A Study on Customer Perception Towards Service Quality In BirIa Institute of technology Library – Ras Al Khaimah (UAE)

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Introduction :

Perception is a process by which an individual selects, organizes & interprets stimuli into a meaningful and coherent picture of the world. It can also be described as "How we see the world around us". Each individual perceives the world around him in a unique way and this unique interpretation of a situation is known as perception. Humans do not passively receive information rather they analyze and judge it. They can focus on some information and regard other information as worthless. As each person's mind is a unique filter, hence each one of us has his own way of looking at and understanding the environment and people within it. A situation may be same but interpretation of the situation by two individuals may vary.

From Business point of view customer perception is a marketing concept that encompasses a customer's impression, awareness and consciousness about a company and its offerings. Customer perception can also be related to customer satisfaction which is the expectation of the customer towards the products.

Good quality is customer satisfaction. It is used with reference to the end use of the product. Quality has been an integral part of human activity since the emergence of human history. Today customer satisfaction is the motto of any organization and quality an essential requirement for the survival of the organization.

In an organization striving to improve their service the identification of appropriate criteria for use in evaluating the quality service to the customers is essential. Among other service providing organizations university libraries play a major role when catering to their customers. Quality is the basic requirement and philosophy of a library service and all libraries strive to deliver the best service quality. A quality service is that which fully meets all the expectations and requirements of the users. If a library provides appropriate information to the right user at the right time and in the required form then it can be argued to be maintaining quality. Quality library services satisfy the query of each and every user accurately, exhaustively and expeditiously.

1.1 Definition of service quality :

'Quality' means different things to different people. Garvin (1988) discussed five approaches to defining quality:

(1) Transcendent-based quality (2) Product-based quality (3) Manufacturing-based quality (4) Value-based quality (5) User-based quality.

He stated that companies should use the multiple perspectives highlighted above to define quality. He further identified eight dimensions of quality that could serve as a useful framework to address quality issues in an organization. These are performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. As few products can claim to rank high on all eight dimensions at all times, it is clear that some dimensions can be achieved only at the expense of the other dimension. Gavin, therefore, suggested that companies should differentiate themselves by pursuing quality niches.

1.2 Service Quality concept in libraries :

The concept of service quality in the context of a library is defined as the difference between user's expectations and perceptions of service performance. Quality becomes a big issue when libraries try expanding their scope and improving their service. Quality is defined as how good a service is and not necessarily how large or extensive the service is. In the library quality may be recognized by the library users in terms of prompt delivery or lack of error in services. Quality is also seen as relating to the fitness of a service or product to its intended purpose or use, subject to the expectations of the customer or user. Quality therefore must be in conformity with the customer's requirements and needs. This means that the quality of a service can be a definition of the customer's perception of what is good or bad, acceptable or not acceptable service. Therefore quality is an ongoing process where user is a key determinant. Quality assurance is a continuous process of examination and re examination of needs of the user providing the means by which expectations

can be met or satisfied. So, quality service is helping a user to define his or her needs, clarify user benefits, build confidence and monitor and assess the organization and the impact of its services.

Literature Review :

2.1 Consumer Perception :

The entire process by which an individual becomes aware of the environment and interprets it so that it will fit into his or her frame of reference (Walters et al ,1989). (Walters et al, 1989) expanded the definition by stating that every perception involves a person who interprets through the senses something, event or relation which may be designated as the percept. Merely seeing or hearing, however cannot be referred to as perception. Perception is seeing or hearing it in terms of person's frame of reference Van der Walt (1991).Perception is a series of progress of people choose, form, and interpret information to gain an understandable picture of the world (Kotler, 2004). Perception is identified as the progress of an individual chooses, arranges, and interprets stimuli to be meaningful and logical frame of the world (Schiffman & Kanuk, 2004).

Solomon and Stuart (2005) defined that three basic aspects of consumer's perception are exposure, perceptive selection and interpretation. It means that firstly, consumers perceived about products to their sensory from some stimuli, at the same time consumers pay attentions to a particular stimuli more than others and after that consumers make a consistent or significant reaction to a particular stimuli based on their memory picture (interpretation).

2.2 Quality :

The quality's concept is defined as an abstract evaluation or judgment which associates with a product' physical standards and attributes, and also relates to the intrinsic cue that sets standards in the consumers' minds (Zeithhaml, 1987). Different brands tend to have different perceptions of quality in order to maintain brand loyalty. According to Crosby et al., (2003), in perceptions of quality, something is established in the consumers' minds because of their first impression.

Quality is a desirable characteristic of a product to be believable, useful and sought after for consumers. Consumers' perceptions of true quality (high/low) towards a product emerge after purchasing and using it. In this case, advertising can make a product reliable and good quality towards consumers' perceptions.

2.3 Service Quality :

The difference between customer expectation for service performance prior to the service encounter and their perceptions of the service received (Asubonteng et al., 1996).Service quality is the delivery of excellent or superior service relative to customer expectations (Zeithaml and Bitner 1996).Service quality revolve around the idea that it is the result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed (Lewis and Booms 1983).

2.4 SERVQUAL :

In business industries, SERVQUAL is an alternative instrument proposed to measure service quality from customer perspectives and perhaps it has been the most popular standardized questionnaire to measure service quality. (Albert Caruna, Michael T. Ewing & B. Ramaseshan)In the library setting, SERVQUAL was used to assess library quality service continually and it seems that culture of assessment in libraries had strong international dimensions as there is much potential for international collaboration on assessing library service quality. (Martha Kyrillidou & Kaylyn Hipps, 2000). SERVQUAL is a new approach to measure service quality. It generates planning useful for local planning and decision making. It also differentiates between service quality and satisfaction and points the direction for further research (Nitecki and hernon, 2000).

Research Methodology :

3.1 Objectives of Study :

- Toidentify the dimensions which influence service quality the most.
- To determine the degree of association between the expectation & perception towards the perceive quality of services at BIT RAK library.

3.2 Importance And Significance Of Study :

The findings of the study would help in:-

- Identifying where services need improvement from user's point of view.
- Toprovide services that are more closely aligned with the expectations of the users

3.3 Research Design :

The research design adopted is Exploratory in nature.

3.4 Data collection Method :

Both primary data and secondary data will be used in the project. Primary data will be collected by means of a standard questionnaire. Secondary data will be collected from internet sources , management book , newspapers and magazines

3.5 Sample Size :

For a research study to be perfect the sample size selected should be optimal i.e it should neither be excessively large nor too small. Here the sample size is taken as 200.

3.6 Tools and Rechniques of Analysis :

●Factor analysis

●Descriptive statistics ●Chi- square analysis

3.7 Software used :

Statistical package for social sciences, SPSS (version)22.0

Data Analysis & Interpretation :

4.1 Frequency Anaylysis :

Table 1:- Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	127	63.5	63.5	63.5
	Female	73	36.5	36.5	100.0
	Total	200	100.0	100.0	

Figure 1

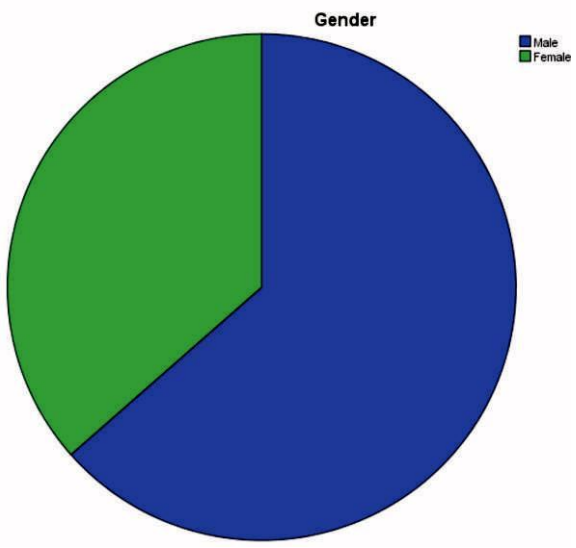


Table 1 and Figure 1 show that out of the 200 total respondents 127 respondents are males and 73 respondents are females

Table 2:- Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	179	89.5	89.5	89.5
	Postgraduate	21	10.5	10.5	100.0
	Total	200	100.0	100.0	

Figure 2

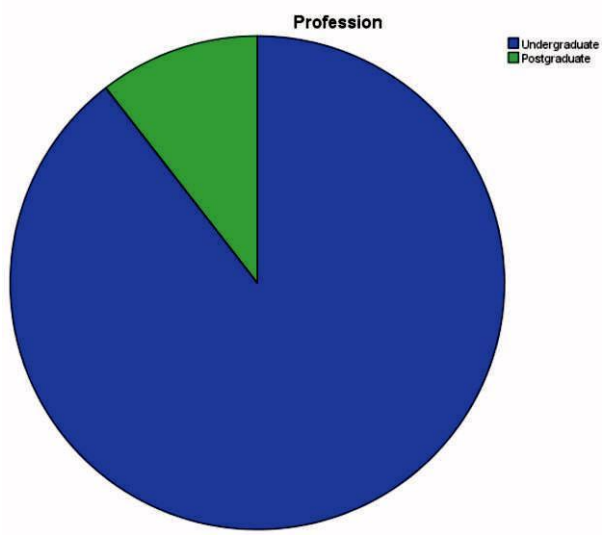


Table 2 and Figure 2 show that out of the 200 respondents 179 respondents were undergraduates and 21 respondents were post graduates.

Table 3 :-Field

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Engineering	87	43.5	43.5	43.5
	Management	98	49.0	49.0	92.5
	Architecture	15	7.5	7.5	100.0
	Total	200	100.0	100.0	

Figure 3

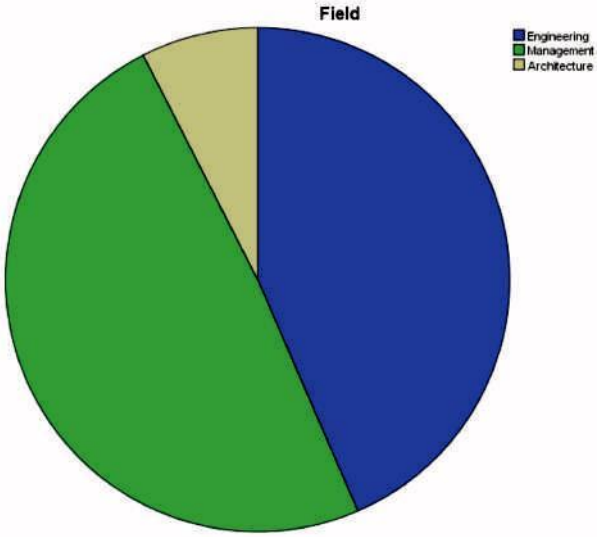


Table 3 and Figure 3 show that out of the 200 respondents 87 respondents were engineering students and 98 respondents were management students and 15 respondents were architectural students.

4.2 Descriptive Statistics :

Table 4 :- Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Modern Equipment	200	0	2	.63	.636
Visually appealing	200	0	3	.59	.771
Neat Professional appearance	200	0	3	.55	.671
Comfortable & Inviting location	200	0	4	.63	.810
Performing duties at promised time	200	-1	4	.45	.663
Sympathetic and Reassuring staff	200	0	3	.46	.656
Dependability of staff in handling user problems	200	0	2	.39	.556
Provides services at promised time	200	0	4	.54	.715
Accurate and up-to-date records	200	0	4	.52	.730
Tells customers when services are performed	200	-1	4	.47	.679
Receive promt service from library staff	200	0	2	.41	.551
Staff willing to help users	200	0	2	.37	.569
Responds to customer request promptly	200	-1	2	.47	.617
Users can trust their library staff	200	0	3	.47	.609
Makes users feel secure about transactions	200	0	4	.55	.742
Polite and friendly	200	0	2	.43	.572
Staff gets adequate support from college	200	-1	3	.50	.709
Library performes user education programmes	200	-1	4	.52	.820
Staff gives individual attention	200	-1	2	.55	.574
Understands the needs of users	200	0	3	.58	.638
Staff has user's best interest at heart	200	0	2	.63	.667
Operating hours of the library are convinient	200	0	4	.60	.827
Valid N (listwise)	200				

4.3 Factor analysis :

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.817
Bartlett's Test of Sphericity	Approx. Chi-Square	1782.317
	Df	231
	Sig.	.000

KMO measure of sampling adequacy is an index used to test appropriateness adequacy of the factor analysis. The minimum required KMO is 0.5.The table above shows that the index for this data is 0.817 & chi-square statistics is significant (0.000 < 0.05).This means the factor analysis is appropriate for this data. Therefore, we test for the null hypothesis that the population correlation matrix is an identity matrix (I.e. each variable correlates perfectly with itself , but is uncorrelated with the other variables). The result of Bartlett's test (the chi-square value is 1782.317 at 0.000 significance level) clearly rejects the null hypothesis that the population correlation matrix is an identity matrix. Therefore ,we can proceed with factor analysis.

Table 6:- Communalities

	Initial	Extraction
Modern Equipment	1.000	.564
Visual appealing	1.000	.690
Neat Professional appearance	1.000	.566
Comfortable & Inviting location	1.000	.762
Performing duties at promised time	1.000	.629
Sympathetic and Reassuring staff	1.000	.626
Dependability of staff in handling user problems	1.000	.724
Provides services at promised time	1.000	.604
Accurate and up-to -date records	1.000	.615
Tells customers when services are performed	1.000	.612
Receive promt service from library staff	1.000	.641
Staff willing to help users	1.000	.573
Responds to customer request promptly	1.000	.695
Users can trust their library staff	1.000	.807
Makes users feel secure about transactions	1.000	.713
Polite and friendly	1.000	.459
Staff gets adequate support from college	1.000	.563
Library performes user education programmes	1.000	.568
Staff gives individual attention	1.000	.711
Understands the needs of users	1.000	.629
Staff has user's best interest at heart	1.000	.667
Operating hours of the library are convinient	1.000	.694

Extraction Method: Principal Component Analysis.

The communality which is given in the second column of the table is arrived at by an iterative process. To start the ball rolling, an initial estimate is used. By default, this is the squared multiple correlations obtained when each variable is regressed on all the other variables. In other words, the amount of the variance of variable X1 explained by all the other variables is taken as a reasonable first estimate of the amount of X1's variance accounted for by the common factors.

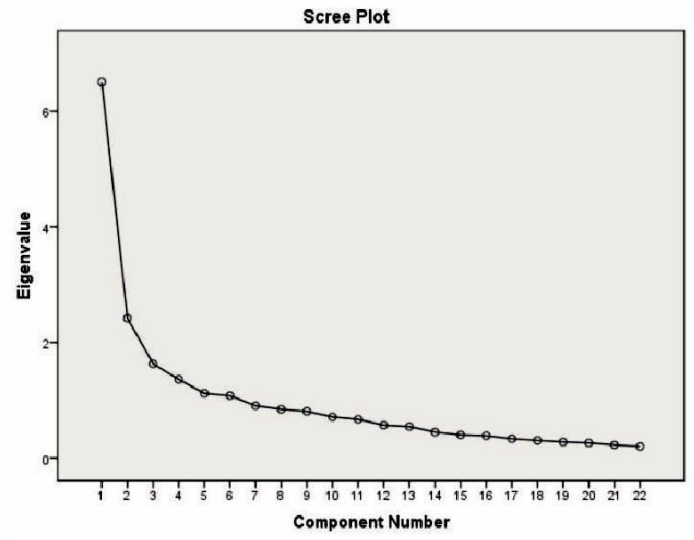
Table 7:-Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.503	29.561	29.561	6.503	29.561	29.561	2.989	13.588	13.588
2	2.418	10.992	40.553	2.418	10.992	40.553	2.782	12.647	26.235
3	1.630	7.409	47.962	1.630	7.409	47.962	2.367	10.757	36.992
4	1.361	6.188	54.151	1.361	6.188	54.151	2.230	10.134	47.127
5	1.120	5.092	59.242	1.120	5.092	59.242	1.949	8.860	55.987
6	1.079	4.904	64.146	1.079	4.904	64.146	1.795	8.159	64.146
7	.905	4.114	68.260						
8	.844	3.836	72.097						
9	.809	3.677	75.773						
10	.712	3.235	79.009						
11	.671	3.052	82.061						
12	.568	2.580	84.641						
13	.544	2.474	87.115						
14	.448	2.034	89.149						
15	.400	1.820	90.970						
16	.385	1.750	92.719						
17	.334	1.517	94.237						
18	.304	1.381	95.618						
19	.278	1.263	96.880						
20	.261	1.188	98.068						
21	.227	1.031	99.099						
22	.198	.901	100.000						

Extraction Method: Principal Component Analysis.

This output gives the variance explained by the initial solution .The table gives the total variance contributed by each component. It may be noted that the percentage of total variance contributed by the first component is 29.561, by second component is 10.992, by the third component is 7.409 and by fourth component is 6.188 . It is clear from the above table that the percentage of total variances is the highest for the first factor & it decreases thereafter. This leads to the conclusion that there are total four distinct factors for the given set of variables.

Figure 4



The Scree plot gives the number of factors against the Eigen values, & helps to determine the optimal number of factors .The factors having the steep slope indicate that larger percentage of total variance is explained by that factor. The shallow slope indicates that the contribution to total variance is less. In the above plot the ideal numbers of factors are 6.

Table:-8 Rotated Component Matrixa

	Component					
	1	2	3	4	5	6
Modern Equipment	**.571**					
Visually appealing	**.765**					
Neat Professional appearance	.**591**					
Comfortable & Inviting location	**.809**					
Performing duties at promised time		**.510**				
Sympathetic and Reassuring staff		**.558**				
Dependability of staff in handling user problems						**.811**
Provides services at promised time						**.537**
Accurate and up-to-date records					**.608**	
Tells customers when services are performed					**.722**	
Receive promt service from library staff				**.640**		
Staff willing to help users				**.678**		
Responds to customer request promptly				**.772**		
Users can trust their library staff		**.882**				
Makes users feel secure about transactions		**.685**				
Polite and friendly			**.384**			
Staff gets adequate support from college			**.656**			
Library performes user education programmes		**.512**				
Staff gives individual attention			**.806**			
Understands the needs of users			**.768**			
Staff has user's best interest at heart			**.493**			
Operating hours of the library are convinient	**.611**					

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.a

This table is the most important table for interpretation .The maximum of each row (ignoring sign) indicates that the respective variable belongs to the respective component.

Table 9:- Interpretation of Results from Factor analysis

Factor no	Labels	Factor name	Statements	Factor loadings
1	Modern equipment Visually appealing Neat professional appearance Comfortable and inviting location Operating hours of the library	Physical Appearance and convenience	Modern equipment includes computers , photocopy machines & furniture Visual attractiveness of the library Professional appearance of library staff in front of the users Inviting and comfortable is the location of the library Convenience of the operating hours	0.571 0.765 0.591 0.809 0.611
2	Performing duties Sympathetic and Reassuring staff Users can trust their library staff Users feel secure about transactions User education programmes	Trustworthiness And Security	Performing duties at promised time Sympathy and reassurance of staff towards users Trustworthiness of library staff Staff makes users feel secure about their transactions Library performes user education programmes for its users	0.510 0.558 0.882 0.685 0.512
3	Polite and friendly Adequate support for staff Individual attention Understands the needs of users User's best interest at heart	Disciplined And Supportive	Polite and friendly nature of staff Adequate support staff gets from college Individual attention given by staff Staff understanding user needs Staff has user's best interest at heart	0.384 0.656 0.768 0.806 0.493

The reduced factors which are identified after running the factor analysis ,based on the estimated factor loadings, it is clear that factor 1- "Physical appearance and convenience" seems to be composed of variables "Modern equipment" , "Visually appealing", "Neat professional appearance", "Comfortable & inviting location" and "Opening hours of library". Factor 2- "Trustworthiness and security" comprises of "Performing duties", "Sympathetic and reassuring staff", "Users trust on library staff", "Users feel secure about transactions" and "User education programmes". Factor 3- "Disciplined and supportive" comprises of "Polite and friendly", "Adequate support for staff", "individual attention", "Understanding user needs", and "User's best interest at heart".

Factor 1: Physical appearance and convenience:- It is one of the most important factor, statements such as:- "Modern equipment includes computers , photo copiers and furniture"(0.571), "Visual attractiveness of library"(0.765),"Professional appearance of library staff in front of users"(0.591), "Inviting and comfortable location of the library"(0.809),"Convenience of operating hours"(0.611).This factor signifies and proves the five dimensions of SERVQUAL given by Parasuraman" that the model helps the libraries of institutions to

improve their quality of physical equipments and physical appearance and timely service as well as other resources available for their customers.

Factor 2: Trustworthiness and security:- "Performing duties at promised time"(0.510), "Sympathy and reassurance of staff towards users"(0.558), "Trustworthiness of library staff"(0.882), "staff makes users feel secure about their transactions"(0.685), "Library performes user education programmes for their users"(0.512). This factor indicates the assurance and reliability of the library staff towards its users which will help the library gain confidence of its users.

Factor 3 : Disciplined and supportive:- "Polite and friendly nature of staff"(0.384), "Adequate support staff gets from college"(0.656), "Individual attention given by staff"(0.768), "Staff understanding user needs"(0.806), "Staff has user's best interest at heart"(0.493). This factor indicates and signifies the nature and quality of work done by library staff for their users which will increase loyalty and trust of users.

4.4 CHI Square Analysis :

As per the first objective that is "to determine the degree of association between the expectation & perception towards the perceive quality of services at BIT RAK library", the following hypothesis for "perceived service quality of BIT RAK Library has a positive effect on customer expectation", have been tested.

H0 (Null Hypothesis): There is no association between perceived service quality and expected service quality.

H1 (Alternative Hypothesis): There is association between perceived service quality and expected service quality.

For the chi-square analysis, the most important independent variable "Educational Qualification" is selected, on the basis of the extracted dependent variables identified from Factor analysis.

They are as follows:-

Educational Qualification * Modern equipment

Table 10 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.546	2	.462
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Modern equipment (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 1.546 (Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-4.62) which equals to 95.38% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with modern equipment. Hence, null hypothesis is rejected.

Educational Qualification * Visual appealing

Table 11 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.056	3	.383
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Visual appeal (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 3.056 (Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-3.83) which equals to 96.17% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with Visual appeal. Hence, null hypothesis is rejected.

Educational Qualification * Neat professional appearance

Table 12 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.115	3	.549
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Neat professional appearance (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 2.115 (Pearson's) has been achieved. This means that the chi-square test is not showing a significant association between the two variables at 95 % confidence level (100-5.49) which equals to 94.51% which is less than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is not associated with neat professional appearance. Hence, null hypothesis is accepted.

Educational Qualification * Comfortable and inviting location

Table 13 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.036	4	.196
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and comfortable and inviting location (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 6.036 (Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-1.96) which equals to 98.04% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with comfortable and inviting location. Hence, null hypothesis is rejected.

Educational Qualification * Convinient operating hours

Table 14 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.623	4	.623
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Convinient operating hours (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 2.623 (Pearson's) has been achieved. This means that the chi-square test is not showing a significant association between the two variables at 95 % confidence level (100-6.23) which equals to 93.77% which is less than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is not associated with convinient operating hours. Hence, null hypothesis is accepted.

Educational Qualification * Duties performed at promised time

Table 15 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.642	4	.004
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Duties performed at promised time (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 15.642(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-0.04) which equals to 99.96% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with Duties performed at promised time. Hence, null hypothesis is rejected.

Educational Qualification * Sympathetic and reassuring staff

Table 16 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.885	3	.117
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Sympathetic and reassuring staff (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 5.885(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-1.17) which equals to 98.83% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with Sympathetic and reassuring staff. Hence, null hypothesis is rejected.

Educational Qualification * Users can trust their library staff

Table 17 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.364	3	.095
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Users can trust their staff (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 6.364(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-0.95) which equals to 99.05% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with Users trust on staff. Hence, null hypothesis is rejected

Educational Qualification * Users feel secure about transactions

Table 18 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.531	4	.032
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Users feel secure about transactions (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 10.531(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-0.32) which equals to 99.68% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with Users feel secure about transactions. Hence, null hypothesis is rejected.

Educational Qualification * Library performes user education programmes

Table 19 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.737	5	.588
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Library performes user education programmes (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 3.737 (Pearson's) has been achieved. This means that the chi-square test is not showing a significant association between the two variables at 95 % confidence level (100-5.88) which equals to 94.12% which is less than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is not associated with library performes user education programmes. Hence, null hypothesis is accepted.

Educational Qualification * Polite and friendly

Table 20 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.269	2	.006
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and polite and friendly (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 10.269(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-0.06) which equals to 99.94% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with polite and friendly. Hence, null hypothesis is rejected.

Educational Qualification * Staff gets adequate support from college

Table 21 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.311	4	.081
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Staff gets adequate support from college (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 8.311(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-0.81) which equals to 99.19% which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with Staff gets adequate support. Hence, null hypothesis is rejected

Educational Qualification * Understands the user needs

Table 22 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.978	3	.173
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Understands user needs (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 4.978(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-1.73) which equals to 98.27 which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with understands user needs. Hence, null hypothesis is rejected.

Educational Qualification * Staff gives individual attention

Table 23 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.476	3	.688
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and Staff gives individual attention (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 1.476 (Pearson's) has been achieved. This means that the chi-square test is not showing a significant association between the two variables at 95 % confidence level (100-6.88) which equals to 93.12% which is less than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is not associated with staff gives individual attention. Hence, null hypothesis is accepted.

Educational Qualification * Staff has user's best interest at heart

Table 24 :- Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.274	2	.010
N of Valid Cases	200		

The Chi-Square test revealed the significant association between the Educational Qualification (Independent Variable) and staff has user's best interest at heart (Dependent variable) of the respondents (students) .From the chi Square Test Output Table it is clear that a significance level of 9.274(Pearson's) has been achieved. This means that the chi-square test is showing a significant association between the two variables at 95 % confidence level (100-0.10) which equals to 99.9 which is greater than the standard value of confidence level.

Thus, it is concluded that at 95 % confidence level, Educational Qualification of a student is associated with staff has user's best interest at heart. Hence, null hypothesis is rejected.

Table 25 :- Interpretation of Results from Chi-Square analysis:

S.No	Independent Variable	Dependent Variable	Pearson Chi-Square	Degree of Freedom	Asymptotic Significance	No. of Valid Cases	Null Hypotheses (Accepted / Rejected)
1	Educational Qualification	Modern equipment	1.546	2	0.462	200	Rejected
2	Educational Qualification	Visual Appeal	3.056	3	0.383	200	Rejected
3	Educational Qualification	Neat professional appearance	2.115	3	0.549	200	Accepted
4	Educational Qualification	Comfortable and inviting location	6.036	4	0.196	200	Rejected
5	Educational Qualification	Convinient operating hours	2.623	4	0.623	200	Accepted
6	Educational Qualification	Performing duties at promised time	15.642	4	0.004	200	Rejected
7	Educational Qualification	Sympathetic and reassuring staff	5.885	3	0.117	200	Rejected
8	Educational Qualification	Trust in library staff	6.364	3	0.095	200	Rejected
9	Educational Qualification	Users feel secure about transactions	10.531	4	0.32	200	Rejected
10	Educational Qualification	Library performes user education programmes	3.737	5	0.588	200	Accepted
11	Educational Qualification	Polite and friendly	10.269	2	0.006	200	Rejected
12	Educational Qualification	Staffs get adequate support	8.311	4	0.081	200	Rejected
13	Educational Qualification	Understands needs of users	4.978	3	0.173	200	Rejected
14	Educational Qualification	Staff gives individual attention	1.476	3	0.688	200	Rejected
15	Educational Qualification	Staff has user’s best interest at heart	9.274	2	0.010	200	Rejected

Findings

- From the factor output it is clear that the various factors having more domination in our study are :- Physical appearance and convenience , Trustworthiness and security , Disciplined and supportive behavior.
- On the extracted factors, to identify the degree of association , chi square analysis, is done . From chi square analysis ,it is clear that in maximum assumptions which are taken for the study, the null hypothesis is rejected where as, in majority alternative hypothesis accepted. The variables which have high degree of association between them, they are :- Modern equipment , visual appeal , neat professional appearance, comfortable and inviting location , convinient opening hours , performing duties on time , sympathetic and reassuring library staff , trustful library staff , users feel secure about transactions , library performes user education programes , polite and friendly , staff gets adequate support , understands needs of users , staff gives individual attention , staff has user's best interest at heart.

Conclusion

- The Present study shows that the following factors Physical appearance and convenience, Trustworthiness and security, Disciplined and supportive behavior contain the maximum factor loadings.
- When chi square analysis is applied on these factors, it shows that most of the variables have high degree of association (95% and above) with the independent variable Educational qualification.

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