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Impact of Information Technology on User Services in University Libraries of Haryana

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ABSTRACT

Information technology has profound effect on the progress and development of human civilization. The advances in science and technology has made a tremendous improvement and changed all activities of present society. Due to revolution of information technology, increased tremendously demand, consumption, and importance of information in present society. The modern technology has greatly improved the capabilities of managing this explosive growth of information effectively. Information technologies today are characterized by their very dynamic development and increasing complexity. Through questionnaire survey the study identifies the impact of information technology on user service and examines the preparedness of library staff for optimum utilization of information technology applications in libraries. The paper concludes that the information technology has great impact on user services like information collection, collection arrangement, innovation, utilization etc.

Keywords: Information Technology, User Services.

INTRODUCTION

Currently we are passing through an era of rapid technological and socio-economical changes. Furthermore, the aura of such changes makes us believe that we are living in an information society. The technological revolution during the last five decades has made tremendous impact on the way, how information is processed, stored, retrieved and disseminated. Believe it or not, admit it or not, the growth and development of Information Technology (IT) are one of the most significant achievements of the present century (Dhanavandan, 2008).

Information Technology has brought a dimensional change in the way people work and live. Every walk of life is deeply affected by the information Technology. The revolution that started about half a century ago has grown at a phenomenal pace of bring a paradigm shift in the present day society. From stand-alone systems of a few years ago, we have now started living in a networked environment. Even from the wired networks of recent past, we have prepared ourselves to wireless networks spread over large campuses.

NEED FOR INFORMATION TECHNOLOGY

Rapid advances in IT in the past two decades have brought revolutionary changes in the concept, organization, functioning and management of library and information systems throughout the world. The impact of these changes is pervasive and affecting all the aspects of library operations, information resources and services, staff skills requirements and users expectations. The accelerating pace of technological developments has tremendously increased the ability to access, store, process, communicate and deliver information services in libraries. Worldwide libraries have been exploring new technologies as a means of providing better and faster access to vast array of information resources and efficient information services to their users. IT has a huge potential for providing wide range of new opportunities and offering better solutions to achieve greater levels of efficiency, productivity and higher standards of quality services in libraries (Ramana, 2004).

IMPACT OF IT ON LIBRARY

The technology revolution has brought many changes to the way librarians and library staff manages their day and provide information to the users. Up until ten years ago, libraries were book focused institutions. They had just printed card catalogs; online databases had barely become tools in the librarian's arsenal to answer questions. In the early 1990s Public access terminals and new online public access catalogue became ubiquitous in libraries to share information regarding library holdings and management of library acquisition.

OBJECTIVES

The following are the objectives of the study:

- To asses the impact of Information Technology on user services.
- To examine the preparedness of library staff for optimum utilization of Information Technology applications in libraries.
- To find out the user satisfaction from Information Technology applications available in libraries.
- To suggest ways and means to enhance the utility of Information Technology applications in libraries.
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REVIEW OF LITERATURE

Singh(2013) in his article Impact of Technology in Library Services stated that the digital library movement in India is rapidly increasing and the traditional libraries are on their way to digitization in a phased manner. The financial constraint of different institutions and government departments creates problem to acquire necessary information technology equipment and infrastructure. This paper highlighted that UGC and INFLIBNET centre have taken steps to develop a consortium where college, university and research library can join for subscription to online journals.

Talab and Tajafari (2012) conducted a study on Impact of Information and Communication Technology on library staff training. The study concludes that 75.8 % respondents are professionals and 24.2 % are paraprofessionals. The study also found that both Indian and Iranian library staff are interested in ICT training and 97% respondents believe that introduction of ICT in libraries has affected their training need.

Mairaj and El-Hadi (2012) conducted a study on Applications of information and communication technologies in libraries in Pakistan. The study concludes that 72.3% libraries had started automating. 56.3% libraries had almost completely computerized their cataloging operation. 72.2% libraries were using various kinds of software. 81.8%of medical libraries had Internet connectivity. The study also found that 95.5% respondents indicated that they had to face problems. Lack of cooperation from higher authorities for (61.9%) and insufficient budget for (52.4%) were the most significant problems.

Rasul and Sahu (2011) conducted a study on Use of IT and Its Impact on Service Quality in an Academic Library. The study concludes that 53.75% of the respondents visits library daily and 30% visit once in 2-3 days. 88.75% respondents are satisfied on library facilities and services and 11.25% respondents not satisfied. The study also found that maximum users daily visit the IIMT library due to high cost of the foreign text books and journals.

Lssa and Others (2011) conducted a study on Application of Information Technology to Library Services at the Federal University of Technology, Akure Library, Ondo State, Nigeria. The study concludes that majority of respondents (74.3%) use internet. The study also found that that the major constraints hindering the use of audiovisual and electronic resources include poor power supply, poor infrastructure, lack of adequate skill, high cost, and unavailability.

METHODOLOGY

In order to accomplish the above set of research objectives the study has been carried out by using a questionnaire for collecting data. The questionnaire method is quite useful in soliciting information from the research scholars and PG students of the universities of Haryana. All the users were approached in the Departments as well as in the libraries and requested them to fill up the questionnaire. A total of 600 questionnaires were distributed to the research scholars and the students. About 525 dully filled in questionnaire were received back. The collected data is presented in the form of tables and analyzed by using the chi-square test.

SCOPE OF THE STUDY

The scope of the present study is limited to impact of information technology on user services in university libraries of Haryana namely:

- Kurukshetra University, Kurukshetra
- Maharshi Dayanand University, Rohtak
- Chaudhary Devi Lal University,Sirsa
- Bhagat Phool Singh Mahila Vishwavidyaly, Khanpur Kalan

ANALYSIS OF DATA

Table-1: Impact of IT on information sources/collection

	MDU		KUK		CDLU		BPSU		Total		χ^2
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Deteriorated	2	1.6%	1	.7%	0	.0%	0	.0%	3	.6%	50.651
Not Improved	5	3.9%	1	.7%	6	4.9%	9	6.7%	21	4.0%	
Little Improved	14	10.9%	25	17.9%	47	38.5%	27	20.0%	113	21.5%	
Much Improved	52	40.6%	65	46.4%	50	41.0%	58	43.0%	225	42.9%	
Very Much Improved	55	43.0%	48	34.3%	19	15.6%	41	30.4%	163	31.0%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The perusal of the table-1 shows that there is statistically significant difference (χ^2=50.651, p< .001) of the respondents on information sources/collection. This may be interpreted that the respondents are of the view that IT has remarkable impact on information sources/collection. Near about 95.4% of the respondents reported that information sources/collection improved due to shift to information technology.

Table-2: Impact of IT on information services

	MDU		KUK		CDLU		BPSU		Total		χ^2
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Not Improved	2	1.6%	9	6.4%	4	3.3%	7	5.2%	22	4.2%	39.117
Little Improved	22	17.2%	39	27.9%	48	39.3%	52	38.5%	161	30.7%	
Much Improved	74	57.8%	59	42.1%	37	30.3%	62	45.9%	232	44.2%	
Very Much Improved	30	23.4%	33	23.6%	33	27.0%	14	10.4%	110	21.0%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The χ^2 value on variable services is 39.117 which is significant at .001 level. It shows that there is statistically significant difference in the responses of the respondents on information services. The results may be interpreted that the respondents are of the view that IT has made impact on information services. Most of the respondents (95.9%) mentioned improvement in information services due to change to information technology.

Table-3: Impact of IT on Collection Arrangement

	MDU		KUK		CDLU		BPSU		Total		χ^2
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Deteriorated	2	1.6%	1	.7%	0	.0%	0	.0%	3	.6%	37.735
Not Improved	12	9.4%	10	7.1%	4	3.3%	7	5.2%	33	6.3%	
Little Improved	36	28.1%	40	28.6%	61	50.0%	40	29.6%	177	33.7%	

Much Improved	46	35.9%	64	45.7%	43	35.2%	73	54.1%	226	43.0%	
Very Much Improved	32	25.0%	25	17.9%	14	11.5%	15	11.1%	86	16.4%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

Near about 93.1% of the respondents reported that Collection Arrangement improved due to information technology. This may be interpreted that the respondents are of the view that IT has made remarkable impact on collection arrangement The statistically significant difference ($\chi 2$=37.735, p< .001) among responses of the respondents on collection arrangement can be seen from table-3 above.

Table-4: Impact of IT on innovation (new ways of service)

	MDU		**KUK**		**CDLU**		**BPSU**		**Total**		$\chi 2$
	Count	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	
Deteriorated	3	2.3%	2	1.4%	0	.0%	1	.7%	6	1.1%	38.463
Not Improved	9	7.0%	22	15.7%	28	23.0%	19	14.1%	78	14.9%	
Little Improved	48	37.5%	26	18.6%	24	19.7%	50	37.0%	148	28.2%	
Much Improved	48	37.5%	70	50.0%	43	35.2%	45	33.3%	206	39.2%	
Very Much Improved	20	15.6%	20	14.3%	27	22.1%	20	14.8%	87	16.6%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The perusal of Table-4 shows that there is statistically significant difference ($\chi 2$=38.463, p< .001) of the respondents on Innovation. This may be interpreted that the respondents are of the view that IT has remarkable impact on innovation. Near about 84% of the respondents reported improvement in innovation due to information technology.

Table-5: Impact of IT on utilisation(resources/service usage)

	MDU		**KUK**		**CDLU**		**BPSU**		**Total**		$\chi 2$
	Count	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	
Deteriorated	2	1.6%	0	.0%	3	2.5%	0	.0%	5	1.0%	36.126
Not Improved	6	4.7%	17	12.1%	18	14.8%	4	3.0%	45	8.6%	
Little Improved	36	28.1%	33	23.6%	36	29.5%	61	45.2%	166	31.6%	
Much Improved	60	46.9%	61	43.6%	47	38.5%	50	37.0%	218	41.5%	
Very Much Improved	24	18.8%	29	20.7%	18	14.8%	20	14.8%	91	17.3%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The $\chi 2$ value on variable Utilisation is 36.126 from which is significant at .001 level. It shows that there is statistically significant difference among the respondents on utilisation. The results may be

interpreted that the respondents of the universities of Haryana are of the view that IT has made impact on utilisation. Most of the respondents (90.4%) mentioned improvement in utilisation due to information technology.

Table-6: Impact of IT on user-friendliness

	MDU		KUK		CDLU		BPSU		Total		$\chi 2$
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Deteriorated	3	2.3%	0	.0%	0	.0%	0	.0%	3	.6%	55.242
Not Improved	6	4.7%	14	10.0%	22	18.0%	18	13.3%	60	11.4%	
Little Improved	28	21.9%	43	30.7%	55	45.1%	32	23.7%	158	30.1%	
Much Improved	64	50.0%	45	32.1%	34	27.9%	59	43.7%	202	38.5%	
Very Much Improved	27	21.1%	38	27.1%	11	9.0%	26	19.3%	102	19.4%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The $\chi 2$ value on variable user-friendliness is 55.242 from table-6 which is significant at .001 level. It shows that there is statistically significant difference of the respondents on user-friendliness. The results may be interpreted that the respondents are of the view that IT has made impact on user-friendliness. Due to information technology most of the respondents (88%) mentioned improvement in user-friendliness.

Table-7: Impact of IT on efficiency

	MDU		KUK		CDLU		BPSU		Total		$\chi 2$
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Deteriorated	1	.8%	0	.0%	8	6.6%	0	.0%	9	1.7%	48.543
Not Improved	5	3.9%	12	8.6%	11	9.0%	10	7.4%	38	7.2%	
Little Improved	40	31.3%	42	30.0%	43	35.2%	34	25.2%	159	30.3%	
Much Improved	53	41.4%	41	29.3%	40	32.8%	70	51.9%	204	38.9%	
Very Much Improved	29	22.7%	45	32.1%	20	16.4%	21	15.6%	115	21.9%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The $\chi 2$ value on variable efficiency is 48.543 from table-7 which is significant at .001 level. It shows that there is statistically significant difference in the opinion of the respondents on efficiency. The results may be interpreted that the respondents are of the view that IT has made impact on efficiency of the users. Most of the respondents (91.1%) mentioned improvement in efficiency due to information technology.

Table-8: Impact of IT on effectiveness(how well library satisfies your demands)

	MDU		KUK		CDLU		BPSU		Total		$\chi 2$
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Deteriorated	1	.8%	0	.0%	8	6.6%	0	.0%	9	1.7%	44.608
Not Improved	9	7.0%	22	15.7%	22	18.0%	14	10.4%	67	12.8%	
Little	37	28.9%	46	32.9%	44	36.1%	41	30.4%	168	32.0%	

Improved											
Much Improved	60	46.9%	51	36.4%	25	20.5%	56	41.5%	192	36.6%	
Very Much Improved	21	16.4%	21	15.0%	23	18.9%	24	17.8%	89	17.0%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

Near about 85.6% of the respondents reported that effectiveness improved due to information technology. This may be interpreted that the respondents are of the view that IT has remarkable impact on satisfying the demands of the users. The statistically significant difference ($\chi 2 = 44.608$, $p < .001$) of the respondents on effectiveness can be seen from table-8 above.

Table-9: Impact of IT on staff attitude (helpfulness)

	MDU		KUK		CDLU		BPSU		Total		$\chi 2$
	Count	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	
Deteriorated	5	3.9%	0	.0%	0	.0%	0	.0%	5	1.0%	
Not Improved	11	8.6%	6	4.3%	12	9.8%	8	5.9%	37	7.0%	
Little Improved	32	25.0%	50	35.7%	19	15.6%	25	18.5%	126	24.0%	
Much Improved	53	41.4%	37	26.4%	62	50.8%	60	44.4%	212	40.4%	48.048
Very Much Improved	27	21.1%	47	33.6%	29	23.8%	42	31.1%	145	27.6%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

Near about 92% of the respondents reported that helpfulness attitude improved due to information technology. This may be interpreted that the respondents are of the view that IT has remarkable impact on staff attitude. The statistically significant difference ($\chi 2 = 48.048$, $p < .001$) of the respondents on staff attitude can be seen from Table-9 above.

Table-10: Impact of IT on staff competence (knowledge & expertise)

	MDU		KUK		CDLU		BPSU		Total		$\chi 2$
	Count	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	**Count**	**Col %**	
Not Improved	11	8.6%	9	6.4%	27	22.1%	6	4.4%	53	10.1%	
Little Improved	38	29.7%	42	30.0%	45	36.9%	24	17.8%	149	28.4%	
Much Improved	42	32.8%	65	46.4%	32	26.2%	54	40.0%	193	36.8%	59.099
Very Much Improved	37	28.9%	24	17.1%	18	14.8%	51	37.8%	130	24.8%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The perusal of Table-10 shows that there is statistically significant difference ($\chi 2 = 59.099$, $p < .001$) of the respondents on staff competence. This may be interpreted that the respondents are of the view that IT has remarkable impact on staff competence. Near about 90% of the respondents reported that staff competence improved due to information technology.

Table-11: Impact of IT on satisfaction

	MDU		KUK		CDLU		BPSU		Total		$\chi 2$
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Deteriorated	2	1.6%	0	.0%	11	9.0%	0	.0%	13	2.5%	70.082
Not Improved	8	6.3%	9	6.4%	21	17.2%	5	3.7%	43	8.2%	
Little Improved	35	27.3%	44	31.4%	41	33.6%	51	37.8%	171	32.6%	
Much Improved	52	40.6%	48	34.3%	27	22.1%	64	47.4%	191	36.4%	
Very Much Improved	31	24.2%	39	27.9%	22	18.0%	15	11.1%	107	20.4%	
Total	128	100.0%	140	100.0%	122	100.0%	135	100.0%	525	100.0%	

The $\chi 2$ value on variable satisfaction is 70.082 which is significant at .001 level. It shows that there is statistically significant difference in the opinion of the respondents on satisfaction. Most of the respondents(89.4%) mentioned improvement in satisfaction due to information technology.

FINDINGS OF THE STUDY

The followings are the major findings of the present study:

1. 95.4% of the respondents reported that information sources/collection improved due to shift to information technology.
2. Most of the respondents (95.9%) mentioned improvement in information services due to change to information technology.
3. Near about 93.1% of the respondents reported that Collection Arrangement improved due to information technology.
4. 84% of the respondents reported improvement in innovation due to information technology.
5. Most of the respondents (90.4) mentioned improvement in utilisation due to information technology.
6. Due to information technology most of the respondents (88%) mentioned improvement in user-friendliness.
7. Most of the respondents (91.1%) mentioned improvement in efficiency due to information technology.
8. Near about 85.6% of the respondents reported that effectiveness improved due to information technology
9. Near about 92% of the respondents reported that helpfulness attitude improved due to information technology
10. Near about 90% of the respondents reported that staff competence improved due to information technology.
11. Most of the respondents (89.4%) mentioned improvement in satisfaction due to information technology.

CONCLUSION AND SUGGESTIONS

Information technology will play a vital role in the 21st century. There is a sure indication that the conventional paper-based documents would vanish from everyday life. The information revolution of today is indisputably caused by the unprecedented advances in information technology comprising computers, telecommunications, micrographics, and reprographics. All these are the pointers towards a paperless society. In a nutshell, libraries would continue to render its valuable services with the help of IT to respond to the needs of the readers and to procure the cost effective information sources.

In order to enhance the information technology skills among university library users, few suggestions have been made here:

1. More computers with latest configuration and multimedia kit should be installed in the libraries so that the user can access information without difficulty.
2. Special fund provision should be made in the annual budget for IT and utilized properly.

3. The time slot of internet should be increased. If possible, there should be no time limit and users should freely access internet even in free times.
4. Wi-Fi facility should also be provided.
5. Subscription of Electronic journals should be increased so that information need of research scholars can be fully satisfied.

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