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Library Professionals Learning Behaviour with the Level of Expertise: A Survey from Pakistan

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Abstract

Purpose: This study is designed to examine the relationship of learning behavior with the level of expertise among library professionals working in Pakistan. It aims to compare the level of professional skills for different library areas. The study also explores the correlation of demographic factors with the level of expertise.

Research Methodology: A quantitative research design is used to carry out the current study. A structured questionnaire is developed to seek responses from respondents. Some hypotheses are developed to check these relationships. Library professionals working as practitioners in different library sectors or faculty members teaching at library schools are the population of the study. A convenient sampling technique is used to collect data. The Link to the online questionnaire was shared on social media and LISTSERVS for recruitment of data. Both descriptive and inferential statistics were used to analyze data.

Practical implications: This study will show the perspectives and dynamics of learning among library professionals working in different capacities in Pakistan. Results will help in measuring the level of expertise among library professionals in different library specializations. Organizational and personal issues that were instrumental and detrimental to their learning will help planning future professional development programs. It will also serve as a guideline for improvement in expertise among library professionals and a baseline for future longitudinal studies across different disciplines.

Keywords: Learning strategies, motives, supporting and inhibiting factors, level of expertise-Librarians, Library and Information Science, Pakistan.

Introduction

The growing use of computers having suits of software, a proliferation of internet access, and growth in electronic resources have changed the role of the library significantly during the past two decades (Jennings, 2005). Introduction and assimilation of Information and Communication Technology (ICT) in libraries has made it mandatory for practicing librarians to acquire relevant skills for providing effective library services to readers (Gbaje, 2012). This revised role of libraries needs some kind of learning and training for library professionals in the use of various mediato work with the new clientele, resources, and environment (Gupta, 2001).

The overall library environment expects professionals to learn on their own (Warken & Young, 1991). An effective learning environment is instrumental for developing a trained suite of librarians having a higher level of expertise. The relationship of motivation, supporting and inhibiting factors, and frequency of participation in learning activities with the level of skills is very important for reshaping the learning environment and parameters. Demographic variables may also affect the process of developing library skills. Mapping the relationship between the level of skills with learning practices and demographic parameters will help design and the learning paradigm. Results will be helpful to streamline the learning activities.

Measuring the impact of learning styles on developing expertise is an important topic for research. Documentation of this relationship may invoke the need among library associations and library administration to remove impediments and promote supports for infusing greater expertise. Library professionals for career planning and professional development may use the results. The level of skills for different areas will identify where library professionals stand now

and weak areas may be targeted for development. Institutions and associations associated with the professional development of librarians may use the findings for cultivating future development initiatives for librarians.

Research Hypotheses

Respondent's age, education, sector of working and gender were the demographic variables about which data were collected in the current study. Four behavioral variables including motivations for learning, supporting factors of learning, inhibitors in learning and frequency of participation in learning activities were used. These variables were used as independent variables while the dependent variable was the level of skills. Based on dependents and independent variables, the following research hypotheses were developed to depict the relationship among independent variables and the dependent variable:

- **Hypothesis 1:**Library and Information Science (LIS) professionals having higher motivation for learning will have a higher level of expertise.
- **Hypothesis 2:**Intensity of learning will positively affect the level of expertise.
- **Hypothesis 3:**Hindrances in learning will affect the level of expertise negatively.
- **Hypothesis 4:**Supporting the environment will enhance the level of expertise.
- **Hypothesis 5:**Significant differences exist among library professionals in the level of skills based on personal/demographic variables.
- **Hypothesis 6:**Different types of skills may be affected differently by demographic variables.
- **Hypothesis 7:** Sharp differences exist among levels of different types of skills. Furthermore, the level for different types of skills is average.

- **Hypothesis 8:** Similar types of skills have a strong correlation as compared to less related skills.

Review of literature

The review of the literature revealed different aspects of skills. Many investigations are conducted about typologies of skills needed for librarians, skills that librarians consider as important, library skills for emerging roles or future scenarios, and acquisition and developing these skills. The level of skills and its relationship with different demographics or other variables are the focus of the current study. Therefore, this review is restricted to both these areas.

Level of skills

A review of the literature revealed that different approaches were used to classify the level of skills. In the first approach, the authors have examined the level of a particular skill and its sub-categories. The second approach categorized skill into multiple categories and then compared the level for different categories. Ali and Richardson (2018) assessed the information literacy skills of librarians of Karachi. They grouped these skills into six categories. Respondents have rated their command in searching higher as compared to information literacy skills. Ahmad and Bhatti (2017) examined the level of digital skills among university librarians working in the university libraries of Punjab. The level of digital skills possessed by librarians was of basic level. According to Satpathy and Maharana (2011), the majority of librarians were familiar with library automation. However, only 43 respondents out of 113 were able to apply their knowledge practically. They possessed knowledge of digital libraries and were proficient in using Greenstone Digital Library Software (GDLS), DSpace, and New GenLib digital library software for managing electronic resources. Khan (2018) studied a theory of Taylor's Information Use Environment and identified that fresh professionals have lower skills and experienced

professionals have higher skills and hence they have different approaches to seek information for addressing any problem/issue within the organization. However, less experience in advanced organizations is more proactive than high experience in a less advanced organization.

Many authors have examined the level of ICT skills among librarians. Ahmad and Shamshad (2016) examined information technology competencies. They found that the status of ICT skills is unsatisfactory among library professionals working in the public sector universities of Khyber Pakhtunkhwa. Ayoku and Okafor (2015) categorized IT skills into different categories and examined the level of skills in each category. They found that respondents have good knowledge of email use and word processing tasks but lack skills in search engines, subject gateways evaluation, cataloguing of e-resources and web design.

Batool and Ameen (2010) examined the ICT skills of university librarians by categorizing the level into no skills, learning and proficient. The majority of respondents are proficient in word processing and library automation but have no skills in managing electronic resources and computer hardware. Librarians working at Isfahan University did not have computer skills (Safahieh & Asemi, 2010). Librarians working at engineering colleges in Tamil Nadu have a fair knowledge of managerial skills and automation systems. They were aware of Windows and DOS but do not know UNIX and LINUX (Babu, Vinayagamorthy & Gopalakrishnan, 2007). The majority of librarians working in Nigerian university libraries have either average or low level of computer skills (Adomi & Anie, 2006).

Some authors have also assessed different library skills and rated their levels. Farooq, Ullah, Iqbal and Hussain (2016) investigated the gap between the current and required level of personal and professional skills among university librarians working in Islamabad and Rawalpindi. A significant gap exists between the current level of skills and the required level of

skills. The current level of both the personal and professional skills is at the middle level but the desire for these competencies is of a higher level. Warraich and Ameen (2011) examined the level of satisfaction among LIS graduates about the competence they achieved during the MLIS course. They found that LIS graduates were satisfied with the competence they achieved during their enrolment in the MLIS course. They were more satisfied with their knowledge of marketing, information technology and library automation but were less satisfied with cataloging and classification skills. Medical librarians rated their ICT skills, communication skills and knowledge of medical databases as high while they were unaware of the current developments in medical librarianship (Ullah, Ameen, & Bakhtar, 2011).

Correlation or Comparison of Skills

A review of the literature revealed that a single skill or typology of skill is compared or correlated. The collective skill level of multiple skills is also computed and then correlated or compared by LIS authors. Comparison and correlation are based on personal or demographic variables. Khan and Bhatti (2017) investigated the differences in the level of digital skills among university librarians based on the sector. Through an independent sample t-test, they found that university librarians working in the private sector have a higher level of digital skills as compared to librarians working in the public sector. However, Khan and Rafiq (2019) conducted a study and mentioned that both private and public sector university libraries use online library services equally. Mansour (2017) predicted a significant relationship of demographic variables (age and education) and professional variables (discipline, job title and experience) on digital information literacy skills. Gender has no effect on digital information literacy. Farooq, Ullah, Iqbal and Hussain (2016) investigated the relationship and differences in the current and required level of skills based on demographic variables. The length of a job (i.e. experience) and grade of

academic librarians have no relation with their current level of skills. Gender has significantly affected both the current level and the required level of skills. Males have a higher score on the current level of professional competencies while females have a higher score on the required level of skills. Significant differences exist based on designations about the librarianship and ICT skills of librarians working in engineering colleges libraries of India (Kaltimani&Naik, 2013).

Some authors have also correlated behavioral variables with library skills. Khan,Nasrek and Nazdar(2015) examined the impact of technology management competencies on job satisfaction. Library professionals having a higher level of technology management competencies have a higher level of job satisfaction.Ramzanand Singh (2010) reported that the behavior of librarians towards information technology affects their attitude towards information technology. The intensity of the librarian's fears towards IT and their ability to cope with IT are predictors of librarians' attitudes toward information technology. IT anxiety will negatively affect the technical skills of librarians.Anwar and Al-Ansari (2002) opined that library professionals have a natural tendency to update their knowledge and skills but they found that the interest of individuals has no relationship with their level of skills.

Literature review about the relationship of skills with different skills conducted for the current study has revealed that studies were undertaken to correlate skills with demographic and behavioral variablesbut no study has ever been conducted to correlate the level of skills with learning practices. The current study is intended to fill that gap.

Research Methodology

A quantitative researchapproach was used to carry out the current study. A structured questionnaire was developed to seek responses from respondents. Empirical data were collected from library professionals working in Pakistan. A questionnaire was developed through a review

of literature, interviews and discussion with Library and Information Science (LIS) trainers who have a high level of expertise and arrange a workshop to train other LIS professionals. The names of the trainers were selected through the perusal of the training initiative shared on the Pakistan Library and Automation Group (PAKLAG). The following questions were asked from LIS trainers:

1. What learning strategies have you adopted to develop current expertise as a trainer?
2. What did motivate you to develop yourself?
3. What supporting factors did facilitate you?
4. What inhibitors did you experience in your professional development?
5. What is the level of expertise in different library-related areas?

The answers and further review of the literature were used to develop items for different variables of the current study. The dimensions of five behavioral variables were assessed by using different scales. Motivations, supporting and inhibitor factors were measured by using a five-point Likert type scale between “strongly disagree” and “strongly agree”. The frequency of participation in different learning strategies (10 items) was measured by using a five-point Likert type scale between “always” to “never”. Levels of skills were measured by adopting a five-point Likert type scale between “highly skillful” to “no skills”.

Data were collected from library professionals working as practitioners in different library sectors or faculty members teaching at library schools in Pakistan. A convenient sampling technique was used to collect data from respondents. The link to the online structured questionnaire was shared on social media tools (Facebook groups and pages) and a LISTSERVS (PAKLAG Yahoo group) for the recruitment of data. Collected data were analyzed by using

SPSS. Pearson correlation, multiple regression and binary logistic regression were used to find the correlation among different variables.

Reliability of the instrument

The reliability of five variables was measured by using Cronbach's alpha coefficient. The value of Cronbach's alpha coefficient for different variables such as frequency of participation in different learning strategies (.874), level of motivation (.809), level of support from colleagues and parent organization (.832), inhibitors (.861) and level of skills (.909) indicates a strong connection between items on a scale.

Demographic status of the respondents

Details about the library professionals who participated in this study are provided in Table 1. Nearly two-thirds are male and the remaining one-third are female. In terms of qualification, 55% are MPhil/Ph.D. and 45% are MA/BS degree in Library and Information Science or Information Management (IM). Nearly half have worked in both the public and private sector and slightly more than one-third worked either public or private sector each. Concerning age, the numbers of respondents in the lower and upper age intervals are equal (30%) while respondents aged between 21 and 30 have a slightly higher percentage (39%).

Table 1: Demographic status of respondents

Demographic variables	Parameter	Frequency	Percentage
Gender	Male	93	70
	Female	39	30
Education	MA/BS	60	45
	MPhil/PhD	72	55
Sector	Public	39	29
	Private	34	26
	Both	59	45
Age	21-30	41	31
	31-40	52	39
	More than 40	39	30
Total		132	100%

Hypothesis 1: LIS professionals having higher motivation for learning will have a higher level of expertise.

Results of Pearson correlation showed that a significant relationship of motivation with the level of skills does exist. To check the strength and variance of the relationship, the Linear Regression Analysis was applied. The predictive ability of motivation for learning is significant with the level of skills. The value of the correlation coefficient (.229) shows that 23% of the total data produced this correlation.

The positive value of beta-unstandardized is (.547) in table 2 indicates that there exists a positive correlation between independent variables i.e. motivation and dependent variable i.e. level of skills leading to the acceptance of a hypothesis. One unit increase in the level of motivation will increase .547 times the level of skills.

Table 2: Linear Regression Analysis between motivation and the level of skills

Variables	N	R	R-square	Beta-unstandardized	Sig.
Motivation for learning	132	.229	.052	.547	.032

Hypothesis 2: Intensity of learning will positively affect the level of expertise.

Results of Pearson correlation showed that a significant relationship exists between participation in learning activities and level of skills. The value of the correlation coefficient ($R=.363$) denotes that participation in learning strategies significantly predicted a 36.3% increase in the level of skills. The regression coefficient ($\beta=.447$) also reveals that one unit increase in participation in learning activities will increase .447 times in the level of skills.

Table 3: Linear Regression Analysis between the frequency of learning activities and the level of skills

Variables	N	R	R-square	Beta-unstandardized	Sig.
Learning activities	132	.363	.132	.447	.001

Hypothesis 3/4: Hindrances in learning will affect the level of expertise negatively and a supportive environment will enhance the level of expertise.

Pearson correlation was applied to depict the relationship hindrances and supports with the level of skills. Results showed that a significant relationship of hindrance and supports with a level of expertise do not exist. So both the hypotheses are rejected.

Hypothesis 5: Significant differences exist among library professionals in the level of skills based on personal/demographic variables.

A binary logistic regression was performed to ascertain the effects of the sector, age, gender and education on the level of skills of respondents. The model explained 11.0% (Nagelkerke R^2) of the variance in the level of skills and correctly classified 60.0% of cases.

A significant relationship exists between the sector of respondents and their level of skills. Library professionals who have worked in both the public and private sector have a higher level of skills as compared to those who have worked in either the private sector or public sector only. Value of odd ratio shows that respondents who worked in both the public and private sector have four times greater skills as compared to professionals who worked in the private sector only and twice as those who worked in the public sector only (Table 4).

Age, gender and education of respondents have not significantly affected the level of skills. The level of the female is slightly higher than males. The level of respondents having an MPhil/Ph.D. is slightly lower than professionals having MA/BS. The level of skills is higher among older professionals.

Table 4: Binary logistic regression of different types of skills with demographic variables

Variables	Parameter	Estimate	SE	Sig	Odd ratio
Sector	Public	-0.697	0.555	0.209	0.498
	Private	-1.466	0.596	0.014	0.231
	Both	0.000			1.000
Age	21-30	-1.090	1.088	0.317	0.336
	31-40	-0.811	1.005	0.420	0.444
	More than 40	0.000			1.000
Gender	Male	-0.052	0.566	0.927	0.950
	Female	0.000			1.000
Education	MA/BS	0.021	0.487	0.966	1.021
	MPhil/PhD	0.000			1.000

Hypothesis 6: Different types of skills may be affected differently by demographic variables.

Skills were categorized into seven different categories and data was converted into binary form. Binary logistic regression was performed to ascertain the effects of the sector, age, gender and education on the level of skills for six categories. Binary logistic regression analysis confirmed the hypothesis. Different demographic variables have affected different types of skills with varying proportions.

- Education affected significantly the level of research method skills. Research method skills of MPhil/Ph.D. respondents are 10 times higher than the respondents having MA/BS education.
- Academic writing and critical thinking skills are significantly affected by the age of library professionals. Respondents who are more than 40 years old have 4 time higher skills than professionals having age between 31-40 years. Low age professionals (between 20-30 years) have 20 times lower skills as compared to professionals who are more than 40 years old.

- Information literacy, information searching, automation, and digital skills are significantly related to the sector of respondents. In all four types of skills, respondents having work experience in both the public and private sectors have higher levels as compared to professionals who worked in the private or public sector only. In the case of information literacy, information searching, and automation skills, public sector library professionals were more skillful as compared to private sector professionals. In respect of digital skills, private sector professionals have higher levels as compared to those working in the public sector. The relation of digital skills with the sector for the current study is similar to Khan and Bhatti (2017) who found that university librarians working in the private sector have a higher level of digital skills as compared to the public sector. In contrast, a study conducted by Rafiq, Ali and Khan (2020) revealed that the perception of academic librarians of both public and private sector universities has same perception about the effectiveness of information literacy; however, they offer basic level information literacy instructions in their organizations.
- The level of digital skills is significantly affected by gender. Digital skills of the male are 8 times higher as compared to female library professionals.
- In the case of management skills, a significant relationship does not exist between the level of skills and demographic variables.

Table 5: Binary logistic regression of different types of skills with demographic variables

Type of skills	Variables	Parameter	Estimate	SE	Sig	Odd ratio
Research Method	Education	MA/BS	-2.180	0.669	0.001	0.113
		MPhil/PhD	0.000			1.000
Academic and critical skills	Age	21-30	-3.303	1.556	0.046	0.045
		31-40	-1.410	1.357	0.299	0.244

		More than 40	0.000			1.000
Information literacy skills	Sector	Public	-0.863	0.599	0.115	0.422
		Private	-1.173	0.627	0.041	0.308
		Both	0.000			1.000
Searching skills	Sector	Public	-1.186	0.558	0.034	0.306
		Private	-1.204	0.594	0.043	0.300
		Both	0.000			1.000
Automation Skills	Sector	Public	-1.030	0.577	0.095	0.358
		Private	-1.674	0.627	0.021	0.188
		Both	0.000			1.000
Digital Skills	Sector	Public	-1.281	0.651	0.049	0.270
		Private	-0.346	0.672	0.606	0.707
		Both	0.000			1.000
Digital Skills	Gender	Male	2.074	0.769	0.007	7.951
		Female	0.000			1.000

Hypothesis 7: Sharp differences do not exist among levels of different types of skills

Different values of the mean (ranging between 3.81 and 4.45) show that sharp differences in the level of skills do not exist. All types of skills are rated good and high by respondents. Information literacy and management skills are rated higher than other skills. Library professionals have a good level of skills in automation and digitization. The level of digitization skills found in this study contradicted the findings of a study conducted by Khan and Bhatti (2017). They found that librarians working in university libraries of Punjab have a basic level of digital competencies but in the current study the level is good. Research methods and academic writing skills are higher than average but less than good.

Table 6: Comparison of the level of different types of skills

Types of skills	Mean	Std. Deviation
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Information searching and retrieval	4.45	.676
Information literacy	4.36	.756
Management skills	4.21	.550
Automation and Information technology	4.10	.648
Digitization	4.01	.809
Research methods	3.97	.890
Academic writing and critical skills	3.81	1.027

Scale (5=high, 4=good, 3=average, 2=weak, 1=no skills)

Hypothesis 8: Similar types of skills have a strong correlation as compared to less related skills.

Pearson correlation was applied among four types of skills including digital, automation, research method and academic writing skills. The level of these skills has a strong and positive relationship with each other but values of correlation coefficient show that digital and automation skills are highly correlated (.549) while research method and academic writing skills are highly correlated (.756). The correlation among other less related sets of skills are not so strong (digital and research method=.361, automation and research method=.311, digital and academic writing=.382, automation and academic writing=.299). Results proved the above hypothesis.

Findings and Discussion

Participation in learning activities has a positive impact on the level of skills. Library professionals should be provided with opportunities to participate in learning activities. Motivated professionals are more skillful as compared to less motivated professionals. Organizational supports and hindrance have no significant effect but support has a positive

relationship while hindrances have a negative relationship with the level of skills. University and library administration should give more attention to professional development activities.

The sector has significant effects on the overall level of skills. Library professionals who have worked in both the public and private sectors have improved their skills significantly. Collaboration in public and private sector libraries may be enhanced to improve their skills. Local fellowships may be provided to professionals for enriching the experience of library professionals.

Demographic variables have varying effects on different types of skills. Research education has greatly improved the research method skills. Young professionals have a lower level of academic writing and critical skills. Shares of younger professionals in academic writing have increased substantially in the past few years but still, they need patronization to become critical thinkers and writers. The sector has affected the level of core library skills such as automation, information literacy and information searching and retrieval. Males are highly skillful in digital library skills than females. It may be due to the fact that projects of digitization are being executed by male library professionals in libraries across Pakistan.

Library professionals are more expert in core library skills instead of research methods and academic writing skills. Research incentives should be provided to attract library professionals in academic writing. Research skills are necessary to undertake the assessment and evaluation of resources in the ever-changing environment (Partridge, Menzies, Lee & Munro, 2010). Library professionals have rated their skills as high or good in contrary to other Pakistani authors who have rated the level of skills as average or low. For example, Khan and Bhatti (2017) rated digital skills at a basic level and Farooq, Ullah, Iqbal and Hussain (2016) rated skills as average. It may be due to the collection of data through social media. Library professionals

using social media and yahoo groups may be more skillful as compared to non-users of technological tools.

A similar set of skills have a strong correlation as compared to the different nature of skills. Technology-related skills including digital and automation are more related to each other as compared to others. Similarly, research-related skills including research methods and academic writing skills are more related to each other as compared to other skills. Librarians having experience in automation may perform well in the digitization of resources if they are entrusted with such tasks. Professional having good knowledge in research method skills can be deputed for assessing library services.

Conclusion

Organizational factors, personal values and participation in learning activities have played a key role in developing expertise among library professionals. A conducive supporting environment should be created for developing expertise. Parent organizations, library heads and library associations should play their due role in streamlining the learning environment. University administration should also provide opportunities to participate in learning programs. Library professionals should adopt a proactive role to increase the level of skills. They need to develop a strong urge or motivation among themselves to attain a higher level of competencies. Opportunities for research education may be provided to enhance research methods skills. Professionals with high writing skills should come forward to making young professionals as independent researchers. LIS professionals should maintain core library skills but also need to learn research skills. This study offers insight for library managers and LIS faculty to plan for the future.

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