time and in comparison with scientists. *Journal of the Medical Library Association. 92*(2), 233.

7 Wu, M. M. (2005). Why print and electronic resources are essential to the academic law library. *Law Libr. J. 97*, 233.

8 Kapoor, K. (2010). Print and electronic resources: Usage statistics at Guru Gobind Singh Indraprastha University Library. *Program. 44*(1), 59-68.

9 Liu, Z. (2006). Print vs. electronic resources: A study of user perceptions, preferences, and use. *Information Processing & Management. 42*(2), 583-592.

10 Sathe, N. A., Grady, J. L. and Giuse, N. B. (2002). Print versus electronic journals: a preliminary investigation into the effect of journal format on research processes. *Journal-Medical Library Association. 90*, 235-243.

11 Anunobi, C. V. and Okoye, I. B. (2008). The role of academic libraries in universal access to print and electronic resources in the developing countries. *Library Philosophy and Practice (e-journal)*. 189.

12 Stewart, L. A. (2001). Choosing between print and electronic resources: The selection dilemma. *The Reference Librarian. 34*(71), 79-97.

13 Campbell, J.D. (2006) Changing a cultural icon: The academic library as a virtual destination. *Educause Review.* 41(1), 16-31.

14 Hurd Jm, Weller Ac, Curtis Kl. Information seeking behavior of science faculty: the impact of new technologies. American Society for Information Science. *Proceedings of the ASIS Mid-Year Meeting* 1996:188–96.

15 Pandita, R. (2012). Growing use of electronic sources of information-A Users survey of Baba Ghulam Shah Badshah University. *Trends in Information Management.* 8(1) 43-51.

16 Ministry of HRD, GoI (2016). National Institutional Ranking Framework-2016. Retrieved on June 01, 2016 from https://www.nirfindia.org/Ranking

17 Worstall, Tim., Forbes Magazine, Feb 8, 2016 retrieved on April 02, 2016, accessible at http://www.forbes.com/sites/timworstall/2016/02/08/india-to-be-worlds-fastest-growing-economy-keeping-it-going-will-be-the-difficult-trick/#4394daa83d8d. 2016

18 SCImago., SJR — SCImago Journal & Country Rank. Retrieved March 31, 2016, from http://www.scimagojr.com., 2016.

19 The Royal Society of UK and the commonwealth. (2016) Retrieved from https://royalsociety.org/~/media/Royal_Society_Content/policy/publications/2011/4294976134.pdf

20 Nature Index. (2016). Retrieved from https://www.natureindex.com/pdf/news/indian-science-ascending.pdf

21 INFLIBNET Centre, Gandhinagar. (2016). Retrieved from http://www.inflibnet.ac.in/about/

22 INFLIBNET, Gandhinagar. (2015). Annual Report 2014-15. Retrieved from http://www.inflibnet.ac.in/publication/annualreport/AR_2014-15.pdf

23 Mahesh, G. (2016). is India lax in its e-journal preservation efforts. *Current science*. 110, 1881-1882

24 Eisenberg, M.B. (1990). Trends and issues in library and information science. Syracuse, NY: ERIC *Clearinghouse on Information Resources*.

25 University Grants Commission, New Delhi (2015). Retrieved from http://www.ugc.ac.in/oldpdf/xiplanpdf/ugcinfonetdigitallibconrtim240409.pdf

26 National Digital Library, India. (2016). Retrieved from https://ndl.iitkgp.ac.in/

27 Shodhganga. (2016). A reservoir of Indian theses. Accessed on September 21, 2016 and retrieved from http://shodhganga.inflibnet.ac.in/

Table- 1 Fund utilization on procurement of print and e-resources by twenty leading university libraries in Indian

University Libraries	Total Fund spending during 2012-13, 2013-14 & 2014-15					Avg spending during last three years in lakhs	Rank
	Print		E-documents		Total Amount in lakhs		
	Amount in lakhs	%Share	Amount in lakhs	%Share			
Homi bhabha national institute	5228.6	38.11	8490.53	61.89	13719.13	4573.04	**1**
Indian institute of science Bangalore	53.58	1.37	3846.36	98.63	3899.94	1299.98	**2**
University of Delhi	2601.87	69.89	1120.92	30.11	3722.79	1240.93	**3**
Jawaharlal Nehru university	417	19.35	1738	80.65	2155	718.33	**4**
Banaras Hindu university	282.49	17.10	1368.71	82.90	1651.2	550.40	**5**
Punjab university	1175.17	75.07	390.25	24.93	1565.42	521.80	**6**
Indian institute of space science and tech.	366.62	35.86	655.47	64.14	1022.09	340.69	**7**
Aligarh Muslim University	1009.61	99.12	8.89	0.88	1018.5	339.50	**8**
University of Hyderabad -Hyderabad	389.82	40.00	584.63	60.00	974.45	324.81	**9**
Amrita vishwa vidyapeetham- Coimbatore	698.97	73.12	256.83	26.88	955.8	318.60	**10**
Pondicherry university	392.51	46.27	455.67	53.73	848.18	282.72	**11**
Institute of chemical technology	577.35	85.27	99.68	14.73	677.03	225.67	**12**
Birla institute of tech. & science -Pilani	176.67	28.92	434.1	71.08	610.77	203.59	**13**
North eastern hill university	500.29	90.48	52.58	9.52	552.87	184.29	**14**
King Georges medical university-lucknow	395.42	74.99	131.85	25.01	527.27	175.75	**15**
Bharathiar university	325.22	88.41	42.6	11.59	367.82	122.60	**16**
Goa university- Goa	339.92	96.68	11.65	3.32	351.57	117.19	**17**
Tezpur university	175.34	51.84	162.86	48.16	338.2	112.73	**18**
Visva Bharati	166.67	79.35	43.35	20.65	210.02	70.00	**19**
Jamia hamdard-new delhi	75.95	97.86	1.66	2.14	77.61	25.87	**20**
	15349.07	43.54	19896.59	56.46	35245.66	11748.55	

Table- 2 Fund utilization on procurement of print and e-resources by twenty leading Institute of Technology libraries in Indian

Institutes of Technology Libraries	Total Fund spending during 2012-13, 2013-14 & 2014-15					Avg spending during last three years	Rank
	Print		E-documents		Total Amount		
	Amount	%Share	Amount	%Share			
Indian Institute Of Technology, Bombay	218.76	4.37	4782.5	95.63	5001.26	1667.08	**1**
Indian Institute Of Technology, Kharagpur	366.17	7.66	4414.07	92.34	4780.24	1593.41	**2**
Indian Institute Of Technology, Patna	3274.59	77.32	960.52	22.68	4235.11	1411.70	**3**
Indian Institute Of Technology, Madras	412.48	9.75	3817.88	90.75	4230.36	1410.12	**4**
Indian Institute Of Technology, Kanpur	477.3	11.50	3670.26	88.50	4147.56	1382.52	**5**
Indian Institute Of Technology, Roorkee	1675.05	48.59	1771.56	51.41	3446.61	1148.87	**6**
Indian Institute Of Technology, Gandhinagar	172.11	5.41	3008.69	94.59	3180.8	1060.26	**7**
Indian Institute Of Technology, Delhi	324.11	10.68	2709.3	89.32	3033.41	1011.13	**8**
Indian Institute Of Technology, North Guwahati	453.57	27.58	1190.65	72.42	1644.22	548.07	**9**
Indian Institute Of Technology, Mandi	85.76	5.81	1390	94.19	1475.76	491.92	**10**
Vellore Institute Of Technology	370.81	27.38	983.42	72.62	1354.23	451.41	**11**
National Institute Of Technology, Rourkela	740.04	59.10	512.02	40.90	1252.06	417.35	**12**
Indian Institute Of Technology, Indore	317.68	29.27	767.45	70.73	1085.13	361.71	**13**

S.V National Institute Of Technology	359.18	35.68	647.4	64.32	1006.58	335.52	**14**
Indian Institute Of Technology, Ropar-Rupnagar	43.44	5.35	768.1	94.65	811.54	270.51	**15**
Indian Institute Of Technology, Hyderabad	147.46	20.16	583.96	79.84	731.42	243.80	**16**
V. National Institute Of Technology, Nagpur (DU)	447.84	66.35	227.03	33.65	674.87	224.95	**17**
National Institute Of Technology, Tiruchirappalli	164.52	27.65	430.3	72.35	594.82	198.27	**18**
Indian Institute Of Technology (BHU), Varanasi	352.39	75.16	116.41	24.84	468.8	156.26	**19**
Birla Institute Of Technology	12.69	7.54	155.47	92.46	168.16	56.05	**20**
	10415.95	24.04	32906.99	75.96	43322.94	14440.98	

Table- 3 Fund utilization on procurement of print and e-resources by twenty leading Institute of Management libraries in Indian

Institutes of Management Libraries	Total Fund spending during 2012-13, 2013-14 & 2014-15					Avg spending during last three years	Rank
	Print		E-documents		Total Amount		
	Amount	%Share	Amount	%Share			
Indian Institute Of Management, Calcutta	350.97	21.92	1250.13	78.08	1601.1	533.70	**1**
Indian Institute Of Management, Ahmedabad	222.62	14.92	1269.4	85.08	1492.02	497.34	**2**
Indian Institute Of Management, Kozhikode	730.00	70.87	300	29.13	1030	343.33	**3**
Indian Institute Of Management, Bangaluru	70.19	7.05	924.21	92.95	994.4	331.46	**4**
Indian Institute Of Management, Lucknow	55.71	6.63	784.04	93.37	839.75	279.91	**5**
S. P. Jain Institute Of Management & Research	615.37	77.02	183.57	22.98	798.94	266.31	**6**
Indian Institute Of Management, Indore	36.91	5.03	696.04	94.97	732.95	244.31	**7**
Indian Institute Of Management, Tiruchirappalli	51.13	7.91	594.48	92.09	645.61	215.20	**8**
Management Development Institute	213.16	38.22	344.46	61.78	557.62	185.87	**9**
Xavier Labour Relations Institute (Xlri)	238.03	47.55	262.53	52.45	500.56	166.85	**10**
Rajiv Gandhi Indian Institute Of Management	74.90	15.58	405.58	84.42	480.48	160.16	**11**
Indian Institute Of Management, Raipur	174.89	39.60	266.72	60.40	441.61	147.20	**12**
Indian Institute Of Management, Udaipur	16.50	4.00	395.00	96.00	411.5	137.16	**13**
International Management Institute-New Delhi	30.12	14.00	184.98	86.00	215.1	71.70	**14**
Indian Institute Of Technology, Kanpur	42.29	19.88	170.37	80.12	212.66	70.88	**15**
Indian Institute Of Management, Rohtak	65.55	32.57	135.68	67.43	201.23	67.07	**16**
Vellore Institute Of Technology	47.99	27.38	127.27	72.62	175.26	58.42	**17**
International Management Institute, Kolkata	99.35	64.03	55.80	35.97	155.15	51.71	**18**
Indian Institute Of Forest Management	33.45	39.02	52.26	60.98	85.71	28.57	**19**
Thiagarajar School Of Management	27.64	59.47	18.83	40.53	46.47	15.49	**20**
	3196.77	27.51	8421.35	72.49	11618.12	3872.70	