

JOB MARKET ANALYSIS: A COMPARATIVE STUDY OF LIBRARY AND INFORMATION SCIENCE WITH COMPUTER SCIENCE AND MANAGEMENT SCIENCE SUBJECTS IN KP

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Abstract. *This study is conducted to analyze the job market of library and information sciences (LIS) and make a comparison with Computer Sciences and Management Sciences subjects in Khyber Pakhtunkhwa in 2017. The study shows that a drastic change occurred in the LIS job market in the year 2018. The job opportunities in LIS have been increased very rapidly as compared to above mention disciplines. There are more chances of jobs 73.33% at public sector for the professionals of LIS as compared to Computer science 63% and Management Science 46.15%. This study shows that Management Sciences jobs are on the top at job market 53.84% at private sector following Computer Sciences 37% and LIS 26.67% respectively. Higher degrees such as M.Phil or PhD degrees are also required for many higher posts. Majority of the posts need Bachelors and Master degrees in LIS subject as compared to other subjects of this study.*

Key words: Job market, employment, Computer Sciences, Management Sciences, LIS.

Introduction

Job market does not mean a kind of place or area where products and services move from concept to customer but it is a process and method where employers seek for employees and employees seek for jobs. The job market depends on the unemployment rate. If the unemployment rate becomes higher, the employers try to decrease wages in the same way. Conversely, when the unemployment rates come down, the employers tend to increase wages for the available workers which ultimately affect the job market.

The LIS job market in Pakistan, as analyzed by several studies over the last few years (Ameen, 2011; Mustafa & Ansari, 2012) these studies indicate that the LIS profession is changing rapidly in Pakistan but it should need to bring a

drastic change in the application of information and communications technologies (ICT) users requirements or demands, service structure information gating or production and working procedure etc. The latest computer literacy is very vital for all the librarians to accept the new challenges of IT and ICT involving in field of library and information science (Safahieh & Asemi, 2010).

It is evident that Computer Science and Management Science are the fastest growing Job fields. According to recent study of National Association for Colleges and Employers (NACE), that 68.7% Computer Science graduates get job, while only 54.3% Management Science graduates get job. From this we infer that the students get Jobs easily in these subjects after their graduation .This shows that there are more opportunities in these fields. But according to this study, there are many Universities and Institutions that offer courses in these subjects due to which, the ratio of jobs automatically decrease and the percentage of unemployment increase with the same proportion. Because the Institutions produce more graduates in comparison with the jobs available in the market.

Objectives

Following are the objectives of this study.

1. The overall objective of the study is to assess the job market of LIS as compared to computer science and Management Science subjects at Khyber Pakhtunkhwa.
2. To know the number of graduated students produced & jobs advertised during 2017 in the discipline under study.
3. To find out demand and supply ratio of LIS, Computer Science and Management Sciences subjects.
4. To examine jobs opportunities in both public and private sector during the period 2017.
5. Analyze trends in job titles for LIS, Computer Science and MBA Professionals.

Scope of the study and its limitation

The study contains all types of jobs related to Library and Information Sciences, Computer Sciences and Management Sciences, whether they are in public, private or other types of jobs relevant to these disciplines. This study is geographically limited to Khyber Pakhtunkhwa (KP) Province of Pakistan in 2017.

Literature Review

The researchers examined the job market of LIS in Sindh province from 1991 to 2011. The findings show that the library professionals' jobs advertised in two years 1991 and 2011 were analyzed to find out the changes happened in 20 years. 39 jobs advertised in 1991 and 71 jobs advertised in 2011. The study shows that no specific change happened between these twenty years however the advertising of jobs increasing in future (Ansari, 2012).

It was analyzed that 282 jobs were advertised between four years, from 2004 and 2008, which is not satisfactory. The study also shows job titles problem because sometime the job title is not specified by the employers (Mustafa & Ansari, 2012). Another research study shows that more jobs were advertised during three years from (2009 to 2012) in the South Africa country. Similarly the LIS jobs opportunities were found more at public sector as compared to private sector. The study further reflects that IT skills are the most requirement from the employers for the LIS professionals (Shongwe & Ocholla, 2013).

The main reasons of successfulness of developed countries are by the amalgamation of ICT and new technology in LIS profession. To improve the library profession in Pakistan Information Communication Technology may be adopted in our libraries (Ameen, 2011).

One thousand jobs were advertised in spring 2009 at the University of Maryland for the new LIS graduated students. Most jobs were advertised in academic libraries and archives. The average salaries were offered but higher salaries offered in government sectors (Reeves & Hahn, 2010).

Training is very vital for library professionals. It was found that mostly librarians were working in academic libraries and they felt deficiencies due to lack of insufficient training which they received (Yelinek & Hinchcliff, 2009).

The most jobs were advertised from American Library Association (ALA's) online job list need IT skills. The findings show that the librarians need a highly different kinds of skills such as IT, Web development, and Program management etc. (Mathews & Pardue, 2009).

The current condition of library professionals in the South Australia indicates that employers of the South Australia demand for different kind of skills from the LIS professionals which contain Communication skills, Team relation, IT and ICT are mostly required by them (Pamment, 2008).

The job advertised (ads) indicated that the requirement of skills which have been increasing for the academic and research libraries are language skills. The

language skills are required for all the positions whether they are technical services or public services jobs. Language skills as important as work experience found in this study (Zhang, 2008). This study was conducted to produce an appropriate way through which employers could be convinced for posting jobs opportunities on the web free of cost. Their findings show that instability of electronic media creates problems for LIS professionals (Du, Stein, & Martin, 2007).

Comparison has been don of the Australia LIS ads jobs with the United States and found deficiencies both in skills and competencies which required for LIS professionals in these countries (Kennan, Willard, & Wilson, 2006).

This study was specially conducted for the special libraries and alternative careers. According to this study, the market of special libraries increasing day by day and employers also demanding for competent librarians for these special libraries (Stronski, 2004).

Methodology

Methodology acts like a guide. It shows the ways of actions which the researcher has decided to follow. For data collection of this study, leading newspapers of the country have been searched. These comprises of the daily Aaj, the daily Mashriq, the daily Dawn, the News and The Nation and also from the internet websites like www.paperpk.com and www.pakjob4u.com.

The present study covers the jobs advertised during the year 2017. It is a common practice that sometime one post is advertised in more than one newspaper. So in this case only one was included in the study. Similarly if more than one job positions were published in one advertisement, each individual job title was counted.

Data Analysis and Interpretation

Table 1: *Number of Graduated Students of the Disciplines under Study*

S. No.	Disciplines	Output per annum	Percentage
1	LIS	225	2.37
2	Computer Science	2294	24.2
3	Management Science	6760	71.31
4	Total	9479	100

Table 1 shows that a rapid change happened in LIS jobs ads in KP province in the year 2017. It also indicates that Management Science (71.31%) is the major subject followed by Computer science (24.20%) and LIS (2.37%). Similarly LIS subject observed as a minor subject in the above table.

Table 2 *Comparison of Job Ads in 2017.*

Newspapers	LIS Job ads	Comp. Sci. Job ads	MBA Job ads
Daily Aaj	6	29	9
Dawn	0	7	22
Jang	4	9	2
Mashriq	17	47	35
The Nations	2	2	0
The News	1	6	10
Total/percentage	30	100	78

The above table elaborates that the total job, advertised during 2017 are 208. These include 30 of LIS, 100 of Computer Science and 78 of Management Science. Many jobs were advertised by the Mashriq Newspaper are 99 posts which is published in Urdu language. Followed by Daily Aaj Urdu Newspaper are 44 posts which shows that these are most leading Newspapers which perform an excellent roles in the marketing of the mention subjects in this study. The Table 2 also indicates that 30 posts are advertised in the LIS profession for the 225 graduates students according to table 1 followed by Computer Science 100 post were advertised for 2294 students and Management Science 78 posts were advertised for 6760 graduated students.

Table 3 *Demand and Supply Ratio*

Discipline	Number of graduates per year	Jobs advertised during 2017	Demand/ supply	Whole numbers
LIS	225	30	0.133	13.3
Computer Science	2494	100	0.04	4
Management Science	6760	78	0.011	1.1
Total	9479	208	0.021	

Table 3 as consider the focus table on which the whole study depend on, which highlights that there are more opportunities for LIS professionals as compared to Computer science and Management Science graduates. The analysis reflects that ratio 1:4:13. It means if one post was advertised for graduate students in Management Science subject. In the same way 4 posts

were advertised against Management Science in Computer Science subject, likewise 13 posts were advertised against Management Science and Computer Science in LIS subject. It shows that there are more opportunities in the field of LIS as compared to Management Science and Computer Science as these are considered the most required subjects in the present age or for future age. (Younger, 2005) indicates in the study that 1000 jobs were advertised for LIS professionals within one year from 2004 to 2005 in the CILIP gazette of the United Kingdom that shows the great revolutionary changes in the field of Library and information science.

Table 4 *Job Opening in Public Sector and Private Sector Organizations*

Disciplines	Public sector	Percentage %	Private Sector	Percentage %
LIS	22	73.33	8	26.67
Computer Science	63	63	37	37
Mgmt. Science	36	46.15	42	53.84

This table pinpoints that there are more chances of jobs (73.33%) at public sector for the professionals of LIS as Computer science (63%) and Management Science (46.15%).

It is also revealed from the analysis of data that Management Science is at the top of job market (53.84%) at private sector following Computer science (37%) and LIS (26.67%).

The table also reflects that many chances are available in public sector for LIS professionals as compare to Computer Science and Management Science. (Shongwe & Ocholla, 2013) defined that the jobs market for the LIS wishers is increasing very rapidly in South Africa. Especially jobs opportunities are available in the public sector organizations as compared to private sectors.

It shows that public sector organizations are more interested in advertising posts for Library and information science graduates.

Table 5 Comparison of Job Titles

LIS	Job title /%	Comp Science	Job title %	Mgt. Science	Job title %
Additional Librarian	1 (3.33%)	Lecturer	15 / (15)	Lecturer	7/ (8.97)
Deputy librarian	1 (3.33%)	Assistant Professor	6 / (6)	Assistant Professor	5/ (6.41)
Librarian	19 (63.3%)	Associate Professor	4 / (4)	Associate Professor	3/ (3.84)
Assistant librarian	5 (16.7%)	Professor	4 / (4)	Professor	7/ (8.97)
Library Assistant	4 (133%)	Programmer	13 / (13)	Dy. Project manager	8/ (10.25)
		Database Administrator	9 / (9)	Manager HR	5/ (6.41)
		Web developer	7 / (7)	Directors	5/ (6.41)
		Network Adm	5 / (5)	Director General	3/ (3.84)
		Computer operator	9 / (9)	Administration and Accounts	5/ (6.41)
		Others	28 / (28)	Others	30/ (38.46)

Table 5 while analyzing the data on the basis of job titles, it was found that majority of (63.37%) jobs which were advertised in 2017 were of the librarians. It is also noted Lecture in Computer Science is the job title which was more advertised during 2017. Project manager is the more and frequently advertised jobs in the field of Management Science.

Assistant librarian is the second majority of (16.66%) jobs which were advertised in LIS followed by Programmer (13%) in the field of Computer science and Lecturer and professor (8.97%) are the second most advertised jobs in the field of Management Science.

In the same way Additional librarian and Deputy Librarian (3.33%) are the lowest advertised jobs in the LIS field pursued by Associate Professor and Professor (4%) are the lowest advertised jobs in the subject of Computer science and Associate Professor and Director General (3.84) are also the lowest advertised jobs in the field of Management Science.

Table 6 *Comparison of Grade/Scale*

LIS	Quantity/ percentag e	Compute r Science	Quantity/ percentag e	Managemen t Science	Quantity/ percentag e
Below 16	6	Below 16	1	Below 16	1
16	0	16	0	16	1
17	10	17	19	17	3
18	1	18	7	18	3
19	1	19	7	19	5
20	0	20	4	20	7
21	0	21	4	21	3
Not Mentione d	10	Not Mentione d	58	Not Mentioned	55

The analysis of table 6 reflects that grade 17 is the more often advertised job in LIS It is also of worth mentioning that jobs opening in Computer science are in grade 17 in majority of the cases. In the same way grade 20 is also more often advertised jobs in the Management Science.

The table 6 also reflects that grade 16, 20 and 21 in the subject of LIS and 16 is in the subject of Computer science are the non-advertised posts in this study. While grade 16 is the lower advertised post in the subject of Management Science. The table describe that grade 16 is on the low priority by employers and organizations.

Conclusion

The research describe that job market of LIS is increasing day by day in KPK. There are different kinds of job opportunities in different types of libraries, that include school, college, and university libraries. The qualification required is Bachelor and Master Degrees in LIS profession while MS (MPhil) or PhD degrees are also required for higher posts such as chief librarian or Assistant Professor. Though, some jobs need professional skills, such as expertise in computer, library applications, work experience, technical trainings and management skills.

It is also revealed that there are opportunities of Government employment in LIS as compared to the rest of the subjects under study. It is also included that the subject of LIS get popularity among the masses of KP as well in the Pakistan, in the future, there will be advertised more jobs for LIS professionals as compare to Master in computer and MBA in KPK.

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