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Ritu Nagpal
ritunagpal3@gmail.com

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Content Analysis for advocating the role of Digital Scholarship in University Libraries in Delhi under Open Access Environment

Ms. Ritu Nagpal
Research Librarian
Global library
O P Jindal Global University
Sonipat
India
ritunagpal@jgu.edu.in

Dr. N. Radhakrishnan
Professor
Library and Information Science Department
Periyar University
Salem

Abstract

The present study aims to provide a comprehensive overview of Digital Scholarship. The introduction of Digital Scholarship in Libraries has become indispensable. The study is established upon Digital Scholarship in University Libraries in consideration to Content Analysis of Academic Library Website. The research work further more examines the different entities to analyze and interpret the parameters for applicability of Digital Scholarship in University Libraries. Limiting to the Central University Libraries in Delhi according University Grants Commission the study proposes a model of Digital Scholarship which could be adopted by the Institutions of National importance. The proposed model highlights the transformational shift to support the patrons in this conjuncture of information & technology. By acquiring and structuring the governance, the concept of Digital Scholarship could be expanded and integrated to the Digital Scholars to become a part of initiative to stimulate the concept globally. The Content analysis given in the study helps to identify the gaps to be bridged in this present world of digital citizens.

Keywords – Digital Scholarship, Digital Learning, Academic Libraries, Content Analysis, Digital Support, Research & Reference

1. Introduction to Digital Scholarship and Central Universities in Delhi

Digital Scholarship can be defined as an extension to the conventional practices followed by the Library & Information Centers. Presently, Digital Scholarship is a very novel concept in India in context of University Libraries. The concept is gradually picking up interest as a new domain for the community of researchers, learners and educators all across the country. Abby Rumsey in her report for Scholarly Communication Institute (*SCI-9-Road-Map-for-Change.Pdf*, n.d.)³¹ quoted the definition of “Digital scholarship as usage of any testimony or technique in digital form for the purpose of authoring, publishing, curating or preserving digitally which can be used and reused is digital scholarship.” As we are stepping on digital footprints digital scholarship is vital where libraries have to play the role of incubators for creating, preserving and disseminating the knowledge resources as reflected by Bryan Sinclair in his article (*The University Library as Incubator for Digital Scholarship*, n.d.)³⁶. Considering, it in Indian Chapter the conceptualization of Digital Scholarship in University Libraries needs to be highlighted under the horizon of Open

Access. Under the purview of Department of Higher Education in the Ministry of Education the University Grants Commission controls and grants the Central Universities in India. Explicitly given by (Verma & Devi, 2015)³⁸ in their study that ‘Academic library Website’ provides significant information about the resources of library in print or electronic forms. The Library works as a source to knowledge and guide to access for the users. On the basis of which the consolidated list given in Table 1 forms the core part of the study alongside the library website links are given for the content to be analyzed.

Table: 1 Central Universities in Delhi

S.no	Name of the University	University Website	Library Website
1.	Indira Gandhi National Open University ¹⁰	http://www.ignou.ac.in	http://www.ignou.ac.in/ignou/about_ignou/division/idd/introduction
2.	Jawaharlal Nehru University ¹⁴	http://www.jnu.ac.in	http://lib.jnu.ac.in/
3.	Jamia Millia Islamia ¹⁵	https://www.jmi.ac.in/	https://www.jmi.ac.in/zhlibrary
4.	Rashtriya Sanskrit Sansthan ¹⁷	http://www.sanskrit.nic.in	http://www.sanskrit.nic.in/ASSP/index.html
5.	Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapith ¹	http://www.slbsrsv.ac.in	https://www.slbsrsv.ac.in/library/about-library-0
6.	South Asian University ²⁸	http://www.southasianuniversity.org	http://library.sau.ac.in/
7.	University of Delhi	http://www.du.ac.in	http://www.du.ac.in/ducc/index.php?page=du-library-system

2. Review of Literature

According to (Hannah et al., 2020)⁸ ‘a paradox exists in building and managing the digital scholarship centers in academic libraries’ the author has further focused upon the pivotal of academic libraries to increase the knowledge digital scholarship. The emphasis has been given through the study with the emerging need of tools and methods for digital scholarship and the specialist to promote the same in the community of digital preservation and accessibility. (Seibert et al., 2019)²⁴ in the study on Navigating 21st Century Digital Scholarship: Open Educational Resources, Creative Commons, Copyright, and Library Vendor Licenses highlighted the framework for OERs and its sustainability. Further considering the use of Creative Common Licensed Work and the increased collaborations the authors concluded the dynamic role of digital scholarship in University Library like Kansa State Libraries. With a key message to communicate to the Academic Libraries (Cox, 2016)⁵ that the Digital Scholarship offers the both challenges and opportunities too. It is important for the information professionals to embrace the new role and establish a bond within. With the Pandemic hitting the whole world the crucial role of Libraries and librarians have been felt to assimilate the required knowledge on Digital Content in turn on Digital Scholarship. (Jaeger, 2011)¹² calling it a co-evolution has given his perspective on the ‘Transitional History of Paper to Print’. The present study has done to evaluate and assess the visibility of the Digital Scholarship in Libraries through ‘Content Analysis of Library Websites’. The study given by (Shukla & Tripathi, 2010)²⁵ based on evaluation of the library website of Indian Academic Libraries it is indicated that the institutes of National importance directs their users with required set of information which is made available 24*7. Evaluating the usage and through content analysis, the study sets some given criteria for researchers. (Michalec, 2006)¹⁸ in the study on Content Analysis of Art Library Websites gave the potential need of a Library website. For special libraries with the specialized collection the manifestation over Web for a library, contributes well in serving its academic community. With help of Content analysis, the clearly features the different parameters to assess the different criteria. (Qutab & Mahmood, 2009)²¹ added in the research work done on Library Web sites in Pakistan that website for library works as a virtual platform and establishes a structure to work independently for users anytime, anywhere.

3. The Proposition & Need of the study

In India, year by year there has been exponential growth in the digital scholarly content. By advocating the concept of Digital Scholarship the researcher has emphasized on the heavy demand and supply in creation and generation of the digital content by the University Libraries. In the depth of recent studies given by (Seibert et al., 2019)²⁴ the authors also have explicitly experienced that the multifaceted and multidisciplinary notion will lead the scholars towards the alliance of emerging digital tools and techniques. This in turn values and gives rise to the viewpoint indicating the need of Digital Scholarship and Open Access in University Libraries in India.

4. Objective of the study

- To study the web contents of the Central University Libraries website of the Delhi region through which improved and a secured platform for Digital Scholarship can be extended to support the scholars.
- To suggest and extend partnership that bridges the gap between technology leading to sustainability and scalability to the University.
- To support and promote multidisciplinary and multifaceted research in the digital environment in Open Access.
- To increase footfall of the library users for better usage of the resources and tools.

5. Scope of the study

The study is converged with the evolving need of Digital Scholarship as separate entity in University Libraries in Delhi covering the Central Universities. There are 7 Central Universities which promotes teaching and learning at University level in different capacities as guided and controlled by University Grants Commission (https://www.ugc.ac.in/oldpdf/Consolidated_CENTRAL_UNIVERSITIES_List.pdf). Digital Scholarship in University Libraries has been chosen giving prominence to the fact that inspite of number of scholarships offered by UGC there is no such scholarship available in the given field (<https://www.ugc.ac.in/page/Scholarships-and-Fellowships.aspx>). Promoting this dominant position of Central University Libraries in this competitive digital environment through digital scholarship it is predicted to increase the footfalls of users in the library. It is also anticipated that with the increased number of scholars the exploitation of the electronic & print knowledge bases within the libraries will also in turn increase. Also, unrestricted and unlimited access to the Open resources within the copyrighted parameters will also enhance the utility and usability of the resources,

6. Methodology

The assessment of the current framework of Digital Scholarship in the University Libraries is induced by assessing the different variables for understanding the current status and role of submersion of digital technology in the library. The study measures the different entities to analyze and interpret the parameters for applicability of Digital Scholarship in University Libraries as given -

- Demographic Variables
- Inclusive Information
- Navigation & Updated Information on the Library Website
- Inclusive Information
- Research & Reference Support
- Digital Services & Digital Support

7. Data analysis

The analysis of the seven central university libraries according to the UGC formulated an eminent part of the study through the Likert five-point scale and content analysis. The criteria designed is based on 24 data points referring the studies (Shukla & Tripathi, 2010)²⁵ and (Michalec, 2006)¹⁸. The data points were analyzed on the basis of **Five Point Likert scale** (5- Excellent, 4- Very Good, 3- Good, 2- Average, 1 – Provides little or negligible information). Following the unique data points, the different library websites were visited and in detail all the different Tabs available were reviewed. Total 518 data points were collected based on the checklist devised including the

different entities which indicates towards the need of Digital Scholarship in Central University Libraries of National importance. The frequency was calculated in accordance to the Total points analyzed and Maximum points. To calculate the Rate of Occurrence, Average and Standard Deviation MS Excel was used for analysis.

With the focus on the seven Central University library websites and the study is restricted for analyzing and evaluating the content present on the different library websites. During the study ‘accessibility of the library website, highlighting the services, Information related to Fellowship & Internship, Research and Reference Support, Digital Support & services’ has been considered as a key element.

The **Table no. 1** is given to share the list of Central Universities covered in the study with the URLs to the University website and Library Website. The **Table no. 2** highlights the Classification of the demographic variables collected through the library website. To study the demographic variables reflects the year of establishment, rules and regulations, the working hours of the library and details related to the access to the resources of library in print and electronic format. Libraries are service oriented department of the Academic institutions hence opening and closing time of the mainly depends on the user requirements in most of the cases. It is clearly reflected through the content analysis that OPAC access to the users is available 24*7 for easy access. During the course of research, it is equally important to assert that whether the library supports the digital access to the users which implies to the availability and presence of digital scholarship in the library, if any.

Table 2: Classification of the Demographic Variables

Name of the Library	Year of Establishment	Rules & Regulations	Library Working Hours
IGNOU Library	1986	Click here	9:30 am – 6:00 pm
Dr B R Ambedkar Central Library (Jawaharlal Nehru University)	1969	Click here	9:00 am – 8:00 am (Extended hours of support during examination)
Dr Zakir Husain Library (Jamia Millia Islamia)	1920	Click Here	Different sections have different operating hours. Extended hours of support during examination and Weekends/Holidays.
Sanskrit SahityaPustakalya Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya South Asian University	1996	Online Library Click here	Available 24*7 OPAC & access to e-resources supported
Delhi University Central Library	-	Click here	OPAC Search available
Delhi University Central Library	1922	Click here	Open search for different resources available under collection tab on the library website

In the framework of the checklist prepared with 24 data points **Table no. 3** analyses all the Inclusive Information about the Central Libraries in the capital city. The given table enlists the rate of occurrence in percentage pertaining to the overall analysis of the library websites. It brings out the understanding that all the University Library are providing a platform to connect with the user in this virtual world to serve them with the required set of information. The Central Library of Jawarhar Lal University Dr BR Ambedkar Library has the maximum rate of occurrence (78%) on the scale with (Average = 3.91, SD = 1.61) wherein (46%) for Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya - Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapith with (Average= 2.33, SD=1.65). Reflecting the real culture of Digital Services, it is asserted that the JNU Library followed up by Delhi University Central Library with rate of occurrence (71%, Average = 3.58, SD = 1.76).

Table 3: Inclusive Information (n=7)

	IGNOU Library	Dr BR Ambedkar Library	Dr Zakir Hussain Library	Sankrit Sahitya Pustakalya	Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya	South Asian University Library	DU Library
Rate of occurrence	0.55	0.78	0.68	0.508	0.46	0.575	0.71
Average	2.75	3.91	3.41	2.54	2.33	2.875	3.58
Standard Deviation	1.64	1.61	1.74	1.88	1.65	1.512	1.76

Pertaining to the primary features of a Library Website i.e. Accessibility & Navigation **Table no. 4** reflects that Dr B R Ambedkar Central Library (Jawaharlal Nehru University), Dr Zakir Hussain Library and Delhi University Central Library website are easy to access and quickly allows to navigate to different Tabs with Rate of Occurrence ≥ 1.65 and Average ≥ 4.71 . Highlighting the different sections and services offered by the library websites these three University Library Website clearly directs with the language easy and clear with due clarity of Rules & Regulations of the Library. However, it is very articulated for through the study that with Rate of Occurrence < 1.50 there is an urgent need to enhance the vital features.

Table 4: Library Website – Accessibility & Navigation (n=7)

	IGNOU Library	Dr BR Ambedkar Library	Dr Zakir Hussain Library	Sankrit Sahitya Pustakalya	Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya	South Asian University Library	DU Library
Rate of Occurrence	1.25	1.65	1.65	1.4	1.25	1.25	1.7
Average	3.57	4.71	4.71	4	3.57	3.57	4.85
Standard Deviation	1.505	0.51	0.408	1.47	1.22	1.21	0.408

Indicating to the fact that Library needs to disseminate ‘Right information, to the Right User, at the Right time’ hence it is essential for the Knowledge hubs of the country to adapt the change that this Pandemic has brought. **Table no. 5** evaluates the frequency of the information i.e. how often it gets updated alongwith the given information is easy to interpret. It further reveals the access to the Electronic resources through the library website. During Pandemic to meet the user’s requirements with the set of enhance services has become imperative. The analysis given in the table also evaluates whether the library has provided sufficient subscription of Electronic books for the purpose of teaching & learning. The results also depict whether the library has OPAC i.e. Online Public Access Catalogue for the resources supported with Discovery services. Also, detailed review has been done to verify the Remote access to such resources is extended through the library website itself. With the Rate of Occurrence with 100%, Average = 5 for Dr BR Ambedkar Library it is evident that library extends it support and services in Disseminating & Interpreting of Information in this Digital Era. It is important to note during the research that if the value for SD=0 i.e. Identical Values this shows that the Library supports in all forms in this Digital Era and has attained the highest on the Likert Five Point Scale.

Table 5: Disseminating & Interpreting of Information in this Digital Era (n=7)

	IGNOU Library	Dr BR Ambedkar Library	Dr Zakir Hussain Library	Sankrit Sahitya Pustakalya	Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya	South Asian University Library	DU Library
Rate of Occurrence	0.76	1	0.84	0.68	0.6	0.8	0.84
Average	3.8	5	4.2	3.4	3	4	4.2
Standard Deviation	1.78	0 (Identical Values)	1.78	2.19	2	1.41	1.78

Working remotely in support of Proactive Information Services the **Table no. 6** evaluates Does the library regularly meets Users requirement in terms of Research and Reference Support. Additionally, whether library is maintaining Institutional Archive harmonizing the different types of knowledge and content based User Services. To encourage and support the role of Digital Scholarship the situation is ironical in the Institutes meant to be National Importance. With the most overwhelming Library- Dr BR Ambedkar Library with Rate of Occurrence= 0.7, Average=3.5, SD=1.73 supports Research & Reference Support and maintains Institutional Repository on the other hand does not extend much of support in bringing out the knowledge products or supports the usage of Content based User Service.

Table 6: Reference & Research Support (n=7)

	IGNOU Library	Dr BR Ambedkar Library	Dr Zakir Hussain Library	Sankrit Sahitya Pustakalya	Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya	South Asian University Library	DU Library
Rate of Occurrence	0.55	0.7	0.45	0.15	0.15	0.25	0.45
Average	2.75	3.5	2.25	0.75	0.75	1.25	2.25
Standard Deviation	1.70	1.73	1.5	0.5	0.5	0.5	1.89

With ongoing crisis of Information explosion, it is indispensable for the libraries to participate in Digital Services should have digital Resource Centre which ascertain and control the flow of right information through all possible channels. **Table no. 7** distinguishes whether the Central University libraries abides through the Copyright policy in today's Digital World also whether the library supports the Open Access Resources. To enhance the services whether sufficient support is provided for Internships/Fellowships, Trainings & Workshops in conjunction with visibility of library on different Social media platforms whether library is well connected with its users Virtual Reference Librarian/Live Chats, User Guides/FAQs or other mediums in connection. During the analysis it was identified that the libraries offering Academic in the field of Library and Information Science indeed offers Fellowship and internship to the students invariably it is opposite for the other Central University Libraries. The well-articulated support in training, workshops, FAQs or User Guide though is available but to sustain it no definite policy or strategy is evident. It was also noted that all the Central University Libraries in the National Capital are yet to offer Virtual Reference Service or Live Chat to the user. Supporting the role of Open Access, the libraries are supporting and extending its utility in all forms whether it adapting to Content Management or Knowledge base. With the Rate of Occurrence increasing has marked from 0.27 0.55 with Average 1.37-2.75 and SD ranging inbetween 0.74-1.98. To follow the Indian cultural footprints Sankrit Sahitya Pustakalya is the only institution supporting Sanskrit literature in Open Access Platform without any restriction.

Table 7: Digital Services & Digital Support (n=7)

	IGNOU Library	Dr BR Ambedkar Library	Dr Zakir Hussain Library	Sanskrit Sahitya Pustakalya	Mahamahopadhyay Padamsri Dr. Mandan Mishra Granthalaya	South Asian University Library	DU Library
Rate of Occurrence	0.27	0.55	0.47	0.3	0.3	0.47	0.55
Average	1.37	2.75	2.37	1.5	1.5	2.37	2.75
Standard Deviation	0.74	1.98	1.68	1.41	1.41	1.40	1.75

8. Findings, Conclusion & Future Plans

Based on the study the analysis clearly reflects the scope of work in the field of Digital Scholarship to be done by the Academic Libraries in India meant to be of National importance. The introduction of Digital Scholarship is the model could be adopted by the libraries as fellowships or internship by the libraries. To attract more scholars, it could be introduced as a representation of the Knowledge Hubs using the corpus amount which could be paid as remuneration to the digital scholars. The remuneration may render to be of good support for carrying the day to day demands and meet the basic needs. In the preliminary stage the University libraries may propose for summer scholarship and later extend to semester or year - long fellowship programme. Not restricting to any eligibility or criteria, the students may be given digital project within the affiliation of library while working as a scholar. The selected scholars will begin by undergoing training, sharing their progressing experience by writing blogs, assisting in the digital project and finally making presentations and publication. By acquiring and structuring the governance, the concept of Digital Scholarship could be expanded and integrated to become a credit based learning scholarship which will be essential for the students enrolled for Information studies in particular. Also, collaborating with different universities across the globe Online courses will also be proposed & drafted for the of exchange programmes between the libraries at National and International level. Based on the Content Analysis it is recorded that the Academic Libraries covered in the study though are well equipped in terms of tools and technology still there is a need to adapt a sustainable model.

With the introduction of Digital Scholarship in the University the Library Managers i.e. the Knowledge Managers will collaborate closely with the scholars in turn will offer 'Exchange & Partnership of Information & Knowledge amongst Generations'. The model will facilitate continuous flow of knowledge partnership in creation, description and preservation. This can be further yielded by the research & knowledge communities in form of Digital Assets for the institutions meant for National Importance

9. Limitation of the study

The sustainability and scalability of introducing the novel concept of Digital Scholarship in University Libraries is of prime importance and limited to data, archiving and open access only. The proposed model is limited to 7 Central University Libraries of Delhi and recommends a cost effective proposal leading to a sustainable model.

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