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Usage of Websites and eJournals: A Comparative Study of Universities of North India

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I. INTRODUCTION

Information acts as a hub for the expansion of knowledge, foundation for novelty, the creation of resources for knowledgeable population, and as an outcome, becomes a key product for the extension of the society. Mode and sources of seeking information depends upon the literary status of the members of the society. Literate members obtain the requisite information from a variety of sources such as books, journals, databases, e-resources which are often dearer, intricate and complicated for acquisition and use. As Belkin[1] (1978) defined that "the information associated with a text is the generator's modified (by purpose, intent, knowledge of recipient's state of knowledge) conceptual structure which underlines the surface structure (e.g., language) of that text".

1.1 INTERNET RESOURCES

The resources which incorporate documents as well as non-documents in electronic format are understood to mean the Internet resources. Such resources bring forth the information and are simply accessible over the Internet. The Internet resources covered in the present study includes Websites, E-Mail, Listservs, online catalogs, online databases, eJournals and web portals.

1.2INFORMATION SEEKING BY SOCIAL SCIENTISTS

Hemminger, Lu, Vaughan and Adams[2] (2007) explained that "the information seeking behavior of social scientists is being transformed by the availability of electronic resources for searching, retrieving, and reading scholarly materials". Social scientists now progressively use official records, Internet, online databases, e-resources, newspapers and bulletins along with the accustomed documents like books, conference proceedings, journals, research papers, etc.

Therefore, understanding the information-seeking behaviour of social science faculty is essential for information professionals to meet their information needs. To grow up as the potent information providers, an inclusive understanding of the information-seeking behaviour of the users is anticipated. Such understanding would lead to innovation of novel information behaviours which can be used to augment prevailing information models and amplify new ones.

The analysis of the use of Internet resources as a tool for seeking information by the faculty members of the selected universities under study is as below.

1.3 SIGNIFICANCE OF THE STUDY

The information generated by the proposed study would facilitate the development of wide information service base to serve the present and future social scientists. The study in hand would serve as an appraisal of the Internet resources now-a-days being utilized by the social science faculty. The present study would be used to evaluate and provide suggestions to improve the services of the libraries in order to cater to the information-seeking behaviour of the social science faculty.

1.4STATEMENT OF THE PROBLEM

The study in hand explores the access, preferences, usage and purpose of using Internet resources with special reference to online databases and eJournals by the social science faculty in sample Universities of North India.

1.5 OBJECTIVES OF THE STUDY

i. To study various available Internet resources, their preferences, usage and the purpose for which social science faculty use such resources.
ii. To study the extent and pattern of usage of online databases.
iii. To study the extent and pattern of usage of eJournals.

[1] Belkin, N.J. (1978). Information concepts for information science. *Journal of Documentation, 34(1),* p.81.
[2] Hemminger, B.M., Lu, D., Vaughan, K.T.L.., & Adams, S.J. (2007). Information seeking behavior of academic scientists. *Journal of the American Society for Information Science and Technology, 58(14),* p.2205.

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1.6 HYPOTHESIS

i. There is no significant difference in the usage of Online databases by the social science faculty of the sample universities.
ii. There is no significant difference in the usage of eJournals by the social science faculty of the sample universities.

1.7 RESEARCH SAMPLE

In the present study, the faculty of social sciences of five universities from Punjab, Haryana and Chandigarh were studied. The representative sample was taken on the basis of a 'table for determining sample size from a given population' given by Krejcie, and Morgan[3] (1970). The researcher made an effort to ensure a sample that was representative of the disciplines of social sciences by randomly selecting 34.35% of the respondents from each discipline of social sciences from each university. After applying "Proportionate Stratified Random Sampling Technique", the representative sample of 260 respondents was taken out of a population of 757 faculty members from five universities. The distribution of each category of respondents in five universities by proportion is shown in table 1 below:

University-wise Distribution of Participants						
Department	**Universities**					
	PU Faculty	**PbiU Faculty**	**GNDU Faculty**	**MDU Faculty**	**KU Faculty**	**Total**
Commerce and Management	12	13	8	16	14	**63**
Economics	4	6	5	4	4	**23**
Education	3	3	--	4	5	**15**
Geography	4	2	--	5	3	**14**
History	3	2	4	4	2	**15**
Journalism	3	2	--	2	--	**7**
Law	15	5	3	10	10	**43**
Philosophy	3	2	3	--	2	**10**
Political Science	4	4	2	2	2	**14**
Psychology	3	5	2	6	3	**19**
Public Administration	3	2	--	3	3	**11**
Sociology	4	3	3	4	1	**15**
Library and Information Science	2	2	2	2	3	**11**
Total	**63**	**51**	**32**	**62**	**52**	**260**

Source: Krejcie and Morgan (1970). Table for determining sample size from a given population.

Table 1: Distribution of participants in five universities under study

1.8 METHODOLOGY

In the present study, in order to attain the research objectives and to address the research problems, the researcher performed quantitative research and considered survey design to be the most appropriate research design.

2.0 REVIEW OF LITERATURE

Barki, and Kapade[4] (2014) in their paper studied the information-seeking behaviour of faculty members in the biological departments of only science colleges in Gondia Education Society, Gondia. They revealed that majority of the science faculty preferred reference books (28.85%). They observed that 32.7% respondents were using diverse search engines to access online information sources, whereas only 28.85% respondents were using e-journals for information seeking. **Babaria, Patel, and Gohel[5] (2014)** in their paper studied the types of information sources available, use and accessibility of information technologies

[3]Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*, 607-610. Retrieved from http://home.kku.ac.th/sompong/guest_speaker/KrejcieandMorgan_article.pdf
[4] Barki, M., & Kapade, D. (2014). Information seeking behavior of science faculty: a study. *IOSR Journal of Humanities and Social Science (IOSR-JHSS), 19(3),* 32-34.
[5] Babariya, N.A., Patel, M.G., & Gohel, A.V. (2014). Information seeking behavior of library and information science professionals in India. *International Research Journal of Social Sciences, 3(3),* 27-35.

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such as Internet and the present services available in their respective libraries. They observed that the information sources available in the libraries include books (100%), followed by CD-DVD's (97%) and dictionaries (96%). They suggested that the librarians should be able to handle various tasks related to automation, software, digitization, etc. and provide access to its users. **Mostofa[6] (2013)** in his study investigated the use of electronic information sources by the faculty members and found that 47.8% respondents preferred home for study purpose, 43% used formal sources of information frequently. He suggested that the faculty members of each department should work in collaboration and the library professionals should provide the instructions for explicit information seeking associated with their careers and professional activities. **Thanuskodi[7] (2012)** in his study investigated the information channels used, preferred information sources, methods adopted for obtaining the requisite information and the library usage pattern of the faculty members. He revealed that books were ranked as the most important source for teaching and research purpose. He found that the users who had good library usage skills visited library frequently as compared to users who had low library usage skills. He further found that the most frequently used IT-based sources were OPAC and CD-ROM and e-mail was the most popular Internet applications among respondents. **Lakshmi, Chinnasamy, and Venkatachalam[8] (2011)** in their paper examined the usage of library resources by the users of VMKV Engineering College. They found that books were preferred by 43.10% respondents, followed by periodicals (31.03%) and reference sources (12.07%). They found that lack of time (41.98%) and inadequate bibliographical control (29.01%) were the problems encountered by the participants while seeking information.

3.0 ANLAYSIS OF DATA

3.1 INTERNET RESOURCES AS A TOOL TO SEEK INFORMATION

Tables below analyze the use of Internet resources as a tool for seeking information by the faculty members of the selected universities under study.

3.2 Access to Internet resources

In response to the question whether the respondents have access to the Internet resources in their respective universities, the responses received from the respondents are depicted in table 2 below:

Sr.No.	Access to Internet Resources	No. of Respondents (n=215)	% age of Respondents
1.	Yes	215	100.0
2.	No	0	0.0

Table 2: Distribution of participants regarding access to Internet resources

From table 2 above, it is clear that all the respondents (100%) replied in positive that they have an access to Internet resources in their respective universities.

3.3 Preferences of Internet resources

The participants' preference (n=215) in order of the ranks given by them between rank 1 (most preferred) and rank 3 (least preferred) to each of the Internet resources specified in the list provided in the survey instrument is depicted in table 3 below:

Sr. No.	Internet Resources (n=215)	Preferences		
		1st	2nd	3rd
		N (%)	N (%)	N (%)
1.	Websites	107 (49.8)	64 (29.7)	44 (20.5)
2.	E-Mail	103 (47.9)	63 (29.3)	49 (22.8)
3.	Listservs	44 (20.5)	57 (26.5)	114 (53.0)
4.	Online Catalogs	52 (24.2)	9 (4.2)	154 (71.6)
5.	E-Journals	68 (31.6)	56 (26.0)	91 (42.3)
6.	Web Portals	66 (30.7)	5 (2.3)	144 (67.0)
7.	Any other (please specify)	0 (0)	0 (0)	0 (0)

Table 3: Preferences of the Internet resources by the participants

[6] Mostofa, S.M. (2013). Study of information needs and seeking behavior of faculty members of Darul Ihsan University in Bangladesh. *Library Philosophy and Practice (e-journal). Paper 983*. Retrieved from http://digitalcommons.unl.edu/libphilprac/983

[7] Thanuskodi, S. (2012). Information needs and seeking behaviour of the Tamil Nadu Dr. Ambedkar Law University faculty members. *International Journal of Information Science, 2(4),* 42-46. doi:: 10.5923/j.ijis.20120204.03

[8] Lakshmi, S.R., Chinnasamy, K., & Venkatachalam, A. (2011). Study of information seeking behaviour of users of Vinayaka Mission's Kirupananda Variyar Engineering College Library in Salem. *International Journal of Library and Information Science, 3(8),* 179-186. Retrieved from http://www.academicjournals.org/article/article1379674814_Sankari%20et%20al.pdf

The tabulated data from table 3 above evince that websites (49.8%) and e-mail (47.9%) were the top two most preferred Internet resources in terms of 1st and 2nd rank given by the participants. E-journals were reported to be the 3rd most preferred Internet resource in terms of rank 1 by 31.6% participants but a significant number of participants put it at rank 2 and 3. These were followed by web portals (30.7%) and online catalogs (24.2%) in terms of rank 1 but a significantly higher number of rank 3.

3.4 Use of Internet resources

The frequency of use of Internet resources by the participants (n=215) to seek information is depicted in table 4 below:

Sr. No.	Internet Resources (n=215)	Frequency					
		Daily	Weekly	Fortnightly	Monthly	Occasionally	Rarely
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
1.	Websites	121 (56.2)	82 (38.1)	0 (0)	1 (0.5)	8 (3.8)	3 (1.4)
2.	E-Mail	174 (80.9)	35 (16.2)	1 (0.5)	0 (0)	4 (1.9)	1 (0.5)
3.	Listservs	2 (1)	18 (8.4)	11 (5.1)	6 (2.8)	41 (19.0)	137 (63.7)
4.	Online catalogs	35 (16.2)	58 (27.0)	83 (38.6)	15 (7.0)	15 (7.0)	9 (4.2)
5.	E-Journals	57 (26.5)	109(50.6)	25 (11.6)	8 (3.8)	10 (4.7)	6 (2.8)
6.	Web Portals	27 (12.6)	110 (51.2)	40 (18.6)	7 (3.3)	21 (9.7)	10 (4.6)

Table 4: Frequency of use of Internet resources by the participants

Table 4 above indicates that among the users of websites, 56.2% participants used web as an information gathering tool 'daily', followed by 38.1% participants used it 'weekly'. For email users, 80.9% participants used email as an information gathering tool 'daily', followed by 16.2% participants used it 'weekly', 0.5% participants used it 'fortnightly. One percent of the participants used listservs 'daily'. More than 16% of the respondents used online catalogs 'daily', followed by 27% participants used them 'weekly', whereas only 4.2% participants used them 'rarely'. More than 26% of the participants access eJournals 'daily', followed by 50.6% participants who access them on 'weekly' basis, 11.6% participants access them 'fortnightly', 3.8% participants access these on 'monthly' basis, 4.7% participants access eJournals 'occasionally' and 2.8% participants access them 'rarely'.

It is apparent from the above discussion that majority of the participants used e-mail and websites 'daily', e-journals and web portals 'weekly', online catalogs 'fortnightly' and listservs 'rarely'. Similar results were obtained by **Xuemei[9] (2010)** in his study, wherein he discovered that majority of the participants used web (48%) and e-mail (40%) daily or multiple times a day. 60% of them used listservs on daily basis, whereas e-journals were used from daily to weekly by more than 70% of the participants.

3.5 Purpose of using Internet resources

Table 5 below reveals the responses of the participants regarding the purpose of using Internet resources. The options were (a) Article writing (b) To keep up to date (c) For career development and growth and (d) Any other.

Sr. No.	Internet Resources (n=215)	Purpose			
		Article Writing	To Keep up to date	For career development and growth	Any other
		N (%)	N (%)	N (%)	N (%)
1.	Websites	128 (59.5)	148 (68.8)	63 (29.3)	0 (0)
2.	E-Mail	48 (22.3)	186 (86.5)	33 (15.3)	0 (0)
3.	Listservs	08 (3.7)	30 (14.0)	39 (18.1)	0 (0)
4.	Online catalogs	38 (17.7)	115 (53.5)	36 (16.7)	0 (0)
5.	E-Journals	152 (70.7)	90 (41.9)	73 (34)	0 (0)
6.	Web Portals	70 (32.6)	95 (44.2)	44 (20.5)	0 (0)

(Percentage may exceed 100 due to multiple responses)

Table 5: Participants purpose of using Internet resources

From table 5 above, it is observed that 68.8% participants used websites for keeping up to date, followed by article writing (59.5%). 86.5% participants used e-mail for the purpose of keeping themselves up to date, followed by 22.3% participants who used it for the purpose of article writing. Only 3.7% participants used listservs for article writing. 53.5% participants used online catalogs for keeping up to date. eJournals were used by majority of participants (70.7%) for article writing. As far as web portals are concerned, it is revealed that 44.2% participants used them for keeping up to date. 'Any other' option received no response

[9] Xuemei, G. (2005). *Information-seeking behavior of social sciences and humanities researchers in the Internet age.* (Master's Thesis). The University of Tennessee, Knoxville, p.36. Retrieved from http://trace.tennessee.edu/cgi/viewcontent.cgi?article=3256&context=utk_gradthes

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from the participants. The study indicates that majority of the participants used websites, e-mail and online catalogs for keeping themselves up to date and used e-journals for the purpose of writing of articles.

3.6 HYPOTHESES TESTING

In the present study, the identified variables were cross-tabulated and the appropriate tests were applied to prove the statistical significance. The hypotheses were tested as per the data analyzed below:

3.6.1 Testing of Hypothesis H_o1: There is no significant difference in the quantum of usage of Websites by the social science faculty of the sample universities.

Usage of Websites

Analysis of table 6 below shows the frequency distribution of 215 participants (who use websites) from social science faculty of five sample universities of North India according to their usage of websites as a source of information:

Sr. No.	Usage of Websites (n=215)	Name of the University					Total	χ^2 (df; p-value)
		PU	PbiU	GNDU	MDU	KU		
1.	Daily	44 (77.2)	21 (43.8)	17 (70.8)	21 (44.7)	18 (46.2)	121 (56.3)	41.80 (16;.000*)
2.	Weekly	12 (21.1)	25 (52.1)	5 (20.8)	25 (53.2)	15 (38.5)	82 (38.1)	
3.	Fortnightly	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
4.	Monthly	1 (1.8)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.5)	
5.	Occasionally	0 (0)	2 (4.2)	2 (8.3)	1 (2.1)	3 (7.7)	8 (3.7)	
6.	Rarely	0 (0)	0 (0)	0 (0)	0 (0)	3 (7.7)	3 (1.4)	
Total		57 (100)	48 (100)	24 (100)	47 (100)	39 (100)	215 (100)	

** Significant at .05 level*

Table 6: Usage of websites by the participants

It is clear from table 6 above that the usage of websites on daily basis is maximum by the participants from PU (77.2%), followed by GNDU (70.8%), KU (46.2%), MDU (44.7%) and PbiU (43.8%). The weekly usage of websites is maximum by the faculty of MDU (53.2%), followed by PbiU (52.1%). However, few participants use websites on monthly and rarely basis. It is clear from the above observation that the daily usage pattern (56.3%) is most relied upon by the participants, followed by weekly (38.1%) usage patterns. High daily usage pattern is in line with what is being required of faculty to remain abreast with daily updates on the Internet resources for effective utilization of the data.

The calculated chi square value and p-value ($\chi^2 = 41.80$; df = 16; p = 0.000) shows highly significant difference in the quantum of usage of websites by the social science faculty across five sample universities. Hence, the findings again reject hypothesis H_o1.

3.6.2 Testing of Hypothesis H_o2 There is no significant difference in the quantum of usage of eJournals by the social science faculty of the sample universities.

Usage of E-journals

Table 7 below reveals the frequency distribution of participants (n=215, who use eJournals) across five sample universities of North India according to their usage of eJournals as a source of information:

Sr. No.	Usage of eJournals (n=215)	Name of the University					Total	χ^2 (df; p-value)
		PU	PbiU	GNDU	MDU	KU		
1.	Daily	25 (43.9)	16 (33.3)	4 (16.7)	4 (8.5)	8 (20.5)	57 (26.5)	40.94 (20;.004*)
2.	Weekly	21 (36.8)	26 (54.2)	10 (41.7)	30 (63.8)	22 (56.4)	109 (50.7)	
3.	Fortnightly	8 (14)	3 (6.3)	3 (12.5)	6 (12.8)	5 (12.8)	25 (11.6)	
4.	Monthly	2(3.5)	0 (0)	2 (8.3)	2 (4.3)	2 (5.1)	8 (3.7)	
5.	Occasionally	1 (1.8)	1 (2.1)	3 (12.5)	5 (10.6)	0 (0)	10 (4.7)	
6.	Rarely	0 (0)	2 (4.2)	2 (8.3)	0 (0)	2 (5.1)	6 (2.8)	
Total		57 (100)	48 (100)	24 (100)	47 (100)	39 (100)	215 (100)	

** Significant at .05 level*

Table 7: Distribution of participants according to their usage of E-journals

After analysis, it is clear from table 7 above that daily usage of e-journals is highest in PU (43.9%), followed by PbiU (33.3%), KU (20.5%), GNDU (16.7%) and MDU (8.5%). The weekly usage was highest by the participants from MDU (63.8%), followed by KU (56.4%), PbiU (54.2%), GNDU (41.7%) and PU (36.8%). The participants from PU (14%) use them maximum on fortnightly basis, followed by KU (12.8%), MDU (12.8%), GNDU (12.5%) and PbiU (6.3%). Less than 13% of the

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participants use them on monthly, occasionally and rarely basis. It can be concluded from the above results that the weekly usage (50.7%) is the most preferred pattern by the participants, followed by daily (26.5%) and fortnightly (11.6%) usage. Occasionally (4.7%), monthly (3.7%) and rarely (2.8%) usage is sparse. Daily usage by the participants is highest in PU among all the universities. It is required to be adopted by the faculty of all the universities for good results.

The calculated chi square value and p-value ($\chi^2 = 40.94$; df = 20; p = 0.004) shows the highly significant difference in the quantum of usage of eJournals by the social science faculty across five sample universities. Hence, the findings again reject hypothesis H_o2.

4.0 FINDINGS AND CONCLUSION

- 100% participants had an access to and browse Internet resources in their respective universities.
- Websites (49.8%) and e-mail (47.9%) are the two 'most preferred' Internet resources by majority of the participants, followed by e-journals (31.6%), web portals (30.7%) and online catalogs (24.2%).
- E-mail (80.9%) and websites (56.2%) are used daily by majority of the participants. E-journals (50.6%) and web portals (51.2%) are used by the participants on weekly basis and online catalogs (38.6%) are used fortnightly by most of the respondents.
- Majority of the participants use e-mail (86.5%), websites (68.8%), and online catalogs (53.5%) for keeping themselves up to date and use e-journals (70.7%) for the purpose of writing of articles.
- Majority of the respondents (38.5%) consider websites to be the most important Internet resource, followed by e-journals (37.7%), e-mail (35.8%), online catalogs (35.3%) and web portals (32%). Listservs were considered to be the least important Internet resource by 31.6% participants.
- High significant difference was found in the quantum of usage of websites by the social science faculty across five sample universities.
- High significant difference was found in the quantum of usage of eJournals by the social science faculty across five sample universities. Hence, the findings again reject hypothesis H_o2.

5.0 CONCLUSION

The findings of the study indicate that the participants are dependent upon Internet resources such as websites and eJournals for their teaching, research and updating themselves in their field of specialization. The study reveals that the participants have been using the available e-resources satisfactorily.

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