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An Assessment of Service Quality in Private Higher Education Sector with Respect to Students'perceptions

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Abstract--*Universities are the breeding grounds of societies having intellectuals and knowledge capital. Ratio of private higher education institutions of Pakistanis increasing since 2010. The current study attempts to measure determinants of service quality by students' perceptions perspective in most and least influential factors.Private sector HEIs of Pakistan is the population area, particularly Lahore.As far as service quality of private sector HEIs is concerned this study directs areas for improvements. By following a quantitative approach, data was collected using questionnaire having five dimensions of service quality and 48 items. Ten private sector HEIs were included in study as sample. TheCronbach Alpha used for this instrument was 0.910 for all the dimensions of service quality. Exploratory factor analysis was used which extracted nine factors as determinants of service quality of HEIs with students' perception perspective. Principal component Analysis, Rotated Component Matrix elaborates those eight ineffective items which are not converge in ninefactors. Recommendations are provided to improve service quality in those ineffective items of service quality. The study was limited to private higher education sector of Lahore and students' perception aspect of service quality was considered only. Further researchers can study on government higher education sector by considering various stakeholders perspective of service quality.*

Key words--*Service quality, higher education institutions (HEIs), degree awarding institutions (DAIs), students' perceptions;exploratory factor analysis (EFA)*

I. INTRODUCTION

An emergence and horizon of higher education private sector in Pakistan is a matter of fact for many of its stakeholders like prospective employers, parents, society, and investorsetc to provide quality education. Higgs (2007) suggested universities must maintain educational quality levels which are acceptable internationally. According to Higher Education Commission (HEC) of Pakistan there are 78private universities in Pakistan. 28 private sector universities or higher education Institutions(HEIs)or Degree awarding Institutions (DAIs) have campuses operating in Lahore.HEC not only monitor the quality education in various public and private universities but also have a quality assurance cell where HEC controls and monitors the quality standards of private sector HEIs/DAIs. The growth of students' population in higher education private sector universities have increased competition in job-markets (Becet& Brookes,2006)and as a result students are reconstructing their perception levels of higher education (Lawrence & Sharma,2002)and ultimately needs an education that is internationally recognized and acceptable(Nagy 2006).Resultantly universities are keen to reconstruct their educational levels that would meet the international educational standards and job market

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conditions. Universities have developed and implemented quality standards (LeBlance& Nguyen,1997;Dinham,2006)for curricula development(Seah& Edward,2006)and Education sector reforms action plan (2001-2004) (Government of Pakistan 2001) is in response to transnational trends and its implementations in higher education.(Seah& Edward,2006). It's a remarkable challenge for universities to meet quality standards (Nagy,2006;Mishra,Koehler & Zhao,2007)So it is the need of hour for the university management to focus on those items in dimensions of service quality that needs appropriate improvement . With the implementation ofreforms in HEIs, stress has been laid to enhance the quality of education .With the establishments of higher education commission in Pakistan, various reforms are implemented in higher education system. Suchreforms are quality based (National Education Policy, 2017).In this regard HEC has developed medium term development frameworks (2005-2010) and (2011-2015).In the light of such framework quality and performance were the major components in HEIs. Establishment of quality assurance agency and quality enhancement cells are hallmarks of HEC as such are steps towards improving and achieving quality teaching and standards. Various advantages of TQM can assist universities in policy making. (Westcott, R. T. (Ed.). (2013). Such advantages are innovative processes, high stakeholder value, increased job security level, high customer satisfaction, improved cost management, increased efficiency and effectiveness, improved and increased level of production, adaptability to changes in environment and improved competitiveness. HEIs should use such quality principles to achieve their desired goals and objectives. The main purpose of the study is:

- To investigate the most and least influentialdimensions of service quality in HEIs from students' perception perspective.
- To improve the service quality ofhigher educational institutions

II. LITERATURE REVIEW

According to ISO-8402-1986 Standard, quality is defined as "the totality of features/characteristics of a product/service that bears its ability to satisfy stated or implied needs" .In other words quality is the measure of excellence or it is a state that is free from defects/variations and remains consistent or uniform with the standard. According to Philip kotler, 1997, service means any action or an activity offered by a party to another party and such activity or action is intangible and its does not depend onownership. According to (Zithaml, 2003; Bitner, 1985), servicequality refers to focused evaluation that shows the customer's perception of dimensions of service i-e reliability,tangibility,responsiveness,assurance and empathy. Literatureelaborates various definitions of service quality by many authors like (Parasuraman et al., 1988; Zeithmal, 1990;Crosby, 1988;Gronroos, 1984) etc. Table 1 elaborates few definitions of service quality by those authors.

Table 1: Definition of Service Quality

Definition	**Scholar**
The ability of the organization to meet or exceed customer expectations.	(Parasuraman et al., 1988)
comparisons by customers of expectations with their perceptions of service delivered by the suppliers	(Zeithaml et al., 1990).

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Building and Maintaining Quality in the Service Relationship	(Crosby, LA, 1988)
Perceptions minus expectations - measures of service quality.	(Parasuraman;Zeithaml, and Berry 1994)
Service quality is conceptualized as a three-dimension construct: technical *quality*; functional *quality*; and image.The customer evaluations of perceived performance of *service* against his/her perceived *service quality* result in a measure of *service quality*.	(Gronroos,1984)

Application of quality management practices in higher education institutions is the most integral role played by Higher Education Commission of Pakistan (HEC).Application of knowledge in HEIs is most important .Creating knowledge based universities and by using IT and knowledge management help in maintaining and upgrading quality of educational levels. Knowledge management serves as a strategy which assists faculty and management to improve service quality. Private sector universities in Lahore have better knowledge management practices regarding leadership. (Mazhar, 2016).Furthermore universities benefits the societies by empowering students(Fazel, A., Harandi, A., &Farahani, F. 2016).

Table 2: Dimension of Service Quality and their Evidences from Literature

Dimensions	**Evidence from literature**
Reliability	(Parasuraman et al., 1985;Pereda et al.,2007;Brahmbhati et al., 2011;Abdullah, F. 2005;Salvador-Ferrer;C. M. 2010;Buttle, F.1996)
Tangibility (Physical aspects)	(Parasuraman et al.,1985;Pereda et al.,2007;Abdullah, F.,2005; Brahmbhati et al., 2011;Salvador-Ferrer;C. M. 2010;Buttle, F.,1996)
Responsiveness	(Parasuraman et al.,1985;Brochado,2009;LeBlance & Nguyen,1997; Abdullah, F. 2005;Brahmbhati et al., 2011;Salvador-Ferrer, C. M.,2010;Buttle, F.,1996)
Assurance (Policy, Process)	(Brochado,2009;Abdullah, F.2005;Brahmbhati et al., 2011;Salvador-Ferrer;C. M. 2010;Buttle, F. 1996)
Empathy	(Brochado,2009; Brahmbhati et al., 2011; Abdullah, F. 2005;Salvador-Ferrer;C. M.2010;Buttle, F.1996)

According to Parasuraman et al., (1988) the SEVQUAL model used 22 items in which customers are asked what they expect from their organization in terms of service quality. Model proposed by Parasuraman, Zeithaml and Berry(1988)five dimensions of service quality which led to the development of SERVQUAL

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namely: Reliability, Tangibility, Responsiveness, Assurance and Empathy. Such model was based on their research on retail banking, telephone service and credit cards etc.Thus they identified five basic dimensions of service quality reliability, tangibility, responsiveness and assurance that are used by customers to judge service quality.Researchers of this study prepared various codes of dimensions of service quality.Such codes were used in the study like REL for reliability, TAN for tangibility, RES for responsiveness, ASSR for assurance and EMP for empathy.

Reliability (REL) means"the degree to which education is correct, accurate and up to date, how well an institution keeps its promises, the degree of consistency in educational processes(teaching)"Owlia, M. S., &Aspinwall, E. M. (1996)(p.18). Reliability is achieved by focusing on following items: universities should make sure thereadily availability of admission forms at appropriate places,the learning objectives of each module should be prepared, the syllabi and class activities are designed so that the learning objectives should be achieved, the curriculum is designed in such a way that it fulfill the requirements of the degree program, involvement of students during the teaching process, relevant case studies should be discussed, learning level is determined in advance, students' communication skills are developed,course contents are up to date with national and international standards, an assessment criterion is fair and unbiased, merit is strictly followed during the admission process, admission test is conducted fairly and students should be given guideline about the selection of courses during the admission process.

Tangibility (TAN)is the facilities,equipments,and personnel of an organization.HEIs has more focus on its tangibility and they make appropriate complete details of all degree programs provided in prospectus, the campus appearance should be impressive, medical facility is provided, transport facility is provided, hostels facility is provided to the students, needy scholarships are provided, library has the up to date books, and the laboratories have latest equipment and facilities, relevant to subject lab facility is provided to the students; computer lab facility is provided to the students.Up to date computers are in computer labs, books and journals are published from the university; comfortable furniture is available in the class rooms and updateclass roomswell with the latest teaching aids (e.g. multimedia, electronic boards etc.)

Responsiveness (RES)is the positive and promptly attitude of staff and their willingness to help and accommodate the customers in terms of providing services promptly. Reliability covers the following items: courses description is given in detail on the web,online registration details of the students are readily available, online availability of class notes and reading martial, class announcements are communicated through email etc, the proper channel is established to receive feedback from students about teachers and other facilities and keep such feedback confidential, management should respond quickly on students queries , results should be readily available on the web and results are declared within stipulated time.

Assurance (ASSR) is the courtesy and knowledge of the employees by which they built trust and confidence on their customers .Management of private sector HEIs struggle to maintain assurance level by focusing on: availability of competent faculty for teaching and coaching, subjects specialists' faculty is available, faculty has the foreign experience and must be up to date in knowledge ,Proper SOP's are followed for teaching, examination and admission, all administrative matters are followed as per university regulations and the quality of teaching is evaluated fairly.

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Empathy (EMP)is the caring and YOU attitude of the organizations that their staffs provideindividualized attention to itscustomers. HEIs normally maintain their empathy level by focusing on few areas like:The faculty attitude should be cooperative and supportive, management should promote academic culture, alumni follow up services should be provided, university should maintain liaison between students and university authorities, university management should be willing to listen to the opinion of studentsand universitycelebrate different events.

Higher Education Sector in Pakistan:

Education has direct link with socio economic development of any country. Pakistan is facing many challenges in higher education like decrease in students' enrollments, decline in demand of university graduates and problems faced by students regarding their capabilities and knowledge in international markets(Paswan and Ganesh 2009) but now under the supervision of Higher Education Commission of Pakistan HEIs has now shifted their role to innovation, entrepreneurship, faculty, curriculum development, professional development, university industry linkages, national and global partnership, availability of resources and funds and national innovation policy.

The Higher Education Sector and Service Quality:

Quality of education is one of the concerns that universities strive to achieve. So, the continuous improvement in quality of higher education made it mandatory to measure quality of higher educational services.(Monsef, S. M. S,2015)HEIs are gaining competitive advantages (Oldfield and Baron,2000).HEIs must deliver dynamic services to their existing and perspective students to gain competitive advantage (DeShields et al., 2005).

Higher Education as a Service:

Organization used different strategies and market orientation policy for profit orientation.(DeShieldsJr;Kara& Kaynak,2005)such strategies are used by HEIs for the purpose of gaining competitive advantage (Hemsely-Brown & Oplata,2006)that's why institutions are more focusing on the importance of higher education as a service industry and paying more intension on meeting students expectations and perceptions of service quality .Higher education is a service and contains all the characteristics of services and it is difficult to store due to its perishable nature.

Stakeholders of Higher Education:

HEIs have various stakeholders with varying interests. Stakeholders mean any group of people who are affected or can affect the organization objectives. These are students, parents, society, government, facultymembers, current and prospective employers. Colleges and universities are different from business concerns as they are answerable to external environment (Bahrami, S. (2016).

Perceived service quality:

"The customer's perception is your reality" (Kate Zabriskie).Perceived service quality is the net evaluation of the goodness or badness of a product used or service availed(Athiyaman, 1997). It varies from customer to customer and from institution to institution so it's difficult to measure exactly the service quality. However perception changes with the passage of time like the experiences of students changes from year to

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year and from service to service. “Customer satisfaction is the key factor in the crucial and ultimate success of any business venture”. (Almurshidee, K., 2018).

Service Quality in Higher Education:

Measurement of service quality is difficult in HEIs as compared to other sectors education should be agreed internationally by focusing on following factors: levels, standards, effectiveness, and efficiency and emphasis should be on quality learning and not on reproduction. (Lagrosen, Seyyed-Hashemi&Leitner, 2004).

TQM in Higher Education:

Total quality management practices are being implemented in higher education sector to get fruitful results like improvement in communication, increase in employees’ morale, increase in productivity levels, increase in efficiency level, and rejection in defects and costs. Furthermore dimensions of service quality i-e reliability, assurance, responsiveness, empathy and tangibility are the key factors that determine students’ perception of service quality in higher education sector.

III. METHODOLOGY

Quantitative approach of data collection was used in this study. Population contains 21 private sector universities having campuses in Lahore. Out of these 21 universities, 18 are chartered by Government of Punjab and three by Government of Pakistan. Simple random selection technique of data collection is used in the study. A sample of 10 private universities was selected randomly from the website of Higher education commission of Pakistan. Such universities are listed as leading Higher Education Institutions HEIs and DAIs Degree Awarding Institutions as ranked by HEC.All such selected universities have multidisciplinary educational programs. Data was collected specifically from Lahore, because Lahore is a primary education hub all over Pakistan.Questionnaire was used as a primary tool for data collection.Questionnaire has two sections .First deals with demographics of students and second with perceptions .questionnaire has 48 questions divided into 5 dimensions namely: reliability, tangibility, responsiveness, empathy and assurance. Students of final year/semester were included in this research study to tap their perception level of service quality. The questionnaire was adaptedand modified from the study of (Abdullah, 2005).A five point Likert scale was used to tap students’ perception of service quality from strongly disagree to strongly agree.Questionnaires were personally administered and distributed among students of final semester/year of ten selected private universities in Lahore. Simple random sampling technique for data collection was used in the study. In order to collect equal responses from each university, researcher distributed 21 questionnaires to each university.Total of 162 responses were randomly collected completely and correctly. According to (Gorsuch,1983;Kline,1979)least sample size should be 100.however Hatcher(1994) recommended that the sample size should be greater than 5 times the number of variables ,or 100.whereas (Comrey and Lee,1992) considered sample size of 100 as poor,200 as fair,300 as good ,500 as very good and 1000 as excellent. Another rule of sample size depends on subjects to variable ratio and it should be greater than 3.

Dimensions of Service Quality Use

Parasuraman et al., 1991) developedSERVQUALinstrument which has been used in various studies of service quality as it has a generic application approach in any area. SERVQUAL has five dimensions:

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reliability, tangibility, responsiveness, assurance and empathy.Table 3 elaboratesa brief overview of the items included in each dimension of service quality.

Table 3: No.of items included in each dimension of service quality

Dimensions of service Quality	No. of Items used
Reliability(REL)	13
Tangibility(TAN)	14
Responsiveness(RES)	8
Assurance (ASSR)	7
Empathy(EMP)	6

IV. DATA ANALYSIS & RESULTS

Data is analyzed using descriptive statistics, checking data adequacy, reliability via Cronbach alpha, and finally using Exploratory Analysis. Out of the 210 questionnaire distributed, responses of 162 students were completely and correctly filled and returned by respondents. Descriptive statistics are shown in Table 4. Descriptive statistics covers means and standard deviations of five dimensions of service quality used in the study. Assurance holds highest position (3.6070) whereas responsiveness holds lowest position (3.4213).Standard deviation is the measure of variance or how far the data is different from mean. Standard deviation of reliability is 0.87931 which shows more consistency as compared to other dimensions of service quality.

Table No 4: Descriptive Statistics

Dimensions of Service Quality	Mean	Std. Deviation
Reliability	3.5261	.87931
Tangibility	3.4969	.99119
Responsiveness	3.4213	1.01416
Assurance	3.6070	1.02381
Empathy	3.5970	1.01839

Reliability

Reliability of the research instrument was tested. Reliability for all dimensions of service quality for students' perceptions is calculated by using CronbachAlpha. Results shows that the instrument used is statistically reliable and the Cronbach alpha for all the five dimensions of service quality is 0.910.The main purpose of this study was to explore the factors/items that need to be improved in each dimension of service quality. Exploratory factor analysis served that purpose by using SPSS.

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Measures of Sample Adequacy

Two tests were conducted to measure sample adequacy. Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity. The KMO value calculated in the study is 0.922 which is marvelous for factor analysis. While Bartlett's test of sphericity was conducted to check whether correlation matrix is an identity matrix or not. The significant value of the test is 0.00<0.05(Table6).

Table 5: (KMO Sample adequacy values) (Reference)

KMO Values within	Comment
0.9	Marvelous
0.8	Meritorious
0.7	Middling
0.6	Mediocre
0.5	Miserable
less than 0.50	Unacceptable

Source: Measure of Factor Analysis of University of Texas, Austin

Measure of appropriateness of factor analysis at University of Texas, Austinelaborates the appropriateness of KMO values.

Table 6: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.922
Bartlett's Test of SphericityApprox.Chi-Square	6558.403
df	1128
Sig.	0.000

The KMO value 0.922 is marvelous and it shows that the data is suitable for Exploratory factor analysis and Pvalue is also less than 0.05 which shows its significance.

Exploratory Factor Analysis

Factor analysis is a multivariate statistical approach used in self reported questionnaires. Two types of factor analysis are Exploratory factor analysis(EFA)and Confirmatory factor analysis(CFA).Current study uses EFA approach .EFA is a statistical technique within factor analysis that is used to reduce the number of items/factors under each variables which are less important. It further identify the underlying relationship between variables been measured.

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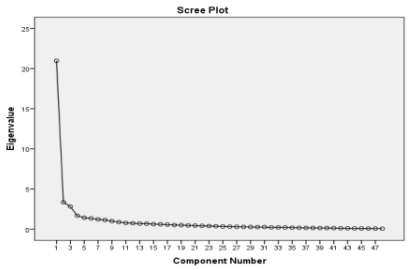
Scree plot:



The scree plot shows that the flattening line and Eigen values falling below one suggest that the items included in the analysis are converge into nine factors. Rotated component matrix shows that which factors are converge into nine factors and which are not converging items. Annexure B shows that 48 items are included in the analysis out of these 40were converge into nine factors while eight factors remains unconverge.Such non converging items are shown in Table 8.

Principal Component Analysis

Principal component analysis (cumulative percentage of variance and Eigens value >1 Rule)shows nine factors were extracted having approximately 72% of the total variance as shown in Table 7.All the cumulative values are greater than 1.Communalities of individual factors are greater than 0.6(Annexure B).

Table 7: Total & Cumulative variance by extracted factors

Extraction Sums of squared Loadings Total and cumulative variance due to extracted factor		
Factor	**% of variance**	**cumulative %**
1	43.72	43.72
2	6.989	50.709
3	5.864	56.573
4	3.477	60.05
5	2.966	63.016
6	2.798	65.814
7	2.543	68.357
8	2.374	70.731
9	2.09	72.821

Items of dimensions of service quality which were converge or not by using Rotated component matrix are shows in annexure B.Items having factor loading 0.50 or greater are taken as significant (Black et. al., 2006) so the loading values less than 0.50 were ignored .In Annexure B result shows that rotated component matrix elaborates 40 out of 48 items were converged.MacCallum,Widaman,Zhang,and Hong(1999)suggested "communalities should be greater than 0.6 ,or the mean level of communality should be at least 0.7 (p.96)".]

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Non Converging Items

40 out of 48 items are converge into nine factors while remaining eight non converging items are listed below in Table 8 elaborating the areas of improvement in each dimensions of private sector HEIs/DAIs.

Table 8: Non Converging items of service quality that need improvement

Labels/codes used	Explanation of factors
REL7	Relevant case studies should be discussed along with the various theoretical bookish materials to keep the knowledge up to date.
REL8	Communication skills of HEIs/DAIs Students' are developed.
REL9	Course contents, details and syllabi are up to date and meet national and international educational and quality standards.
TAN14	The complete and comprehensive details of all degree programs should be mentioned in prospectus.
TAN15	The campuses appearance and area covered is attractive and impressive.
RES35	Results (semester/annual) are declared within stipulated time.
EMP44	Academic culture is promoted in HEIs /DAIs.
EMP47	The university management is willing to listen to the opinion and feedback of students and their feedback pave ways for improving their quality and educational standards.

V. CONCLUSION

Service quality in HEIs was measured by 5 dimensions related to students' perception of service quality are reliability, tangibility, responsiveness, assurance and empathy, giving an insight in the areas of quality management. These 5 dimensions include 48 items.40 out of 48 items converge into nine factors while remaining eight factors are not converge. It's a crucial challenge for private sector HEIs to meet the perceptions of students in various areas of service quality especially in those eight factors which are not converge. Management of HEIs should ensure monitoring and upgrading of service quality in those areas. Private sector HEIs try to ensure and meet the quality standards by focusing on the areas of improvements as analyzed by the students' perceptions in this study.On the basis of this study some recommendations are suggested that management of HEIs must follow to focus on such areas. These are:

- Despite of having theoretical knowledge of various subjects the instructor should discuss relevant case studies and elaborate theory with practical implications.
- Lack of appropriate communication skills is the main factor which is not up to standard and main barrier to meet the international educational standards. So HEIs management should focus on communication skills development of students.
- HEIs management should focus on course contents and syllabi to make them up to date so as to meet national and international educational standards.

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- Prospectus of HEIs should include complete details of programs offered, course outline, subjects list along with credit hours etc.
- As private sector HEIs main aim is to earn profit so it does not usually focus on the campus appearances, location, area covered etc. So it's highly recommended to focus on appearance.
- Results (semester/annual) should be declared within stipulated time it should no longer be prolonged.
- HEIs management should be efficient in promoting academic culture.
- The university management should listen to the opinions of students and keep their feedback confidential as

it will help in improving their educational quality standards.

The results of this study provides ample evidences which reveals reliability, tangibility, responsiveness ,assurance and empathy as key dimension in assessing perceptions of service quality .Continuous improvement is an integral part of quality management that directs private sector HEIs to make necessary improvements and modifications in their quality .

Research implications and future research

Higher Education Commission of Pakistan (HEC) is playing a great role by which all the recognize HEIs are under its umbrella and trying to meet quality standards at the same platform. The items under the dimensions of service quality as identified by the results of study are valuable for management of HEIs for decision making and policy implementation in areas of improvement. The current research study aims at measuring students' perception of service quality in HEIs of private sector universities. Similar study can be conducted on public sector HEIs by measuring the areas of improvement of dimensions of service quality. Study on students' expectations of dimensions of service quality in private and public sector HEIs separately and collectively can also be a research gap for further research. Furthermore faculty perception of dimensions of service quality can also be an area of interest in future. A comprehensive study on above mentioned research gap on HEIs will improve their service quality. In current study service quality was assessed by view point of students perceptions it only presents a picture of HEIs only from students perspective. For the complete picture other aspects should be included like role of stakeholders (governments, faculty members, parents, prospective employees, investors etc.).

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ANNEXURE A

Annexure A shows the coding of the dimensions of service quality used in this study. RELIABILITY (REL)

REL1: The admission forms are readily available at appropriate places.

REL 2: The learning objectives of each module are prepared.

REL 3: The syllabus and other class activities are designed in order to achieve the learning objectives. REL 4: The curriculum is designed to fulfill the requirements of the degree program.

REL 5: During the teaching process students are involved in teaching process.

REL 6: Relevant case studies are discussed.

REL 7: Learning level is determined in advance.

REL 8: Students communication skills are developed.

REL 9: Course contents are up to date with national and international standards.

REL 10: An Assessment criterion is fair and unbiased.

REL 11: Merit is strictly followed during the admission process.

REL 12: The admission test is conducted fairly.

REL 13: Students are given guideline about the selection of courses during the admission.

TANGIBILITY (TAN)

TAN14: The complete details of all degree programs are provided in prospectus.

TAN 15: The campus appearance is impressive.

TAN 16: Medical facility is provided.

TAN 17: Transport facility is provided.

TAN 18: Hostels facility is provided to the students.

TAN 19: Needy scholarships are provided.

TAN 20: Library is equipped with up to date books.

TAN 21: The laboratories have latest equipment and facilities.

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TAN 22: Relevant to subject, lab facility is provided to the students.

TAN 23: Computer lab facility is provided to the students.

TAN 24: Up to date computers are in computer lab.

TAN 25: Books and journals are published from the university.

TAN 26: Comfortable furniture is available in the class rooms.

TAN 27: Class rooms are well equipped with the latest teaching aids (e.g. multimedia, electronic boards etc.)

RESPONSIVENESS (RES)

RES28: Description of courses is given in detail on the university official website. RES29: Online registration details of the students are readily available.

RES 30: Online availability of Class notes and reading material.

RES 31: Class announcements are communicated through email etc.

RES 32: The proper channel is established to receive feedback from students about teachers and other facilities. RES 33: Students queries are responded quickly by management.

RES 34: Results are readily available on the official website of university.

RES 35: Results are declared within stipulated time.

ASSURANCE (ASSR)

ASSR36: Competent faculty is available for teaching and coaching.

ASSR 37: Subjects specialists' faculty is provided.

ASSR 38: Faculty has the foreign experience.

ASSR 39: Faculty Knowledge is up to date.

ASSR 40: Proper SOP's are followed for teaching, examination and admission.

ASSR 41: All administrative matters are followed according to the university regulations. ASSR 42: Quality of teaching is evaluated fairly.

EMPATHY (EMP)

EMP43: The faculty attitude is cooperative and supportive.

EMP 44: Academic culture is promoted.

EMP 45: Alumni follow up services are provided.

EMP 46: The liaison between students and university authorities is intact.

EMP 47: The university management is willing to listen to the opinion of students. EMP48: Celebrations of different events are conducted.

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ANNEXURE –B EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS (ROTATED COMPONENT MATRIX)

Dimension	Cronbach's Alpha	Codes used	F1	F2	F3	F4	F5	F6	F7	F8	F9	Communalities
Reliability	0.928	REL1				.680						.661
		REL2				.747						.718
		REL3				.707						.778
		REL4				.772						.767
		REL5				.674						.775
		REL6				.505						.672
		REL10					.665					.702
		REL11					.748					.697
		REL12					.661					.678
		REL13					.668					.675
Tangibility	0.949	TAN16		.681								.717
		TAN17		.742								.816
		TAN18		.805								.793
		TAN19		.700								.695
		TAN20		.612								.713
		TAN21		.568								.741
		TAN22		.600								.775
		TAN23		.561								.713
		TAN24		.582								.723
		TAN25		.518	.555							.694
		TAN26			.503							.688
		TAN27			.583							.662
Responsiveness	0.904	RES28			.641							.761
		RES29			.607							.742
		RES30			.669							.756
		RES31			.618							.737
		RES32			.567							.804
		RES33			.707							.690
		RES34			.766							.746
Assurance	0.924	ASSR36	.641									.743
		ASSR37	.777									.783
		ASSR38	.796									.704
		ASSR39	.736									.732
		ASSR40	.752									.694
		ASSR41	.807									.794
		ASSR42	.719									.744
Empathy	0.842	EMP43							.612			.757
		EMP45	.533									.700
		EMP46	.573									.722
		EMP48						.808				.736
Coefficient KMO			0.922									
Significant of Bartlett			0.000									

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