

Impact of Information Technology on the Job Satisfaction of LIS Professionals: A Case Study of Jammu & Kashmir

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ABSTRACT

Based on the primary data collected from the library and information science professionals working in the higher education sector of the Jammu and Kashmir, the study aims to assess, as how far the application of information and communication technology apart from improving the library services and activities, has been instrumental in improving the job satisfaction among the library and information professionals. In all 264 responses were generated from the respondents, a whopping, 68.9 per cent respondents are of the view that library and information science professionals contribute significantly into the teaching and research activities of their institution. 61 per cent respondents have shown satisfaction with the information technology infrastructure in their respective libraries, while as, 60.2 per cent respondents are of the view that the application of information technology in libraries contribute to the job satisfaction of library professionals. Still more, 43.9 per cent respondents viewed that the library professionals working in the manual environment show lower levels of job satisfaction.

Keywords: Libraries; Information technology; Library professionals; Job satisfaction; Jammu & Kashmir; Higher education; Infrastructure

1. INTRODUCTION

The success of any institution or an organisation solely depends on its human resource and the human resource which is skilled and technically sound, is always deemed as an asset to the institution or an organisation. But, if the same human resource is not satisfied with an organisation on one or the other account, this dissatisfaction is bound affect the overall productivity of the organisation and so holds true about the library professionals. Till recent past, the library professionals more often used to rate their job as more monotonous, less interactive and least attractive, hence the professionals used to show lower levels of job satisfaction. Although salary, work environment, interpersonal relationship, recognition, advancement, job security, etc, are some of the prime variables which contribute significantly to the job satisfaction of an employee, but apart from these, there are other factors as well which contribute towards the job satisfaction or dissatisfaction among employees. Accordingly, in the modern times, application of information and communication technology in handling the routine services and activities in an organisation is being seen as an important variable, which contributes to the job satisfaction among employees.

It is an established fact that the application of information and communication technology has transformed the every sphere of human activity and so holds true about the application of IT in libraries. Post 1990, like every other institution,

libraries all across the world experienced a soft revolution, whereby a growing trend was observed towards the application of soft technology in handling the routine library services and activities. The introduction of IT in libraries, not just reshaped the ways and means of doing the routine library services and activities, but also turned the job for library professionals more interactive, hence infused a new zeal among library professionals in rendering services to the users, which in turn is being seen as having improved the job satisfaction among the library professionals.

The application of IT has helped libraries to move beyond the four walls by adding a whole new lot of services in this IT driven world. Application of IT in libraries is certain to expand and add new roles and responsibilities, so would IT help in opening up new opportunities, which will ultimately serve them with greater job satisfaction¹. Accordingly, the present study is an attempt to assess the impact of information technology on the overall job satisfaction of library and information professionals in general and those working in the higher education sector in the Jammu & Kashmir in particular.

1.1 Problem Statement

Looking back, libraries as sub-institutions of the larger institutions were seen as custody of books and librarians as custodians, who were more aimed to preserve the documents rather to optimise their use among the information seeker. This conventional image of a library professional somewhere still haunts the present day library professionals, who more or less are not satisfied with their job to the extent they otherwise should

have been. There is no denying in the fact that in the absence of IT, libraries were less attractive and least challenging, but introduction of IT has made libraries more interactive, which warrants the need to assess as how far the IT has improved the job satisfaction among the library professionals.

2. OBJECTIVES

- To assess the impact of information and communication technology on the job satisfaction of library and information science professionals working in the higher education sector of Jammu & Kashmir.
- To understand the perception of library professionals at the gender level towards the application of IT in the routine services and activities of the libraries and the need thereof to hone the IT skills.
- To assess the perception of library professionals of their contribution in the academic and research activities of their institutions in this ever and fast changing IT environment.

3. LITERATURE REVIEW

Studies in the past have revealed that IT has considerably improved the state of the library profession and so has application of IT in libraries helped in dragging better job satisfaction among the library professionals. The higher the levels of job satisfaction among employees, the better will be their job performance². The introduction of IT in libraries apart from helping with the job monitoring, has made the routine library activities more interactive and satisfying than the library activities undertaken during non-automated era, omit it, but keep citation number³. However, in a similar study undertaken by Waters among the library professionals of Tasmania observed that there is no direct correlation between the job satisfaction and the IT, which is independent of it⁴.

Information technology has considerably improved the library services and activities, and the outcome of rendering such services was not so satisfactory when rendered manually⁵. Information technology has changed the role of reference librarians to a great deal and so has it helped the library professionals to reduce their job stress. While surveying over 200 library professionals Plammi observed that IT apart from giving respite from the manual ways of doing work has also helped to overcome the heavy workloads⁶ and understaffing, mostly the libraries and the library professionals suffer with⁷. Skill development is important for the library professionals in the emerging information age, so should libraries engage in exchanging the skilled human resources, which is technology driven observed Lavagnino while interviewing the top library professionals⁸.

Integration of technology to provide more specialised library services to the clientele has reduced the intermediary role of library professionals, who were more or less acting as a bridge between the information and its seeker. With the help of technology, library professionals can play a more proactive role in rendering services to their users and so are library professionals seeking better job satisfaction in this ever and fast changing technological era, which has offered better and new learning opportunities to one and all⁹. The promise Information

Technology has shown in renewing the library profession is not being taken alike by one and all, as some library professionals, especially of those have got used to in conventional methods of library services and practices are a bit wary to embrace the technology fully and reflect varied opinions about its use¹⁰.

In a study, Kibert and Wanyama¹¹ found that the library professionals of the Margaret Thatcher Moi University, Kenya were exceptionally happy to have an automated library. Poole and Debby¹² while examining the library professionals of the Florida Community College recommended the need for reflecting a positive attitude towards embracing the cutting edge technology and so should be there rewards for employees for better job satisfaction.

In this technological age, no institution can afford to run in the absence of technology, which has revolutionised the sphere of human activity in many ways and so holds true of libraries. However, Singh & Krishna¹³ in their study found that the libraries associated with the agricultural universities and other agricultural institutes across India lack IT infrastructure and so do the professionals working in these libraries reflect lower levels of job satisfaction. The introduction of IT in the libraries improves the job satisfaction among the employees, observed Srivastava and Srivastava¹⁴ while studying the job satisfaction among the library professionals working in the higher education sector of the Rajasthan. Perception and attitude towards the use of internet in the libraries varies considerably among the library professionals depending upon the post, the position, gender and the age of an employee at the work place¹⁵. In a similar study Vinayagmoorthy¹⁶, *et al.* stressed on the need to train the professionals in the areas of digitisation and the preservation of digital resources. However, Lim¹⁷ considers the limitation in putting in place the technological infrastructure among the developing countries as an impediment in the job satisfaction of library professionals.

In a study to assess the job satisfaction among the library professionals of Maharashtra and Karnataka, Kacherki¹⁸ found that apart from pay and promotions, IT is a modern day job motivator among library professionals. Walmiki & Ramakrishnegowda¹⁹ stressed on the need to develop the ICT infrastructure in the University libraries across India. The researchers are of the view that an ICT application makes the routine library work interesting, hence serves as a reason for the better job satisfaction. However, Kumbhar²⁰ pointed out that lack of financial support and skilled manpower acts as an impediment in raising ICT infrastructure in libraries across India. While studying the job satisfaction among the LIS professionals in India, Pandita²¹ found that more than 77 per cent library professionals in India want to change their present employer on account of dissatisfaction with their present employers and so is the application of information technology an important variable of job satisfaction among LIS professionals²².

Mathew²³ in his study observed a positive attitude among library professionals towards the application of IT in the Libraries to improve its services and activities, while as the need is to promote the ICT skill among the library professionals and introducing IT curriculum among the potential library professionals can help a great deal. Rahman²⁴ pointed out that

putting in place the IT infrastructure and continuing education is imperative for the better job satisfaction and improved services and so should library professionals omit it show a more proactive approach towards embracing the technology²⁵. The professionals have to always show a positive attitude towards their work and so is there need to motivate the employees towards the change which may be warranted.

4. SCOPE AND RESEARCH METHODOLOGY

Although, the scope of the study is limited to the library professionals working in the higher education sector of the Jammu and Kashmir state, but given the nature of the library profession, the findings of the study can be easily generalised. The state of Jammu and Kashmir is one of the 36 states and union territories of the Union of India. The higher education sector of the state is very vibrant, having nine universities (Seven state universities, two central universities), one National Institute of Technology, one Indian Institute of Technology and one Indian Institute of Management Studies. There are over 100 government degree colleges across the state and nearly 175 private colleges and institutes which are contributing to the higher education sector of the state. To undertake the present study, data were collected from the library professionals working in the higher education sector of the Jammu and Kashmir state, India, by circulating a questionnaire among the respondents, specially designed for the purpose. The respondents include, library professionals working in both government and private sector. A pre-test of the questionnaire was conducted by circulating

it among the 20 respondents and after evaluating the replies, necessary modifications were undertaken with help of subject experts. The responses were collected by using three different methods, one by circulating the online link of the questionnaire among the respondents through their email ids, through groups and social networking sites, etc. Secondly, print outs of the questionnaires were sent by post to the respondents on their official postal address and thirdly, the questionnaires were also distributed in person and responses were generally collected on the next day.

5. LIMITATIONS

By and large no such major limitation was faced during the course of data collection and data analysis; however, given the poor state of the understaffed private and government higher education institutions, mostly being run without a full time librarian, curtailed the expected level of response generation.

6. RESULTS

In all 264 responses could be generated from the library professionals working in the higher education sector of the Jammu and Kashmir. The responses generated were tabulated in the excel sheet and the computations like, addition, subtraction, multiplications, drawing percentage etc., were performed by using the MS excel formulas. Percentage at all the places has been drawn up to one decimal place and has been rounded off to the 100 per cent figure.

Table 1. Biographical information of the respondents

Response variables	Information ↓	Gender		Total	
		Male	Female		
		Freq (% age)	Freq (% age)	Freq (% age)	CF (% age)
Total responses	Gender	117(44.3)	147(55.7)	264(100)	
Age group (years)	Under 25	02 (0.8)	05 (1.9)	07 (2.7)	(2.7)
	26-35	48 (18.3)	53 (20.2)	99 (37.5)	(40.2)
	36-45	50 (19.1)	47 (17.9)	97 (36.7)	(76.9)
	46-55	13 (4.9)	30 (11.5)	43 (16.3)	(93.2)
	Above 56	04 (1.5)	10 (3.8)	14 (5.3)	(98.5)
	Prefer not to say	-	02 (0.8)	02 (0.8)	(100)
Work experience (Years)	Less than 01	04 (1.5)	06 (2.3)	10 (3.8)	(3.8)
	2 – 5 Years	32 (12.1)	33 (12.5)	65 (24.6)	(28.4)
	6 – 10 Years	28 (10.6)	36 (13.6)	64 (24.2)	(52.6)
	11 – 15 Years	35 (13.3)	23 (8.7)	58 (22.0)	(74.8)
	16 – 20 Years	11 (4.2)	16 (6.1)	27 (10.2)	(85.0)
	Above 20 Years	07 (2.7)	30 (11.4)	37 (14.0)	(99.0)
	Prefer not to say	-	03 (1.1)	03 (1.1)	(100)
Employer status	Autonomous	60(22.7)	61 (23.1)	121 (45.8)	(45.8)
	Government	47 (17.8)	67 (25.4)	114 (43.2)	(89.0)
	Private	10 (3.8)	17 (6.4)	27 (10.2)	(99.2)
	Prefer not to say	-	02 (0.8)	02 (0.8)	(100)
Professional qualifications	Certificate Course	03 (1.1)	14 (5.3)	17 (6.4)	(6.4)
	B.Lib.Sc/BLISc	10 (3.8)	16 (6.1)	26 (9.8)	(16.2)
	M.Lib.Sc/MLISc	74 (28.0)	104 (39.4)	178 (67.4)	(83.6)
	M.Phill	07 (2.7)	05 (1.9)	12 (4.5)	(88.1)
	Ph.D	13 (4.9)	07 (2.7)	20 (7.6)	(95.7)
	Prefer not to say	10 (3.8)	01 (0.4)	11 (4.2)	(100)

CF: Cumulative Frequency

Of the total 264 responses generated during the period of study, 44.3 per cent are male respondents and 55.7 per cent are female respondents, clearly reflecting that the library profession is a preferred choice of both the genders. The majority 37.5 per cent respondents are in the age group of 26 yr to 35 yr, which is followed by 36.7 per cent respondents in the age group of 36 yr to 45 yr of age. This clearly indicates that nearly 75 per cent library professionals working in the higher education sector of the Jammu & Kashmir are quite young, hence can be expected of more result and service oriented in their outlook. Also, 5.3 per cent respondents are above 56 yr of age. In all a fair amount of respondent's representation was recorded under each age group of library professionals across the state, Table 1.

In terms of work experience, the majority 24.6 per cent respondents have 2 yr to 5 yr of work experience, followed by 24.2 per cent respondents having 6 yr to 10 years of experience and 22 per cent respondents have 11 yr to 15 years of work experience. While as 3.8 per cent respondents have a work experience less than 1 year. Of the total responses received, 45.8 per cent are working in autonomous bodies, which include, universities and other institutions of national importance, IIT's, IIM, IIIM, NIT's etc. 43.2 per cent are working in the government sector, these include, government degree colleges, medical colleges, nursing colleges, etc., and 10 per cent respondents are working in the private sector, which includes private colleges of technical, academic and professional nature.

In terms of educational qualifications, 67.4 per cent have a Master's degree in Library and Information Science (LIS), 9.8 per cent have a Bachelor's degree in LIS and 7.6 per cent have MPhil and Doctorate degrees in the LIS. In all, given the biographical indices as tabulated in the Table 1, the respondents represent a wholesome representation of the LIS professionals working in different type of institutions across the state.

Table 2. Professional specialisation

Options↓ (per cent age)	Gender→		Total
	Male	Female	
Acquisition	60 (51.3)	63 (42.9)	123 (46.6)
Automation	69 (59.0)	64 (43.5)	133 (50.4)
Cataloguing and classification	54 (46.2)	70 (47.6)	124 (47.0)
Reference service	43 (36.8)	42 (28.6)	85 (32.2)
Circulation	62 (53)	67 (45.6)	129 (48.9)
Serial control	24 (20.5)	27 (18.4)	51 (19.3)
Library administration	56 (47.9)	67 (45.6)	123 (46.6)
Others	01 (0.9)	01 (0.7)	02 (0.8)

6.1 Professional Specialisation

While seeking the reply of the respondents of their professional specialisation, the respondents were given freedom to choose as many areas as they specialise in. Accordingly, we may find a considerable variation in the total number of respondents and total responses generated against each individual specialised area. While as, the overall percentage

has been drawn from the actual number of respondents under each category. The maximum, 50.4 per cent respondents have replied that they specialised in the automation activities of the libraries, followed by 48.9 per cent in circulation services, 47 per cent in classification and cataloguing and 46.6 per cent in acquisition services. Needless to mention that library automation is about the application of information technology in the library services and activities. Given the respondents specialisation, it is evident that information technology is one of the thrust areas of the library services and activities and no library professionals in the modern times can afford to remain elusive of honing and developing the IT skills. At the gender level a considerable difference can be observed in the percentage of male and female library professionals who specialise in the library automation. Compared to 59 per cent male respondents, 43.5 per cent female library professionals specialise in library automation. This signifies that male library professionals are more inclined towards the library automation activities than their female counterparts.

Table 3. Means of keeping track with professional developments

Options↓ (percentage)	Gender→ Male	Female	Total
E-mails	66 (56.4)	75 (51)	141 (53.4)
Library web pages	74 (63.2)	90 (61.2)	164 (62.1)
Coworkers	21 (17.9)	21 (14.3)	42 (15.9)
Supervisors	24 (20.5)	25 (17)	49 (18.6)
Newsletters	46 (39.3)	41 (27.9)	87 (33)
Verbal communication	55 (47)	65 (44.2)	120 (45.5)
Notifications and circulars	34 (29.1)	86 (58.5)	159 (60.2)
No response	05 (4.3)	05 (3.4)	10 (3.8)

7.2 Means of Keeping Track with Professional Developments

The respondents were asked, as how they keep abreast of the latest developments in their chosen field or the professional area, and again the respondents were asked to choose as many options as they find appropriate. Accordingly, the maximum 62.1 per cent respondents have replied that they frequently consult library web pages, followed by notification and circulars, 60.2 per cent and e-mails 53.4 per cent. Here again, it can be emphatically said that information technology plays a very vital role in keeping library professionals abreast of the latest developments in the field. Be it by consulting the library web pages or through e-mails. Nevertheless, the official notification and other circulars are also these days being circulated in the electronic format, be it born digital document or digitised notification. No significant difference can be found at the gender level in browsing the internet, etc., as compared to 51 per cent female LIS professionals 56.4 per cent males LIS professionals update themselves, though e-mails, while as compared to 61.2 per cent females 63.2 per cent males follow library web pages to track professional developments.

Table 4. Have you ever been deputed by your institutional administration to attend the library related professional development programmes

Options (per cent age)	Gender		Total
	Female	Male	
Always	19 (12.9)	21 (17.9)	40 (15.2)
More often	26 (17.7)	24 (20.5)	50 (18.9)
Sometimes	56 (38.1)	41 (35.0)	97 (36.7)
Never	41 (27.9)	23 (19.7)	64 (24.2)
Don't know	01 (0.7)	02 (1.7)	03 (1.1)
No response	04 (2.7)	06 (5.1)	10 (3.8)
Total	147 (100)	117 (100)	264 (100)

7.3 Deputed to attend the Library Related Professional Development Programmes

In reply to the above question, 15.2 per cent respondents have replied that they were always deputed by their institutional administration to attend such PDP programmes, while as, 18.9 per cent replied of being deputed more often and 36.7 per cent replied sometimes. Nearly one-fourth of the respondents, viz., 24.2 per cent replied of being never deputed by their institutional administration to attend such programmes. At the gender level a considerable difference can be observed among both the male and female library professionals. Compared to females, male library professionals appear quite open to attend such PDP's as, compared to 17.9 per cent male respondents, 12.9 per cent female respondents viewed of being deputed to such programmes always, while as compared to 19.7 per cent male respondents 27.9 per cent female respondents have replied of never being deputed to such PDP's.

Table 5. Your satisfaction level with the IT infrastructure in your institutional library

Options (per cent age)	Gender		Total
	Female	Male	
Satisfied	91 (61.9)	70 (59.8)	161 (61.0)
Partly satisfied	35 (23.8)	29 (24.8)	64 (24.2)
Can't say	03 (2.0)	03 (2.6)	06 (2.3)
Partly dissatisfied	05 (3.4)	07 (6.0)	12 (4.5)
Dissatisfied	07 (4.8)	02 (1.7)	09 (3.4)
No response	06 (4.1)	06 (5.1)	12 (4.5)
Total	147 (100)	117 (100)	264 (100)

7.4 IT Infrastructure in Your Institutional Library

The majority, 61 per cent respondents showed their satisfaction with the IT infrastructure in their library, while as 24.2 per cent was partly satisfied. A meagre, 3.4 per cent respondents were totally dissatisfied with the IT infrastructure in their library. At the gender level, no such major difference can be observed in the male-female opinion about the IT infrastructure in their library.

7.5 Contribution in the teaching and research activities

In reply to the above question, whopping 68.9 per cent

Table 6. In the prevailing IT environment do the library professionals contribute significantly to the teaching and research activities of their institution

Options (per cent age)	Gender		Total
	Female	Male	
Yes	99 (67.3)	83 (70.9)	182 (68.9)
No	06 (4.1)	06 (5.1)	12 (4.5)
To some extent	38 (25.9)	23 (19.7)	61 (23.1)
Can't say	01 (0.7)	01 (0.9)	02 (0.8)
No response	03 (2.0)	04 (3.4)	07 (2.7)
Total	147 (100)	117 (100)	264 (100)

respondents replied in affirmative by saying yes, while as a meager 4.5 per cent respondents replied in negative. This reflects that LIS professionals are aware of their role and responsibility in the teaching and research activities of their institution, no matter passively, but LIS professionals recognise their importance and contribution to the field of teaching and research. Compared to 70.9 per cent males 67.3 per cent females have replied yes, while as against 25.9 per cent females 19.7 per cent males have viewed it to some extent, if not wholly, still more, overall 23.1 per cent overall respondents rate such contribution to some extent.

Table 7. Has the application of IT in libraries increased the level of job satisfaction among the LIS professionals

Options (per cent age)	Gender		Total
	Female	Male	
Yes	85 (57.8)	74 (63.2)	159 (60.2)
No	20 (13.6)	17 (14.5)	37 (14)
To some extent	32 (21.8)	20 (17.1)	52 (19.7)
Can't say	07 (4.8)	02 (1.7)	09 (3.4)
No response	03 (2.0)	04 (3.4)	07 (2.7)
Total	147 (100)	117 (100)	264 (100)

7.6 Level of Job Satisfaction among the LIS professionals

The majority 60.2 per cent respondents replied yes and 19.7 per cent said to some extent. However, 14 per cent respondents are of the view that application of IT in libraries has not improved the job satisfaction among professionals. At the gender level, compared to 57.8 per cent females, 63.2 per cent males believe that IT has improved the job satisfaction among LIS professionals, while as against 13.6 per cent female respondents, 14.5 per cent have viewed it negatively. This signifies that compared to female library professionals, male library professionals seek more contention in job satisfaction, following the application of IT in libraries.

7.6 LIS Professionals Working in Manual Work Environment

In reply to the above statement, 43.9 per cent respondents have viewed that LIS professionals working in the manual work environment show lower levels of job satisfaction than those working in the IT based work environment, while as 20.8 per cent respondents see this job satisfaction difference

Table 8. Do the LIS professionals working in manual work environment show lower levels of job satisfaction than those working in IT environment

Options (percentage)	Gender		Total
	Female	Male	
Yes	64 (43.5)	52 (44.4)	116 (43.9)
No	37 (25.2)	26 (22.2)	63 (23.9)
To some extent	26 (17.7)	29 (24.8)	55 (20.8)
Can't say	14 (9.5)	06 (5.1)	20 (7.6)
No response	06 (4.1)	04 (3.4)	10 (3.8)
Total	147 (100)	117 (100)	264 (100)

to some extent. However, 23.9 per cent respondents believe that there is no difference in the job satisfaction levels among the LIS professionals working in the manual environment than those working in the IT based work environment. At the gender level, compared to 44.4 per cent male respondents, 43.5 per cent female respondents uphold the statement, while as compared to 22.2 per cent male respondents 25.2 per cent females view nothing like this.

8. DISCUSSIONS

From the gender level response percentage, it is quite evident that both male and females are equally interested in the library profession. Since, nearly 75 per cent respondents are within the age group of 45 years with, the majority 67.4 per cent having masters degree in library and information science, reflects that the LIS professionals working in the higher education sector of the Jammu & Kashmir are quite young and well qualified, who are generally expected to be quite comfortable with the application of information technology in libraries, so is evident from the responses, as 50.4 per cent respondents have replied that they specialise in library automation. Besides, the library services like circulation, classification and cataloguing etc., are being handled in the automated form. The importance of the application of IT in the libraries gets assessed from the fact that 62.1 per cent respondents have replied that they keep track of the latest developments in their field by frequently browsing the library web pages, and 53.4 per cent use emails for the purpose. Given the fact it is always imperative that LIS professionals should be exposed to the latest technological environment for honing their technical skills at regular intervals of time. Participation in workshops, faculty development programmes, and refresher & orientation courses can significantly contribute in this regard. Besides, attending professional congregations like conferences and seminars helps a great deal in the capacity building of an individual. Deputing library professionals to attend such programmes should always be on the priority list of the institutional administration, which by and large is not a constraint for the LIS professionals working in the higher education sector of the Jammu & Kashmir.

Skill and training of a Library professional can bear fruit only, if the same is supplemented with the necessary basic minimum IT infrastructure. There is no point in appointing or having trained and skilled manpower, if the same is not being provided the necessary infrastructure to put such skills and training into practice. Still more, in this IT driven world

no library can afford to provide updated and advance services to its clientele in absence of IT support. Institutions should always make it sure to provide the minimum basic necessary IT infrastructure to the libraries so as to add to their operating efficiency. Still more, switching over IT work environment, serves a sense of satisfaction to the working professionals in its own way, which in turn contributes significantly to their overall job satisfaction and improves the contribution of LIS professionals in the academic and research activities of an institution.

Needless to mention that subscription of online journals and procurement of ebooks by the libraries has become the order of the day and no library can afford to operate in the absence of such resources. And in order to exploit and utilised all such e-resources to their optimum, there is a need to have a sound IT infrastructure in the libraries. Again, rendering satisfactory services to library clientele gives a good reason to the working professionals to feel elated, whereby they start finding their job more meaningful and purposive. So raising the necessary IT infrastructure and its application in the libraries apart from bettering the overall library services, do contributes in the overall job satisfaction of the working library professionals.

9. CONCLUSIONS

As has become information and communication technology an integral part of the modern day life and services so has become the application of Information technology endemic in rendering effective library services and undertaking other allied activities. In the present times, as no institution can afford to survive in the absence of the libraries, so cannot libraries afford to survive in the absence of the application of Information Technology? The application of Information Technology has maximised the use of the library resources and services in its own way and so has IT turned the job of the working professionals more meaningful, interactive and fulfilling.

The conventional manual methods of working in the libraries were less interactive and more boring for being more monotonous, lacking thrill and variation. Contrary to this fact, application of information technology apart from widening the service base of the users has made the job of library professionals more attractive, hence less boredom and more user satisfaction. The increased work efficiency, serves satisfaction to the working professionals, which in turn improves the level of job satisfaction among the working professionals.

Library professionals' still working in the manual work environment should switch over to the automated work environment and so holds true of the Institutional administration, which in turn should work on exposing the technophobic library professional's to the technological environment and should turn them in to technophilic. The better service delivery serves as a sense of satisfaction to an employee and application of IT in libraries has contributed significantly to the overall job satisfaction of library professionals, irrespective of the gender, post, position or any other individual distinction of an employee. Information technology has helped in giving more meaning to the library profession and so do library professional have started finding their job more meaningful, purposive and fulfilling.

REFERENCES

1. Morita, I.T. Job satisfaction and the changing role of catalogers. *J. Edu. Media Libr. Sci.*, 1991, **28**(4), 428-32.
2. Lynch, B.P. & Verdin, J.A. Job satisfaction in libraries: A replication. *The Library Quarterly*, 1987, **57**(2), 190-202.
3. Latham, J.M. A librarian, a technologist and an information scientist are out in a boat. *New Library World*, 2002, **103**(10), 393-8. doi: 10.1108/03074800210447703
4. Waters, D. New technology and job satisfaction in University libraries. *LASIE : Information bulletin of the Library Automated Systems Information Exchange*, 1970, **18**(4), 103-8.
5. Whitlatch, J.B. Automation and job satisfaction among reference librarians. *Computers in Libraries*, 1991, **11**(8), 32-4.
6. Palmi, C.C. The impact of computerization on library support staff: A study of support staff in academic libraries in Wisconsin. *College Res. Libr.*, 1994, **55**(2), 119-27.
7. Aina, J.O. Impact of library automation on the performance of library staff in university libraries in Nigeria. *Herald Libr. Sci.*, 2002, **41**(1/2), 34-6.
8. Beth Lavagnino, M. Librarians and information technologists: more alike than different? Interviews with CIOs. *Library Hi Tech.*, 1999, **17**(1), 114-20. doi: 10.1108/07378839910267280
9. Dugdale, C. Managing electronic reserves. *Libr. Career Develop.*, 1999, **7**(12), 150-63. doi: 10.1108/09680819910309494
10. Stover, M. Technological concerns for library managers. *Library Management*, 2000, **21**(9), 472-83. doi: 10.1108/01435120010347946
11. Kibet Bii, H. & Wanyama, P. Automation and its impact on the job satisfaction among the staff of the Margaret Thatcher Library, MOI University. *Library Management*, 2001, **22**(6/7), 303-10. doi: 10.1108/EUM000000005597
12. Poole, C.E. & Denny, E. Technological Change in the Workplace: A Statewide Survey of Community College Library and Learning Resources Personnel. *College Res. Libr.*, 2001, **62**(6), 503-15. doi: 10.5860/crl.62.6.503
13. Singh, N. & Krishna, K.M. State of human resource development for digital environment in agriculture libraries. *ILA Bulletin*, 2004, **40**(4), 17-20.
14. Srivastava, A. & Srivastava, A. Opportunities for professional development of librarians: a study of the level of satisfaction among librarians of institutions of higher education in Jaipur. *ILA Bulletin*, 2004, **40**(4), 31-4.
15. Spacey, R., Goulding, A. & Murray, I. The power of influence: what affects public library staff's attitudes to the Internet? *Library Management*, 2004, **25**(6/7), 270-6. doi: 10.1108/01435120410547922
16. Vinayagamorthy, P., Ramesh Babu, B. & Gopalakrishnan, S. Digital Library Initiatives in Engineering Educational Institutions in Tamil Nadu. *Indian J. Tech. Edu.*, 2006, **29**(1), 68-88.
17. Lim, S. Library Informational Technology Workers: Their Sense of Belonging, Role, Job Autonomy and Job Satisfaction. *J. Academic Libr.*, 2007, **33**(4), 492-500. doi: 10.1016/j.acalib.2007.03.007
18. Kacherki, U.Y. Job satisfaction among engineering college librarians A comparative study of Maharashtra and Karnataka states: Kolhapur; 2008.
19. Walmiki, R.H.R.C.K. ICT infrastructure in university libraries in Karnataka. *Annals Libr. Info. Stud.*, 2009, **56**(4), 236-41.
20. Kumbhar, N.S. Job satisfaction among the library professionals in Karnataka state university libraries 2009.
21. Pandita, R. Job satisfaction among library and information science professionals in India; A case study. *J. Info. Sci. Theory Practice*, 2017, **5**(1), 47-62. doi: 10.1633/JISTaP.2017.5.1.4
22. Pandita, R. & Domnic, J. Variables of Job Satisfaction: A review study with special reference to LIS Professionals. *Int. J. Info. Dissemination Technol.*, 2016, **6**(4), 258-67.
23. Mathew, K.S. Impact of Information Communication Technology (ICT) on professional development and educational needs of library professionals in the universities of Kerala: Cochin; 2011.
24. Rahman, M.S. Service quality, corporate image and customer satisfaction towards customers perception: An exploratory study on telecom customers in Bangladesh. *Business Intelligence J.*, 2012, **5**(1), 56-63.
25. Dukić, G. Perception and Adoption of Change Management in Information Institutions: A Study from Croatia. *Libri*, 2015, **65**(3), 175-190. doi: 10.1515/libri-2014-0162
26. Registrar General of, India. Census of India : Provisional Population Totals India : Paper1 : Census 2011. 187- p.

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