High-Tech Functional and Professional Skills, Generic Job Satisfaction, and Training Needs of the Pakistani University Librarians: An Empirical Appraisal

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Abstract:

Since modern librarians are urged to acquire technological skills, thus objectives of this study are: 1) to examinewhether or not the acquisition of such skills affects theirgeneric job satisfaction (GJS) and; 2)toidentifythe training needs.To this end, twelve research hypotheses were formulated indicating the relationship of high-tech functional and professional skillswith GJS. The findings revealedsignificant effects of high-tech functional and professional skills on GJS and accordingly, all hypotheses (H₁-H₁₂) are supported. In addition, Information Assurance and Security Skills were established as the principal predictor of GJS whereas Library Content Management System skills as theweakest. Additionally, training needs analysis establisheda 76.3percent deficit, 19 percentsurplus, and 21.2 percentjob-best fit. This study has diverse implications: 1) practical implications-national high-tech functional and professional competencies model is neededto enable librariansto acquire neededskills; 2) social implications- results emphasize librariansto enhance the current level of professional skills to perform contemporarily that perhaps augment their social image and; 3) theoretical implications-the integrated research model of this study can be utilizedbyfuture researcherseither for cross-validation of findings of this study or to improve the topic scope.

Keywords: Technological Competencies, Technical Skills, Job Satisfaction, University Librarians, Technology adoption, Performance.

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Introduction

A range of researchers has established thathigh-tech innovations have significantlyaugmented the basicprinciples of librarianship. The academic librarians are believed to acquire thehigh-tech functional as well as foundational skills and should learn how to utilizetechnologiesat the workplace (Khan, Rehman and Rehman, 2013).Moreover, librarians are directed toenvisage technologiesand professional challenges as prospects of advancement (Khan, 2006). To manage such challenges, library associations have designed diverse competencies models, such asthe FederalLibrary, and Information Center Committee's (FLICC)competency model. FLICC model definedhigh-tech and professional skills as acquiring capabilities of dealingwith technological innovationsfrom kickoff to dispersal and toexecution.Abundant researchersare of the opinion thatthe influence of high-tech skillsonperformance, satisfaction, and overall adoption of innovations is significant (FLICC, 2011). Long (1993)and Attar and Sweis (2010)indicated that the relationship of high-tech skills with thequality of work and job satisfaction is significant. However, Danziger and Dunkel (2005)reporteda negative and insignificant correlation between high-techskills and job satisfaction.Besides the fact that competencies are strongly associated with GJS, it is still unknown whether or not sucha relationshipis valid in the context of Pakistani academic librarians.As a response to fill this gap, the intended study was conducted to evaluate the relationship of different indicators of high-tech skills with GJS. Additionally, this study measured variance in the level of librarians' high-tech functional skills to identify thetraining needs. For this purposes deficit, surplus, and job-best fit were explored.Sincedeficitsexplored the areas where training is required, thus training needs analysis (TNA) was conducted. However,surplus informed about skills under-utilization, for which top-down allocation of tasks was suggested to increase job-best fit.

In the intended study, the appraisal of TNA has two foremost justifications. Firstly, Pakistani universities are facingmonetarylimitations, anda meagre portion of theirbudget is allocated to libraries which is not enough to adopt modern infrastructure of library services or to enhance the librarians' current professional skills. These libraries also have limited training opportunities and,as a result,their performance is not contemporary (Khan and Begum, 2016). Some universities are struggling to organize training programs frequently but the outcome is not satisfactory due to trivial training contents, librarians' lack of interest,the absence of competent resources persons etc. Secondly, TNA may address the issue of what type of contents should be included in the training module.

Toaddress the above two issues are critical because they have negative impacts on the generalized societal and organizational image of libraries and librarians in Pakistan. Low performance and incompetence of librarians are presenting librarianshipas not only an unattractive profession but also regarded as a low paid, dull, stagnant, uncreative, and mediocre people job. Librarians are the people who have no work in their libraries. For thesocial image, self-protection, and professional survival, institutions have adopted escape policies such as the term "library" is being eradicated from the title "library and information science" in Pakistan. One of the possible intentionsfor such actions is to enhance their social, organizational, or institutional profile. Another possible justification may be to give theimpression of being adopting modern innovative ideas which may not be true. Because their curriculum even though looks like "old wine in the new bottle". Such measures are humiliating the image of librarianshipand that is why librarians and teachers of library and information science are not willing or feel shyness and reluctance in the use of word"library" while interacting with people from the other disciplines. Besides poor social image, Pakistani librarians are still dependent on traditional ways of managing their libraries and are not motivated to acquire the needed high-tech functional skills or augment the current levels of acquired competencies. Additionally,the curriculum currently taught in the schools of librarianship is not compatible withmodern professional demands. The course contents are the assimilation of outdated concepts replicated from western countries. The resource persons are not well-equipped or trained in the use of the modern concepts and as a result, the graduates of these schools are not proficient in the use of moderns innovations and faces several professional issues. Thus, this study assumedthe need for training on technological skills. Besides the above,TNA is importanttorecognize budget limitations, type of training required, training areas, cost, identify workers that need training, explore skills deficit, surplus, level of job-best fit and save the time.

Research Objectives

The intended has the following research objectives:

1. Toinvestigate the relationshipbetweenhigh-tech functional and professional skillsand generic job satisfaction.
2. Toanalyzelibrarians' training needs on high-tech functional and professional skills.

Literature review

Generic job satisfaction

Asubstantial amount of research affirmsthat job satisfaction (JS) hassignificant effectson performance and is needed to be examined. According to Bowra and Nasir (2014),JS should be an important parameter of performance evaluation.General Job Satisfaction (GJS) refers to workers' generalized approaches towards the job, personal and professional abilities (Hart, 2010). It specifiesthe vision of abilitiesand emotional reactionsto the work[10]. The concept ofGJS is heterogeneous such as Ravari et al. (2012)found six diversestylesin theliteraturethat explainsGJS. Further, Somvir (2012) stated thatGJS meaneither satisfied or unsatisfied workers. The indicators of GJS include promotion, jobsetting, and salaries (Testa, 2001). Additionally, Luthans (1998)characterizedGJS as intrinsic JS (abilities) and extrinsic JS (wages).

High-tech functional and professionalskills

Regardless ofmonetaryrestraints, organizations spend a major portion of theirbudget on procurement and management of technologies. However, productivity is not simplysupposed to be the cause of employing technologies but alsoaccredited to the waysof integrating such innovations in organizational setup, provision of needed high-tech functional skills and appraisal of acquired skills. In the context of librarianship, high-tech skills are the apparent, quantifiableconfigurations of technological competenciesrequiredat the workplace which may be foundational and/or functional.

Functional high-tech skillsrepresenta cluster of identical or unifiedskills that signify the keypracticaljob that designates the profession.It is noteworthy that skillsare also viewed from professional and personal perspectives. Thus, it is assumed that technologies can be utilized for personal as well as for professional purposes. To avoid any conceptual ambiguities, for this study we adopt the use of high-tech functional and professional skills. The FLICC competencies model operationally defined high-tech functional and professional skills as information and communication technologies, assistive technologies, enterprise information technologies, information assurance and security, library and content management systems, social media, collaborative and mobile technologies. High-tech functional and professional skillsplay significant roles in successful organizational productivit9 (Ravari et al. (2012). Gera and Gu (2004) stated that the provision of technology skillsensure improved performance. Furthermore, technology is regarded as a challenge for organizational performance but is essential for competitive advantage. Unfortunately, organizations take little interest inthe development of workers' skills and thus the outcome is poor performance.The advent of technological innovations and later on its

rapid proliferationare the main driversthatincreased users' information demands. Because of that library professionals are demanded to acquire the needed high-tech skills that ensure optimal performance.

Relationship of GJS with High-Tech Functional and Professional Skills

Despite the fact that technologies influence job satisfaction, researchers have paid little attention to it in the Pakistani context.However, findings from other fieldshave reported diverse types of relationships between these constructs. For example, Meyer (2006), Attar and Sweis (2010) and Ryding (2010) have established a positiverelationship between technology skills andGJS. Besides the above, Aracil and Velden (2010) indicated that variation in the levels of the current and required professional and high-tech skills negatively influence GJS. Further, Hart (2010) stated that such variations have caused dissatisfaction among librarians. To eliminate job dissatisfaction, Faraj and Badraghe (2013) suggested training for librarians that assist in managing gaps in the levels of professional and high-tech skills and further augment GJS and performance.

From the above discussions,it is deduced that librarians must be competent in the use of technologies. For that, librarians must change their attitude from traditional librarianship to technology-based practices. Their approaches must be optimistic towards professional challenges and envisage them as opportunities. Since research findings are scarce onthe effects of professional and high-tech skills on GJS, thus it is unknown whether or not the effects of professional and high-tech skills on GJS of Pakistani librarians are significant. The present study aimed to assess the relationship of high-tech functional and professional skillson GJS of Pakistani university librarians. Further, this study identified the skills where training is needed.

Training Needs Analysis and Skills Development

Training means the determinationsand struggle that offers employees the skills to attain thedesired performance and organizational objectives. Itdescribes organizational goals,augmentsjob-best fit,improvesself-reliance,producesoptimism, facilitatespolicy-making, and exploresproblemhandling strategies[20].Earlier researchers have recognized several benefits of training such as it improves the current level of professional skills, lessen skilldeficits, supportsattainment ofthe advancedabilities, and expandsoccupational perspectives,generates new employment opportunities and professional evolution.Training is dependent on workers' demand forneeded skills or augmentation of the current skills. However, prior to organizing any training programs training needsanalysis (TNA) is vitalto identify workers that needtraining. TNA tells about what type of training is needs, where training should be carried out, how it should be conducted and managedwhen training is significant to be planned etc.Training will be

successful if given to the right workers (workers who need training) and therefore necessitate the skills to identify the right workers. TNA is basically a method of finding a suitable employee for the training. It confirms training participation of those workers that have deficiencies in thelevel of current skills. Workers deficient in skills always exhibit poor performance (Khan, Masrek and Nadzar, 2014).TNA describesvariance in the current and needed skills and therefore assist in theevaluation of workers' performance and their contributions towards theattainment of organizational goals. Another important benefit of TNA is that it is cost-effective, avoids skillreiteration, and impedes inclusion of trivial training contents in the training module. Moreover, TNA is significant and mandatory ifan organizationfaces financial constraints.

The above discussions showed that skills varianceaffectsGJS and performance. In addition, research onskills variancemay defineskills deficit, surplus and person-job matching or mismatching. To this end,the significance ofhigh-tech and professional skills varianceand need of training wereevaluated.

ResearchModel and Hypotheses Development

Since this study is based on two central research objectives, thus integrated theoretical model of the study as shown in Fig. 1, is composed of two parts; 1) relationship study and 2) difference study for training needs analysis. In this study, GJS is used as a dependent variable that captures Pakistani university librarians' overall attitude or feelings towards their job. Numerous earlier researchers such as Kessler (2007) have used GJS as thedependentvariable. The research framework has six high-tech skills as predictors.
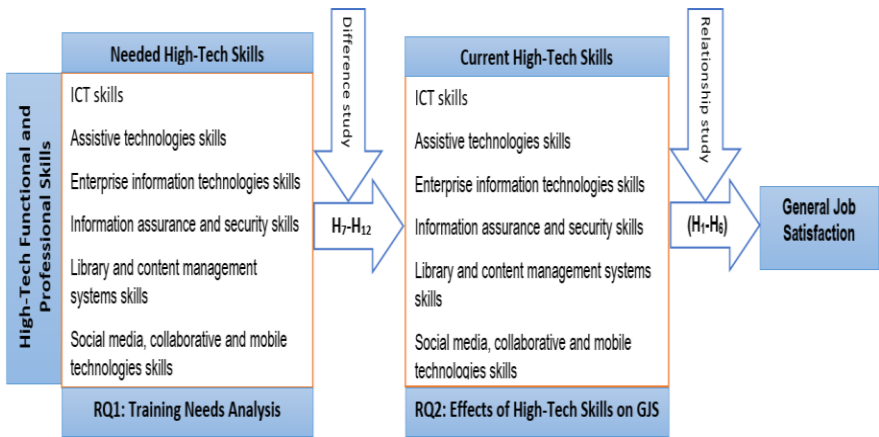

Fig. 1: Study framework

In terms of Pakistan, the below research hypotheses (H_1-H_{12}) are formulated:

H_1. Information and communication technologies skills are the significant predictors of GJS.
H_2. Information assurance and security skills are the significant predictors of GJS.
H_3. Library content management skills are the significant predictors of GJS.
H_4. Social media, collaborative and mobile technology skills are the significant predictor of GJS.
H_5. Enterprise information management skills are the significant predictors of GJS.
H_6. Assistive technologyskills are the significant predictors of GJS.

To accomplish the second research objective, this study designs a model that measures skills variance in context ofprofessional and high-tech functional. The difference study is composed of three steps; a) examining the significance ofskills variance; b) exploration ofskills' deficit/skills overutilization, surplus/skills underutilization, and person-job matching and; c) analysis oftrainingrequirements. Hence,the following six hypothetical relationshipsare assumed in the context of Pakistan librarians:

H_7. Statistical variance in the current and needed levels of ICTskills is significant.
H_8. Statistical variance e in the current and needed levels of information assurance and security skillsis significant.
H_9. Statistical variance in the current and needed levels of library content management skills is significant.
H_{10}. Statistical variance in the current and needed levels of social media, collaborative and mobile technology skills is significant.
H_{11}. Statistical variance in the current and needed levels of enterprise information technology skillsis significant.
H_{12}. Statistical variance in the current and needed levels of assistive technology skills is significant.

Research Methodology

This study has six stagesi.e.; 1) questionnaire building; 2)reliability and validitytests; 3) gathering of data; 4) hypotheses testing; 5) difference study and; 6) training needs analysis. All these steps are discussed in the following sections.

Questionnaire Construction

For the intended study, a questionnaire was constructed. This data collection tool was composed of multiple sections. The first section gathered data on the demographic characteristics of the study participants. The second section was related to the items describing the technology management skills identified from the related literature and FLICC competency model. At this level, all skills identified from the previously validated scales were matched with the skills described in the FLICC competency model. Theprocesshelped in the removal of skills' elusivenessin terms of construct operationalization, inferredexplanation, and paradigms grouping that further demonstrated consistency in skills statements. As shown in Fig. 2, skills developments process started with reviewing the related literature and terminates with a single cluster of technology management competencies. All scale items in this section were validated through pretesting. All pretesting experts examined the accuracy, relevancy, and appropriateness of the scale items in terms of Pakistan. According to the feedback of these experts, a final version of the questionnaire was generated where scale items were measured through a five-point Likert scale. Likewise, to measureGJS,anadaptedform of the Michigan Organizational Assessment Questionnaire (MOAQ)was utilized. The pastresearchers haverecommended the use of MOAQ to evaluate theGJS because of its high-reliabilityvalue ranging from 0.77 to 0.87.

The Study Constructs

To develop constructs, exploratory factor analysis (EFA) was used. For GJS, PAF and varimax rotation were further utilized. The KMO value (0.655) was >0.6 and Bartlett's Test of Sphericity is significant at X^2=91.267, p<0.00). This justified the factorability of correlation and supported sample appropriateness for the use of EFA. The determinant value (0.445) was found greater than 0.00001, confirming the absence of multicollinearity. Further, the same procedure was carried out for all twenty-four technology skills items and all the above requirements were found within the range (r = 0.498 and above; KMO=0.939>0.6; Bartlett's Test of Sphericity X^2=2704.101, p<0.00). As exhibited in Tables 1 and 2, the reliability values were found higher than 0.7 (between 0.719 and 0.818).
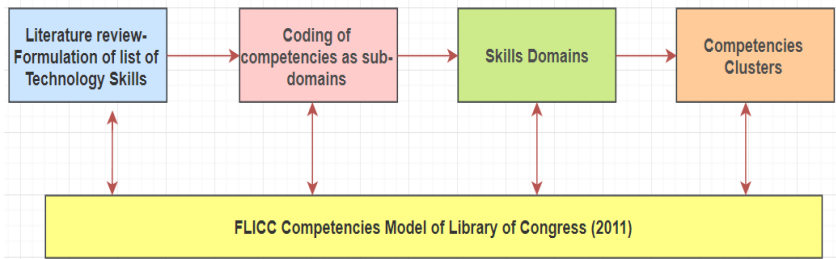
Fig. 2: Technology skill statements clustering techniques

Table 1: Factor loading for GJS

Items	Factors	Cronbach Alpha value
GJSq1	.873	.855
GJSq2	.762	
GJSq3	.546	

Table 2: Factor loadings for high-tech functional and professional skills

Items	Factors						Reliabilityvalues
	1	2	3	4	5	6	
ICTq1	.761						.719
ICTq2	.783						
ICTq3	.849						
ICTq4	.702						
IASq1		.719					.811
IASq2		.839					
IASq3		.682					
IASq4		.561					
LMq1			.520				.745
LMq2			.773				
LMq3			.745				
LMq4			.710				
SCTq1				.677			.810
SCTq2				.788			
SCTq3				.647			
SCTq4				.551			
EITq1					.753		.899
EITq2					.860		
EITq3					.688		
EITq4					.812		
ATq1						.818	
ATq2						.861	.817
ATq3						725	
ATq4						.811	

Sample and Data Collection

To collect data on the study construct, 300self-administered survey questionnaireswere distributed to a randomly chosen sample (n=225; N=540). Only252 duly filled survey were returned (response rate=84%). Preliminary data editing procedures identified 227 questionnaires as the ultimate data set.

Results ofDemographic Characteristics

Figures 3,4,5,6 and 7 demonstrate that in the intended study 142 (63%) respondents are male and 85 (37.4%) are female; 196(86%) respondentsare serving in publicuniversities whereas 31(13.7%) respondentsin privateuniversities.Furthermore, age distributions showedmaximum participation (n=92, 41%) from the librarians in the age group of 92(41%) librarians are 21-30 years whereasthe minimum participation (n=15, 7%) was observed from the librarians having age above the fifty years. Data on qualification indicated the maximum participation of librarians with a master degree in LIS (n=217, 96%). However, only one participant with a PhD degree in LIS participated in this study (n=1, 0.4%). Likewise, data on job status indicated that the majority of the study participants (n=173, 76%) are serving as permanent employees in the university libraries of Pakistan.
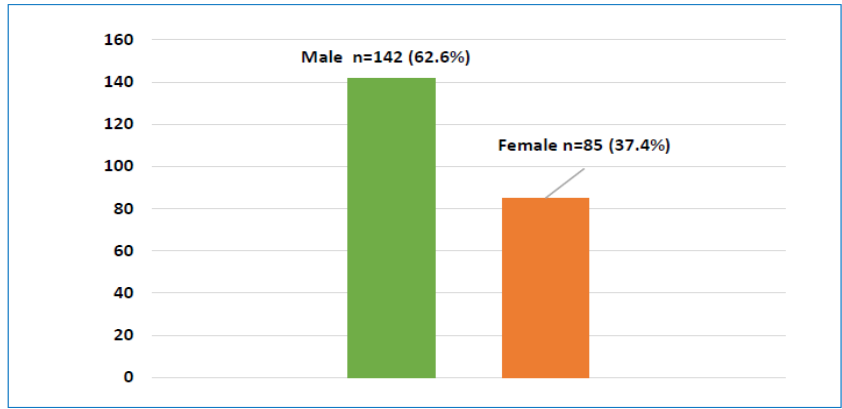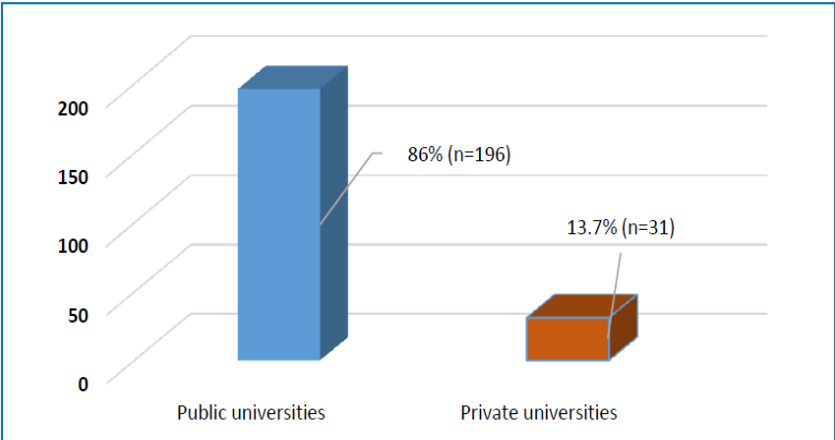

Fig. 3: Participation by gender

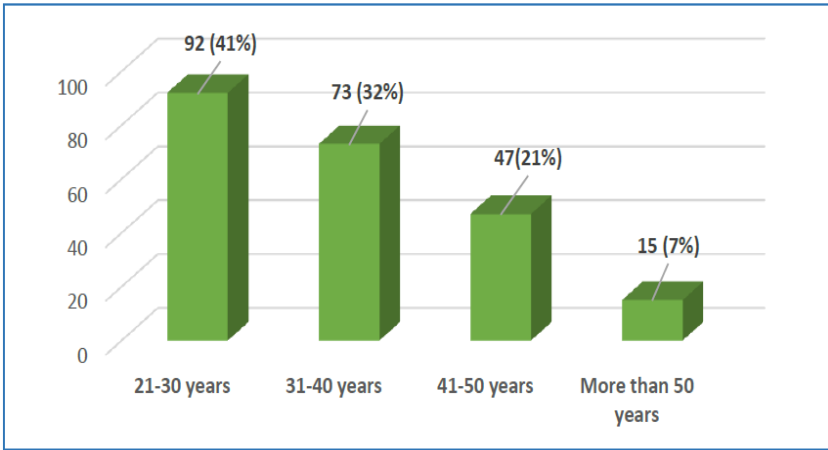Fig. 4: Data distribution by type of university
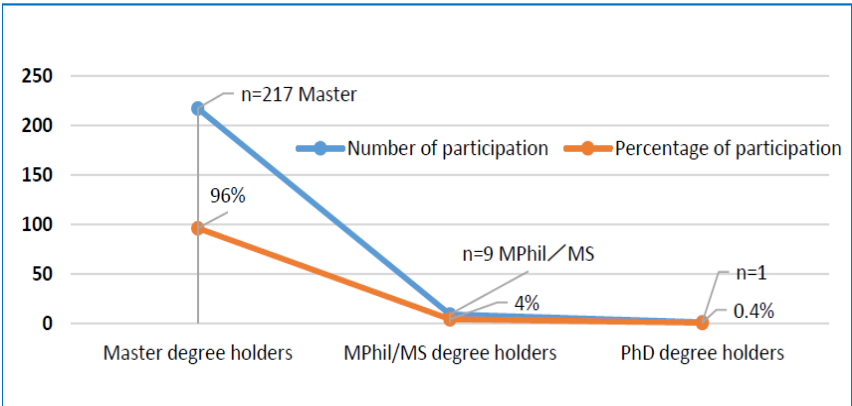

Fig. 5: Participation by age

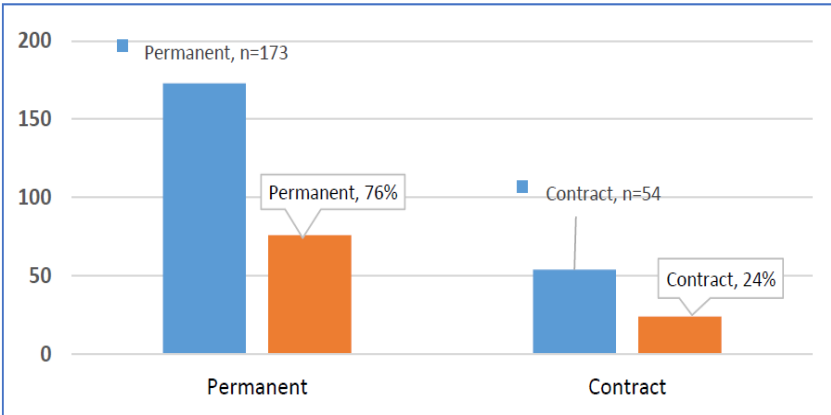Fig. 6: Data distribution by respondents' qualification

Fig. 7: Participation in the study by employment status

Correlation Analysis

For the measurement of correlation of high-tech functional and professional skills with GJS Pearson's correlation test was used andfound significant at the level of an alpha score of 0.01. The correlation magnitude was recorded between the range of 0.216 and 0.379, indicatingmediumcorrelation strength as exhibited in Table 3.

Table-3: Results on correlations of GJS with High-tech skills

Tag	Constructs	M	SD	1	2	3	4	5	6	7
1	GJS	2.91	0.39	1						
2	ICT	3.45	0.78	.369**	1					
3	IAS	3.27	0.88	.379**	.573**	1				
4	LM	2.98	0.68	.216**	.565**	.584**	1			
5	SCT	2.78	0.67	.333**	.546**	.500**	.526**	1		
6	EIT	3.88	0.47	.312**	.521**	.521**	.519**	.521**	1	
7	AT	3.71	0.76	.361**	.546**	.519**	.571**	.543**	.565**	1

**. Correlation is significant at the 0.01 level (2-tailed)

Multiple Regression Analysis

Table 4 and 5 exhibitthe findings of the regression analysis. The regression model was composed of six indicators yields $R^2 = 0.268$, F $(1,222) = 14.715$, $p < .000$. Findings indicated that high-tech skillspredict GJS (F $(1,222) = 14.715$). Additionally, there is a linear association between high-tech skills and GJS (F>4; P<.005). According to the R-value (0.457), regression model showed a moderate outcome on the prediction of GJS. Likewise, 27% ($R^2 = 0.268$) of variance has been observed by indicators with the outcome. Conversely, adj. $R^2 = 0.245$condensed 1.4% ofdifference. Moreover, influences of high-tech skills on the variance of GJS is also significant ($\beta = 0.453$) which implies that improvement in the level of high-tech skills leads to enhance GJS. According to individual beta value, the highest contribution was made by the information security and assurance skills while the least was produced by assistive technologies skills. Hence the regression equation isY = a + b_1X + b_2X + b_3X + b_4X + b_5X + b_6X read as Y = 2.758 + 0.211(ICT) + 0.281(IAS) +.179(LCM) + 0.182(SCT) + 0.173(EIT) + 0.121(AT), where Y stands for GJS. Since results are significant, thus all hypotheses are supported.

Table-4: Overall Model Summary

Model	R	R^2	AdjR^2	F	F change	Sig, F change	Sig
1	.457	.268	.245	14.715	17.607	.000	.000

Table-5: Relationship of high-tech functional and professional skillswith GJS

Constructs	Unstructured coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
Constants	2.758	.170	.000	16.683	.000
Info.& Com. technology skills	.141	.057	.211	2.454	.015
Info. Assur. & sec. skills	.173	.054	.281	4.227	.011
Lib. Cont. management skills	.084	.042	.179	2.814	.012
Soc. Med., coll. tech. skills	.117	.050	.182	2.320	.021
Enter.Info. technology skills	.136	.054	.173	3.141	.011
Assistive technology skills	.163	.053	.121	2.152	.025

a. Dependent variable: GJS

Paired Sample T-test

To assesstraining needs in terms ofhigh-tech skills,the significance of varianceamong the variables was examined. Results based on paired sample t-test were found significant as indicated in Tables 6 and 7 respectively. Since the difference between all constructs is significant, thus training needs analysis was performed. However, as indicated in Table 8 and Fig. 8 and 9, the results of TNA have three major portions namely surplus, deficit and job-best fit in term of high tech functional skills. In this study, training analysis was performed only for deficit because surplus and job-best fit do not need training. Based on the average scores under each category of high-tech functional skills, the overall average was calculated as 76.3 per cent of the deficit, 19.1 per cent of surplus and 21.2 per cent of job-best fit. It shows that 76.3 per cent of the university librarians perceive their current level of high-tech functional skills less than the needed levels and therefore indicated the need for training.

Table6: Paired Samples Statistics

Constructs	Mean	N	Standard Deviations	Standard Errors
ICT (current level)	3.363	227	0.931	0.059
ICT(neededlevel)	2.938	227	1.337	0.085
IAS (current level)	3.105	277	0.921	0.048
IAS (neededlevel)	2.911	277	0.311	0.081
LCM (currentlevel)	3.211	277	0.942	0.034
LCM (needed level)	2.817	227	1.401	0.041
SCM (currentlevel)	3.272	227	0.914	0.058
SCM (needed level)	2.998	227	1.301	0.083
EIT(current level)	3.177	227	0.813	0.042
EIT (needed level)	2.821	227	1.341	0.071
AT (current level)	3.188	227	0.837	0.032
AT (needed level)	2.931	227	1.361	0.086

Table7: Findings of paired samples t-test between high-tech skills and GJS

variables	Differences					t	d*f*	Sig.
	M	SD	SDM	95% Confidence Interval of the Difference				
				L	U			
ICT	.425	2.092	.133	.162	.688	3.182	227	.002
IAS	.312	1.811	.143	.025	.531	2.411	227	.013
LCM	.451	2.733	.125	.142	.631	2.619	227	.001
SCM	.274	1.999	.127	.022	.525	2.146	227	.033
EIT	.361	1.905	.152	.146	.504	3.241	227	.041
AT	.241	1.842	.127	.022	.525	2.146	227	.021

Table8: Results of the difference in high-tech skills

Competencies	Indicators	Deficit		Surplus		Job- best Fit	
		f	%age	f	%age	f	%age
High-tech Functional and Professional skills	ICT	102	44.9	110	48.4	15	6.7
	IAS	170	74.8	50	22.0	7	3.0
	LCM	156	68.7	49	21.5	22	9.6
	SCM	162	71.3	48	21.1	27	11.8
	EIT	224	98.6	3	1.3	0	0
	AT	226	99.5	1	0.4	0	0
	Total		76.3		19.1		21.2
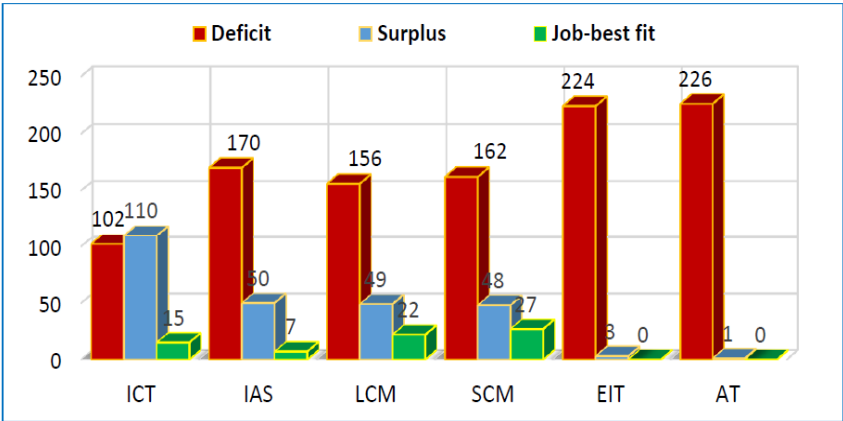
Fig. 8: Training needs analysis: deficit, surplus, and job-best fit
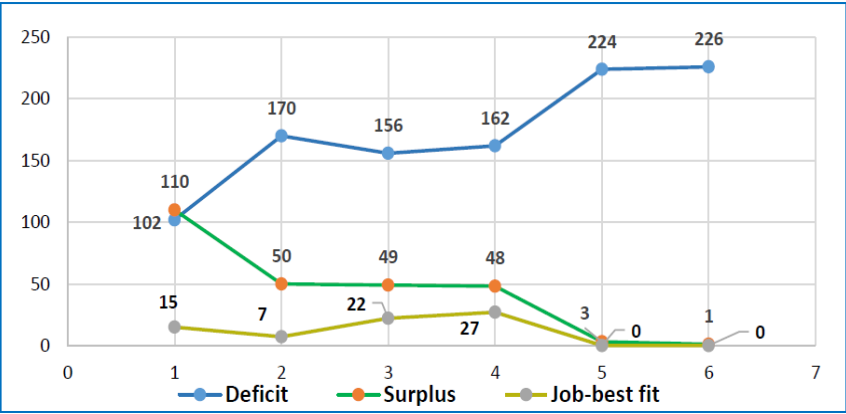
Fig. 9: Scatter plot of variations in the current and needed skills

Discussions

This study founda positive association of allindicators of the high-tech functional and professional skillswith GJS. Further, results showed that the difference between the study constructs is significant. As a result, all hypothetical relationships (H_1-H_{12}) are supported.Additionally, information assurance and security skills are established as the major indicator of GJS whereas library content management system skills were found as the minorone.

The findings established several prior results,for example, Meyer(2006),Khan, Masrek and Nazdar (2015a), Khan, Masrek and Nazdar (2015b), Khan and Ullah (2015) and Safahieh and Asemi (2010) that established a significant association among the study constructs. In addition, other studies have also established a significant relationship between high-techprofessional skills and GJS. For example, Attar and Sweis (2010)have also recognizeda significant impact on technology skills on GJS.Conversely, this study could not establishthe results reported by Danziger and Dunkle (2005) that describedhigh-tech skills as non-predictor of GJS (Khan, Masrek and Nadzar, 2017).

Based onthe findings of this study, it is inferredthat an adequatelevel of high-tech functional and professional skillsisessential forachieving GJS. For effective performance, librarians should acquire adequate levels of skillsin the use of technologies.To attainGJS,librarians should an adequate level of technology skills that will also help them in managing professional challenges and in the adoption of information security policies and the best professional practices. The provision or acquisition of needed high-tech functional skills may enable librarians to comprehend library content management system, its implementation,

professional use of social media, anddigital information and knowledge products. In other words, librarians may infuse and diffuse social media, collaborative and mobile technologies for library effective functioning and facilitate them to diminish their dependence on traditional library management practices. This further demonstrates that technologically competent librarians can perform up to the entire satisfaction of their organization that further enhance their performance and level of job satisfaction. It is further inferred that higher the level of current technology skills, the more will be GJS, performance will be effective, organizational image and library utilization will be higher.

After establishing that difference between the skills is significant, this study further perform TNA to explore the training need.Results showed that 76.3 percent of the university librarians need training in different areas of technology skills. Thus, to manage mismatch or gaps in the level of current and needed skills, training programs on different indicators of high-tech skills are strongly suggested.Probably, skill deficitsmay be an indicator of job dissatisfaction in the context of Pakistani university librarians. Numerous researchers such as Khan andMasrek (2017) and Khan and Begum (2017) established that librarians in Pakistanare moderately happy with theirlevel skills and have no or limited in-servicetraining opportunities. Their study findings strongly suggested training programs to manage skills deficiencies. Likewise, to manage surplus under each indicator of high-tech functional skills, evaluation of job descriptions is suggested to augment job best-fits. To attainsuchgoals, the top-downdistribution of responsibilities will be abetter option. It entails that allocatedifficultjobs to the skilled librarians, whileeasy should be given to the one havinglow high-tech functional skills.In anticipation, findings of this study are significant to facilitate librarians to manage skills disparity, strengthen professional collaborations, stimulates workers toward espousal of innovative skills, copeworkanxieties, and manage organizational behaviours. Furthermore, the studysuggests the provision of optimistic, contented, and dedicatedlibrarians thatensure to achieve organizational goals.

Conclusion

Thisstudyfounda significantrelationshipof high-tech skills with GJS in terms ofPakistani university librarians. However, theiracquired status of high-tech skills islow. To ensure that librarians are satisfiedworkers and effective performer, their technology skills must be enhanced. Further, the provision of high-tech skills is essentialto ensure professional existence and achievement of organizational goals. It is assumed that skilled and gratified librarians will be loyal and effective performers. The university authorities in Pakistan are recommended to

organize training programs for librarians on high-tech skills to make them effective performer and augment their level of job satisfaction. Librarians and the university authorities are suggested to realize the importance of the acquisition of high-tech skills and its significant impacts on GJS.

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