International Journal of Recent Technology and Engineering (IJRTE)
ISSN: 2277-3878 (Online), Volume-9 Issue-2, July 2020

Assessment of Service Quality Dimensions in Higher Education Sector of North India

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Abstract: ***The current paper discusses the importance of service quality in higher education among the Indian universities. In this modern world, education is a way to shift the country's economy to knowledge economy and emerges as an important sector for the increasing the county's economy and wealth. Therefore, assessment of service quality among the universities is gaining the preference from the researchers around the world. In this connection present study collected the data of355 post graduate student and analysed with the help of Structure Equation Modeling. The present paper found that all dimensions of SERVQUAL model (reliability, tangible, assurance, responsiveness and empathy) are important for the service quality assessment and it is affecting highly. Among all the dimensions reliability is having a great impact on service quality among the private universities of north India. Education managers can enhance of quality of service in their universities with the help of the current study.***

Keywords: Higher education, SERVQUAL, perceptions

I. INTRODUCTION

In this modern world, education is a way to shift the country's economy to knowledge economy. However this increasing importance develops a market place called as higher education institutions and student are their customers. Now days globally higher education institutions and universities mostly work like businesses. They are highly motivated to explore new opportunities and options to export their services widely (Sahlberg, 2006). However, this sector is not providing as such product but service provided increases the competitive segregation between institutions in terms of unique experiences of students (Kanji et al., 1999). Moreover, this competiveness also increases the research and innovation in these universities and all they wanted to deliver service quality (Mahmoud et al., 2018). This lead them to achieve success and excellence in their services (Amegbe et al., 2019). On the other hand students also critically analyze the universities during process of choosing (Binsardi and Ekwulugo, 2003). It is bottle neck to take care of student's satisfaction for the universities (Douglas et al., 2008)..

Manuscript received on May 25, 2020.
Revised Manuscript received on June 29, 2020.
Manuscript published on July 30, 2020.
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Therefore, service quality approaches create an appropriate clarification of quality dimensions and its unique features (Dabholkar et al., 2000).Therefore, the objective of this present paper helps in developing a service quality's theoretical framework among higher education with assessment of gap of perception and expectation and helps out service quality to improve their work for the private universities of India

II. CONCEPTUAL FRAMEWORK AND RELEVANT LITERATURE

2.1 Service quality concept

In a higher education quality was defined by Harvey and Knight (1996). However in a service organization quality can be calculated by the way delivered service quality and tried to confirm the expectation of customer. Inseparability, intangibility, and heterogeneity are the basic features of service. Study suggested that the quality always reflects the exceptionality, purpose of fitness value of money and consistency along with transformative. Lewis and Booms (1983) explained the importance of service quality and with the help of match customer expectations to service level delivered measure it. Gronroos (1984) highlighted two dimensions first namely as functional quality and second called as technical quality. Functional quality explained the services related to the performance, whereas technical quality examines the service's actual outcome. In 1985, the service quality concept was first introduced by the Parasuraman, Zeithaml and Berry (1985) considering the disconfirmation model. It helps them to understand the expectations of customer's and their perceptions. Internal gap is dogged by direction and size of the services. That is why to assess this SERVQUAL model is used. The gaps are explained as: Gap 1 (It is the gap between the management's perception and expectations of consumers also called positioning gap) followed by Gap 2 (It is the gap between firm's service quality in regards to management perception and expectations of customers is called specification gap), Gap 3 (It is the gap among service delivery by the employee and specifications of services is called delivery gap), Gap 4 (It is the gap within the communication spread for it and availing actual services also called communication gap), and Gap 5 (The fifth gap instrument is the difference between the service's expectation and customer's internal perception) (Sesmiarni and Ilmi, 2019). The five dimensions that are used in the SERVQUAL are reliability that provides accurately and dependably services and ability to perform it well, responsiveness provides the accurate service as promised to the consumers with will. Assurance conveys trust and confidence about the services with knowledge.

Empathy is the process related to individual caring and attentiveness towards the consumers. Tangible is the best way of delivery by providing physical appearance, equipment, personnel's and communication materials. There are numerous reviews from the literatures that show use of SERVQUAL instrument to examine the qualitative service parameters among higher education. A study by Legcevic (2009) proved that the expectations exceeded perceptions of faculty and the students of law at Osijek University in Croatia.

Even many scholars found t perceptions receive low rank among other dimensions in the instruments studied among various higher education sectors of Pakistan (Yousapronpaiboon, 2014). Khodayari and Khodayari (2011) found that in Islamic Azad University, Iran, a gap was found among student's expectations and perceptions. They analyzed with the help of SERVQUAL model. Thus students significantly follow reliability than tangibllty followed by responsiveness, assurance and empathy. On basis above said discussion following hypothesis have been formulated:

H1: In higher education system assurance significantly affects the student's intentions towards service quality.

H2: In higher education system responsiveness significantly affects the student's intentions towards service quality.

H3: In higher education system reliability significantly affects the student's intentions towards service quality.

H4: In higher education system empathy significantly affects the student's intentions towards service quality.

H5: In higher education system tangible significantly affects the student's intentions towards service quality.

III. METHODOLOGY

3.2 Questionnaire development

The data was collected through structural questionnaire. The questionnaire consists of demographic information of the respondents as well as SERVQUAL questionnaire was used to evaluatepost graduate's perception about service quality receiving in their university. The questionnaire consist of 15 items of 5 dimension of service quality dimensions responsiveness (3 items), empathy (3 items), reliability (3 items), assurance (3 items) and tangibles (3 items). A Likert type scale was used with 1 to 5 ranges. In questionnaire, 1 represent disagreement (1) to st agreement (5) strongly to understand student's perception of higher education institutions in North India's service quality. Reverse questions were used to avoid the biasness among the respondents.A pilot study was also conducted with the 20 management students and instrument was revised as per the suggestions received after the pilot study. Reliability of the instruments was checked with the help of Cronbach alpha during the pilot test and found the value 0.77 which is within the acceptable range (0.60) as per the Hair et al (2008).

3.3 Data collection and Sample size

With the help of self-administrated questionnaire, the survey was conducted to collect the data. Data were collected from Uttar Pradesh state of India and nearby regions. Data was collected from private universities of Uttar Pradesh state of India. Universities were selected on the basis on current student strength. Therefore on the basis of student strength top five universities were selected with high student base. Around 500 questionnaires were distributed among the respondents and only 355 responses were found without any discrepancies. Data was collected from North India and collected among 5 Universities. Students were tapped during the lunch time, canteen and malls near to their campus.

3.5 Statistical Analysis

With the help of SPSS and AMOS software were used for the data analaysis. As per the suggestion of Anderson and Gerbing (1988) two stage Structural equation modeling (SEM) was used to analyse the hypothesis. In the first step reliability and validity was checked with the help of measurement model. In the second step hypothesis were tested with the help of structural path. 4. Results

4.1 Respondent's profile

The data was collected from post graduate students. The demographic information includes participant's gender, year of education, age and monthly household income. The demographics Table 2 highlight the demographic information.

Table 1. Measuring Items

Construct	Measuring Items
Tangibles	TAN1: updating of faculty researches and with modernequipment.
	TAN2: Good Tangiblefacilitiesfor thefaculty.
	TAN3: Good dressing sense of staff.
	TAN4: Latestliterature in the library
Reliability	REL1: Promised servicers by Institute.
	REL2: Staff is courteous.
	REL3: Subjects are practiced by eminent professors.
	REL4: The administrative staff is very strict toexamsschedules.
	REL5: Faculty and staff always try to keepsexactrecords of students.
Responsiveness	RES1: Students are well informed about their schedules and changes are well
	RES2: During the service hoursstaff accommodate all students
	RES3: Faculty and supporting staff is ready to help you.

	RES4: Staffarepromptly respondtostudentenquiry
Assurance	ASS1: The behavior of faculty staff in stills confidence in you.
	ASS2: Faculty staff is trustful.
	ASS3: Faculty is very responsive in overall mannered.
	ASS4: Faculty is responsible.
Empathy	EMP1: Faculty is provide attentiontoeach student
	EMP2: In office hours faculty are convenient toadvisestudents
	EMP3: The faculty and Staffgiveattention individually to each student.
	EMP4: Facultyhas always tried to follow bestinterest objective policy.
	EMP5: Faculty and staffare awareoftheprecise needsofcustomers.
Service Quality	SQ1: Overallservice by staff
	SQ2: Offerexcellentoverall system by the faculty
	SQ3: Service standardare high of currentfaculty
	SQ4: Qualityof service are too high for current faculty

IV. RESULTS:

Measurement model: Analysis of validity and reliability

Measurement model: Analysis of validity and reliability

Reliability and validity of constructs was checked with help of measurement model. The Cronbach's α value of variables ranges from 0.78 to 0.83 to measure internal consistency. Convergent validity was measured with the help of composite reliability.Composite reliability is ranged from 0.82 to 0.85 cross the minimum standard of 0.60 (Bagozzi and Yi, 1988). Factor loadings and (AVE) used to analyse range. Factor loading is in between 0.70 to 0.88. AVE in the range of 0.601 to 0.661. Discriminant validity was measured by using square multiple correlations (SMC). The correlation between the each construct was less than square root of AVE (Chin et al., 1997) above recommended criteria of 0.3 (Bagozzi and Yi, 1988). CFA specifies a good model fit ($\chi2$= 154.789, $\chi2$/df = 1.821, Goodness of Fit index (GFI) = 0.901, Comparative Fit Index (CFI) = 0.928, Incremental Fit Index (IFI) = 0.930, Normed fit index (NFI) = 0.925, Tucker-Lewis Index (TLI) = 0.910 and Root Mean Square Error of Approximation (RMSEA) = 0.045. The square root of AVE of each construct was larger than the correlation between the constructs, it ensure the adequate discriminant validity (Chin et al., 1997). So, on the basis of above discussion it can be predicted that the theoretical model epitomizes an adequate validity (convergent and discriminant) and reliability. Table 2 is highlighted the measurement model. The values of discriminant validity are highlights in Table 3.

Table 2: Measurement model

Constructs items	Factor loading	CR	SMC	Cronbach α	AVE
TAN1	0.87		0.757		
TAN2	0.85		0.723		
TAN3	0.71	0.853	0.504	0.79	0.661
RES1	0.88		0.774		
RES2	0.8		0.64		
RES3	0.72	0.844	0.518	0.78	0.644
ASS1	0.84		0.705		
ASS2	0.78		0.608		
ASS3	0.7	0.818	0.49	0.81	0.601
SQ1	0.88		0.774		
SQ2	0.79		0.624		
SQ3	0.72	0.84	0.518	0.78	0.638
EMP1	0.85		0.723		
EMP2	0.8		0.64		
EMP3	0.73	0.837	0.532	0.81	0.632
REL1	0.88		0.774		
REL2	0.75		0.563		
REL3	0.71	0.825	0.504	0.83	0.614

Notes: SMC: Squared Multiple Correlation (correlation between the constructs), CR: Composite Reliability, AVE: Average Variance Extracted, and AVE = ΣSMC/ (ΣSMC+ Standard Measurement Error)

Table 3: Details of discriminant validity

	ASS	RES	REL	EMP	TAN	SQ
ASS	**0.813**					
RES	0.307**	**0.802**				
REL	0.053	0.055*	**0.775**			
EMP	0.055*	0.41	0.010	**0.798**		
TAN	0.044	0.010**	0.011*	0.031	**0.794**	
SQ	0.009	0.017	0.019	0.025	0.012	**0.783**

Note: The bold values represent the square root of AVE. SD=standard deviation. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

V. ANALYSIS OF HYPOTHESIS TESTING THROUGH STRUCTURAL MODEL:

GFI, TLI, NFI, CFI, IFI and RMSEA are considered to know the fit statistics of the structural model. The study showed the fit indices as $\chi 2$= 164.677, $\chi 2$/df = 1.924, GFI=0.925, NFI=0.945, TLI=0.952, CFI=0.953, IFI=0.955. RMSEA appears as 0.062 that crosses the minimum cut-off level. It designates the values of goodness of fit indices. Hypotheses were analyzed with the help of standardized regression coefficients (β values) and p-values.The present study examine that all five factors of SERVQUAL can affect the higher education Institute service quality and perception of students. Reliability is high among the other factor towards student's perception of service quality (β= 0.64, p=0.01, t=7.585) and supported hypothesis 3. In addition to reliability, assurance dimension is also highly affecting the perception of students towards service quality in higher education (β= 0.46, p=0.01, t=4.382) which supported the hypothesis H1. Further, responsiveness is also appears assignificant dimension which can change the perception of customers towards service quality in higher education (β= 0.467, p=0.01, t=6.483) and supported hypothesis H2. Empathy is having a positive significant on customer's perception of service quality in higher education (β= 0.257, p=0.01, t=4.585) and supported the hypothesis H4. In the last, tangible is a significant driver of perception of service quality especially in the higher education sector (β= 0.379, p=0.01, t=5.883) and supported the hypothesis H5. On the other hand explanatory power (Adjusted R2= 0.577, i.e. 57.7%) of proposed model was found reliable.

VI. DISCUSSION AND CONCLUSIONS

The five dimensions in the study reveals the similar findings with Parasuraman, Ziethmal& Berry (1988) study that most top SERVQUAL dimension is reliability. It is very important in the students' perception of service quality. The descending order found in study related to service quality dimension is reliability > responsiveness > empathy > Tangible. Study is also contrast of Zeshan et al., (2012) study that showed tangible has highest significant impact rather than reliability. Study also showed empathy as the top most influencer in students' perception.

The lowest perception dimension tangibility occurs due to non consideration of updations in library, faculty, personality development and physical appearance of university premises. In the case of reliability students seek the benefits that match the word of mouth floated by the university before admissions. Students also seek the perfection in all academic and practical work during education. Students also seek some help and quick response towards their grievances and queries. Hence, there is high degree of reliability dimension in contrast to tangibility among students to choose higher education universities.

Managerial Implications:

The present study has several managerial implications. The study creates meaningful insights into the service quality enhancement in the universities. First, in the case of reliability universities should make certain that they communicate correct and accurate information on time before and after the commencement of service. Secondly in responsiveness, higher education premises need to make effort to give prompt response on every grievanceand express readiness to help students to decipher their all queries (Legcevic, 2009). Thirdly, under assurance dimension staff makes sure that they provide best answer to the students' question by possessing the knowledge and deliver best quality education in both theoretical and practical work. In addition to this staff must show courteous and friendly behaviour to instill trust among students.

Fourth, the empathy also has significant impact on students' perception toward universities. Empathy helps to understand the specific needs of students. It also strengthened the bond between faculty and students. Lastly, tangibility showed the lowest (Parasuraman et al., 1988). Thus, the universities could improve their tangibles parameters, i.e. visualization related to physical appearance, structures and tools with techniques. There should be flexi timings schedule in working hours. Through accepting such discussion any higher educational institutions improve the perceptions of students towards them positively.

LIMITATIONS AND FUTURE RESEARCH

This study has various limitations related to the results. These are limited to higher education institutes. Result will change in different context and this could leverage the validation of the results. Only bachelor degree students are considered for this study so that future research should include masters and doctoral. Also, perceptions of service quality in the higher education sector would be checked by considering other stakeholders' of higher education system. A longitudinal study related in comparison of public and private higher educational institutions' will be helpful to understand the service quality gap scores.

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