Impact of IT on Human Resources of Pakistani University Libraries

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Abstract

The core objective of this paper is to study the impact of IT on human resources serving in the university libraries of Pakistan. To achieve this objective a questionnaire survey of 82 university libraries from public and private sector was conducted. Respondents were asked to express their opinion about 10 statements to measure their perceptions about impact of information technology on human resources. A five point Likert Scale was used to rate the statements. Descriptive (Min., Max., Mean, Median, Mode, SD) and inferential (t-test) statistics was used to analyze the data.

Calculated values of 't' and its P-values indicates that there is no significant difference between the opinions of both public and private sector's respondents regarding the impacts of IT on human resources except the statement 'Staff has more awareness about profession'.

The findings of this study are helpful in formulating human resource development policies and strategies not only in Pakistani university libraries but also in other developing and under developing countries of the world.

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Background of the Study

Use of information technology is inevitable in library and information centers to provide better and efficient services to library patrons. Professional, para –professional and support staff frequently uses IT to perform their duties. This technology had made multi-dimensional impact on these human resources. According to Younis (1999), IT had increased staff effectiveness and satisfaction level. Mulimila (2000) found that library employees welcomed and were cooperative in the introduction of IT in East African university libraries. Only one respondent showed that the staff felt threatened on the job. Aderinto & Aderinto (2006) conducted a survey of 16 managers in Obafemi Awolowo University, Nigeria to examine the effect of information technology on their managerial efficiency. The study found IT as effective tool in the management of academic library, and may be applied for effective budgeting and performance evaluation. Implementation and use of IT had also made the managerial functions easier. This paper also recommended to replicate this study in other university libraries in Nigeria in order to assess the effect of IT on the managerial efficiency

Amekuedee (2005) stated that attitude of most of the staff members of Ghanaian university libraries towards automation was positive. The main reason was because computerization improved library operations and gave access to more internal and external sources of information.

Temjen (2003) studied the attitude of Indian academic and research library professionals towards IT. The study found that LIS professionals without any experience

with computers had shown high level of anxiety towards IT. LIS professionals who had interaction with computers since 9-10 years, considered IT to be highly efficient; those who had 3-4 years experience with computers, showed higher use confidence; and those who had 11-12 years long experience in automated environment showed more acceptance towards IT. The study concluded that "experience with computers definitely influences attitudes towards information technology and that, there is positive attitude towards information technology among library professionals who have higher working experience with computer"

Ilyas (1997) mentioned that misconceptions regarding IT, fear of unemployment, and hesitation to accept new technology were the main obstacles to adopt IT among LIS professionals in Pakistan. Sharif & Mahmood (2001) surveyed alumni (n=82) of Pakistan Library Association's Computer Training Center to determine the impact of the Certificate in Library Automation (CLA). The findings showed that most of the respondents were young professionals working in Lahore. Most of them had computer facility in their libraries and were involved in automation activities in their libraries. Two third of all the respondents stated that their computer knowledge had helped them in getting a job or better job.

The above scenario had shown the lack of research on this area and strengthens the need to study the impact of IT on library human resources in Pakistani context.

Research Objectives

- To study the number of existing human resources in various categories serving in the University Libraries of Pakistan.

- To study the impact of IT on human resources working in the University Libraries of Pakistan.

Study Design

Scope and population

Main/central libraries of all the universities having chartered to provide 'on-the-campus' education, geographically situated within Pakistan except Azad Jammu and Kashmir were included in the study. Out of 91, nine universities had no provision of Central/Main Library, so finally 82 university libraries comprised the population for this study

Methodology

A semi structured questionnaire was designed to collect the data. The researcher sent both printed and soft copies of the questionnaire to the chief librarians/head librarians of 82 university libraries. The valid response rate was 63.41% (52 out of 82).

Analysis

Statistical Package for Social Sciences-16 was used to analyse the data. The descriptive statistics including frequency distribution, percentage, mean, median, mode, minima, maxima, standard deviation etc. and inferential statistics t-test were employed to analyze the collected data. Figures were also made to interpret the data.

Findings

LIS professionals

The details of LIS professionals working in respondent university libraries are presented in Table 1. The table demonstrates that 35 (67.31%) respondent libraries had up-to five and nine (17.31%) had up-to 10 LIS professionals. There were only three libraries having up-to 20 professionals on their payroll. The descriptive statistics shows that the total number of LIS professionals was 270 that ranged from one to 18 with the Mean value of 5.19. LIS professionals were 21.13 percent of the total staff.

Table 1

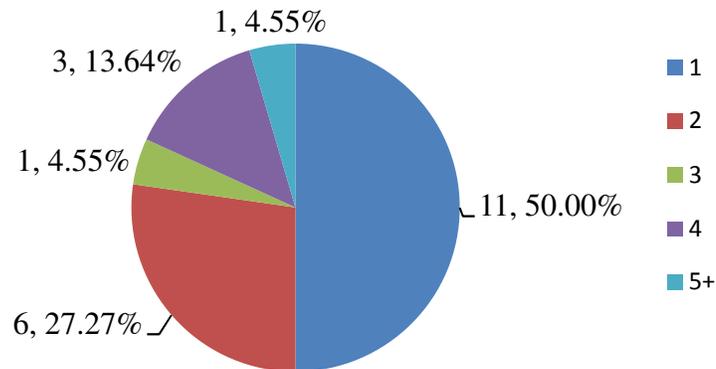*Frequency Distribution of LIS Professionals (N=52)*

LIS Professionals	Frequency	Percent
Up-to 5	35	67.31
6-10	9	17.31
11-15	5	9.62
16-20	3	5.77

Note. Percentages do not always equal 100 due to rounding.

IT professionals

It is revealed from Figure 1 that 22 university libraries responded about their IT professionals. Out of 22, 11 (50.00%) university libraries had up-to one, six had up-to two and only one library had more than five IT professionals to provide technical support to their IT infrastructure, networking, equipments and software. Further analysis highlights that IT professionals were 3.44 percent of the total staff. The sum of IT professionals in all the respondent libraries was 44 with a mean value of 2.00 and ranged from one to six.

Figure 1. IT Professionals (N=22)

LIS para-professionals

Frequency distribution of LIS para-professionals (Table 2) describes that in majority (26, 72.22%) respondent libraries, number of LIS para-professional staff is up-to five, six (16.67%) had para-professionals staff between 6-10, while in one each respondent library, LIS para-professional staff ranged between 16-20 and 21-25.

Table 2

Frequency Distribution of LIS Para-professionals (N=36)

| LIS Para-professionals	Frequency	Percent
Up to 5	26	72.22
6-10	6	16.67
11-15	2	5.56
16-20	1	2.78
21-25	1	2.78

Note. Percentages do not always equal 100 due to rounding.

Analysis also point outs that the sum of LIS para-professional staff in respondent libraries was 182 and was 14.24 percent of the total human resources, ranged from one to 26 and having a mean value of 5.06.

IT para-professionals

Figure 2 gives the details of IT para-professional staff serving at 27 respondent university libraries. Majority (17, 62.96%) of the respondents had employed IT para-professionals up-to two, four (14.82%) had employed 3-4, while six (22.22%) had employed up-to five and above. IT para-professional staff was 7.59 percent of the total staff. According to descriptive statistics, sum of IT para-professional staff was 97 with a mean value of 3.59 and were ranged from one to 20.

Figure 2. IT Para-professionals (N=27)
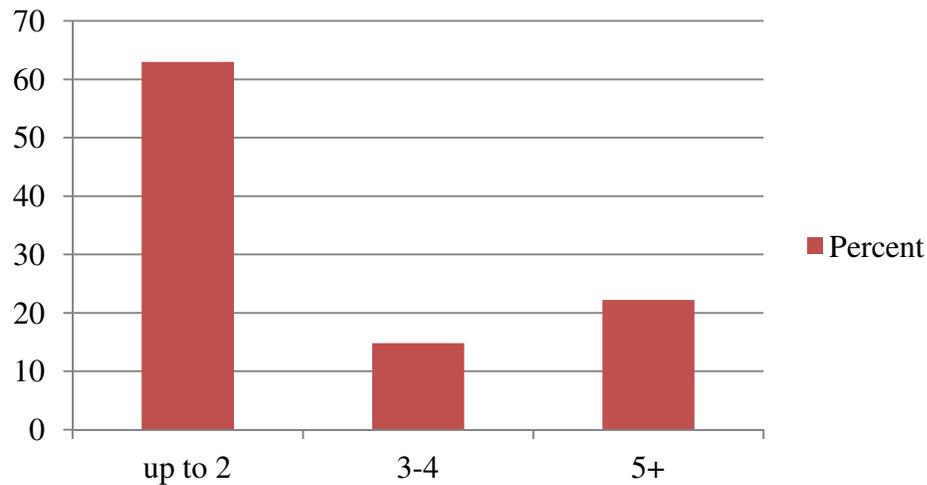
Non-professional staff

Libraries were asked to provide information about their non-professional staff. The results presented in Table 3 indicates that 31 (63.27%) respondent libraries were getting benefits from the services of up-to 10 non-professional staff members, seven (14.29%) had employed 11-20, whereas two each had 31-40 and 51-60 on their payroll respectively. Only one respondent library had non-professional staff between 91 and 100. The descriptive statistics shows that the mean value of non-professional was 13.98 with a sum of 685 and was ranged between 1 and 100. This category of staff was 53.59 percent of the total staff members.

Impact of IT on Human Resources

Respondents were asked to express their opinion about 10 statements to measure their perceptions about impact of information technology on human resources. A five

Table 3

Frequency Distribution of Non-professional Staff (N=49)

Non-professional Staff	Frequency	Percent
Up-to 10	31	63.27
11 - 20	6	12.24
21 - 30	7	14.29
31 - 40	2	4.08
51 - 60	2	4.08
91 - 100	1	2.04

Note. Percentages do not always equal 100 due to rounding.

point Likert Scale was used to rate the statements. Table 4 shows the descriptive statistics of impact of IT on human resources serving in university libraries of Pakistan. The respondents agreed with the following statements; 'Experience sharing has increased among library staff', 'Staff having IT skills has more recognition than those with no IT skills', 'Job descriptions have been changed after IT implementation', 'Staff has more awareness about profession', 'Staff is more satisfied' and 'IT illiterate staff have felt inferiority complex' (Mean=4.21, 4.15, 4.10, 4.08, 4.08, and 3.79). Further analysis shows that respondents expressed 'No Opinion' against the following statements; 'Positions of support staff have reduced after IT implementation', 'Workload of staff has increased', 'There was resistance among staff while implementing IT in

Table 4

Descriptive Statistics of Impact of IT on Human Resources

Rank	Statement	N	Min.	Max.	Mean	Median	Mode	SD
1	Experience sharing has increased among library staff.	52	3	5	4.21	4	4	0.61
2	Staff having IT skills has more recognition than those with no IT skills.	52	1	5	4.15	4	5	1.02
3	Job descriptions have been changed after IT implementation.	52	2	5	4.1	4	4	0.82
4	Staff has more awareness about profession.	52	1	5	4.08	4	4	0.88
5	Staff is more satisfied.	51	2	5	4.08	4	4	0.8
6	IT illiterate staff have felt inferiority complex.	52	2	5	3.79	4	4	0.98
7	Positions of support staff have reduced after IT implementation.	52	2	5	3.37	4	4	1.05
8	Workload of staff has increased.	52	1	5	3.29	4	2	1.19
9	There was resistance among staff while implementing IT in library resources & services.	52	1	5	3.19	3.5	4	1.1
10	Health problems have increased among the staff.	52	1	5	2.81	2	2	1.16

Note: 1=Strongly disagree, 2=Disagree, 3=No opinion, 4=Agree, 5=Strongly agree

Table 5

Results of t-test Regarding 'Impact of IT on Human Resources' With Respect to 'Sector'

Statement	N	t-calculated	P-value
Experience sharing has increased among library staff.	52	$-0.831^{n.s}$	0.410
Health problems have increased among the staff.	52	$-0.452^{n.s}$	0.653
IT illiterate staff have felt inferiority complex.	52	$-1.861^{n.s}$	0.069
Job descriptions have been changed after IT implementation.	52	$-1.068^{n.s}$	0.291
Positions of support staff have reduced after IT implementation.	52	$-0.186^{n.s}$	0.853
Staff has more awareness about profession.	52	-2.162*	0.035
Staff having IT skills has more recognition than those with no IT skills.	52	$0.299^{n.s}$	0.766
Staff is more satisfied.	51	$-0.154^{n.s}$	0.878
There was resistance among staff while implementing IT in library resources & services.	52	$1.259^{n.s}$	0.214
Workload of staff has increased.	52	$-1.01^{n.s}$	0.317

Note: n.s mean non-significant   * Significant at 0.05 level

library resources & services' and 'Health problems have increased among the staff'

(Mean=3.37, 3.29, 3.19 and 2.81). In Table 5 , calculated values of 't' and its P-values

indicate that there is no significant difference between the opinions of both public and

private sector's respondents regarding the impacts of IT on human resources except the

statement 'Staff has more awareness about profession'.

Conclusion

On the basis of findings, it is concluded that information technology applications have increased the experience sharing opportunities among library staff. IT literate human resources have more recognition and respect as compared to those who lack IT skills. Technology has also forced to the employers to change job descriptions of LIS professionals and staff. Now the information professionals are much aware about the professional development activities and opportunities at national, regional, and international level. Information technology has increased the job satisfaction level; whereas IT illiterate staff is feeling inferiority complex.

The opinion of the respondents is neutral regarding the statements: 'Positions of support staff have reduced after IT implementation', 'Workload of staff has increased', 'There was resistance among staff while implementing IT in library resources & services' and 'Health problems have increased among the staff'.

It is also concluded that there is no significant difference between the opinions of both public and private sector's respondents regarding the impacts of IT on human resources except the statement 'Staff has more awareness about profession'.

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