

Valuing Quality in Educational Services: An Empirical Study

Sanjeev Verma, NITIE, Mumbai-400087
e-Mail:samjeevntie@gmail.com

Ram Komal Prasad, NITIE, Mumbai-400087
E-mail: prajapatikomol71@gmail.com

Abstract

This study aims to evaluate the value parameters in education services and to develop a framework for enhancement of student's satisfaction. Focusing on traditional service quality dimensions and new concerns, it seeks to investigate the changes in expectations due to changing trends in education service industry and level of performance achieved with the identification of gap areas. This paper reviews emerging gaps in service performance in education sector with the help of primary study. Respondents are selected on simple random basis from various formats of management institutes in India. Research instrument was designed with available scales in service quality studies with some new additions reflecting changed scenario. Data analysis reflects the gaps and the important dimensions which needs urgent attention. The paper suggests that educational planners should look into the emerging trends and allocate their resources in light of importance-performance analysis. The findings of this study can be used by the practitioners in identification and improvement of service gap areas to enhance student's satisfaction.

Keywords: Service quality, Customer Satisfaction, Service Gap, Service Performance

1. INTRODUCTION

Service quality in higher education has started gaining in recent times. [Stern and Tseng \(1993\)](#) reported that few higher institutions have adopted a service quality philosophy. Earlier research has demonstrated that students are reluctant to complain about poor service ([Gronhaug and Arndt, 1980](#)) but these days students are becoming increasingly more value conscious. The educational institutions in India, increasingly find themselves in an environment that is focused on understanding the role and importance of service quality. Relentless global, social, cultural and economic change is being translated by educational institutions into a continuous stream of complex reforms based on quality. There is a need for adaptation to serve the interests of its stakeholders in terms of greater responsiveness, responsibility, accountability and increased expectations, the educational systems are being pressurized to shift their focus from quantitative expansion, to an emphasis on quality. The quality of service experience becomes an important factor in buying decision ([Baston, 1995](#)).

Higher education quality assurance systems place emphasis on the student experience as one of the most important assessment criteria ([Allen and Davis, 1991](#); [Ramsden, 1991](#)). In response to growing concerns from stakeholders about poor or inconsistent quality, institutions of higher education are increasingly realizing the significance of students centered philosophies and thereby, seeking ways to improve and provide better students' service. Students' service could be viewed as a philosophy of management permeating throughout the institutions with the aim of satisfying the students through the quality of services. Educational institutions have begun to realize the importance of this philosophy, which is shown by an increasing concern among academics about the dissatisfaction of students regarding the quality of education and overall management of educational institutions. The educational literature suggests that there is mounting pressure from the students, parents, employers and even faculty members, to close the widening gap between their expectations of institutional performance and the actual performance ([Brigham, 1994](#)).

Quality in higher education exhibits all the classical features of services: it is intangible and heterogeneous, meets the criterion of inseparability by being produced and consumed at the same time, satisfies the perishability criterion and assumes the students participation in the delivery process ([Cuthbert 1996a](#)). Quality in services, with impact on students' psychology and resultant behavior, exhibited in terms of a positive attitude towards higher education services, has led to the conclusion that the quality is the single most important factor for long-term success and survival and the educational institutes have begun to realize the significance of a qualitative orientation and commensurate to this, there have been attempts at providing better services to the students.

This research investigation aims to analyze service quality among a sample of management graduate students in India. Starting with the theoretical background, the paper outlines the results of the study conducted on the students as primary customers to obtain a perspective on service quality of select management institutions located in Northern India. Based on the literature review, followed by a pilot study, the various students' requirements were identified. The management educational services quality model was applied to identify the gap and determine the level of service quality in management institutes. Confirmative factor analysis is done to identify the set of minimum quality components that meet the requirements of the students as important customers and factor analysis is performed to identify the major contributors to student's satisfaction. A better understanding of how these students from impressions of quality can provide valuable information to educational management for designing service delivery systems that enhance their satisfaction level (Seymour, 1992).

2. LITERATURE REVIEW

The conceptualization of service quality has aroused considerable interest and debate in the research literature in recent time (Parasuraman *et al.*, 1985; Dotchin & Oakland, 1994; Gaster, 1995; Asubonteng *al.*, 1996). A definition of 'service quality' is person dependent and has different meaning for different people. Most definitions of service quality are customer- centered (Galloway & Wearn, 1998), with customer satisfaction being seen as functions of perceived quality (Anderson & Sullivan, 1993), or perceived quality being a function of customer satisfaction (Parasuraman *et al.*, 1988). Thus, the commonly accepted orientation defines service quality as the extent to which a service meets customers' needs or expectations (Lewis & Mitchell, 1990; Dotchin & Oakland, 1994; Asubonteng *et al.*, 1996). Service quality, as perceived by customers, involves a comparison of what they feel the service should be (expectation, E) with their judgment of the services they received (perception, P) (Sasser & Arbeit, 1978; Gronroos, 1984; Parasuraman *et al.*, 1985; Zeithaml *et al.*, 1985). It is defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman *et al.*, 1985; Lewis & Mitchell, 1990).

2.1 Measuring Service Quality

To achieve quality as perceived by the customer, proactive organizational commitment is required. Berry (1995) suggests that service plays an important role in enhancing value, and can positively influence a firm's success. From a customer perspective, a provider's service can help to offset potential burdens, like having to play a high price etc. As a result, understanding and measuring customer expectations and performance are therefore an essential component that can be used to enhance organization's service provision.

In analyzing service from the customer's perspective, research by Parasuraman *et.al* (1988) yielded a useful concept of ten potentially overlapping dimensions. When developing their framework further, extensive statistical analysis revealed significant correlations between certain dimensions depicted in the original concept, and this led to the regrouping of the original ten items into five subsequent dimensions (tangibles, reliability, responsiveness, assurance and empathy) and was labeled as the SERVQUAL scale (Parasuraman *et.al* 1988). The instrument represents a multi-item scale that since its development has been widely used for measuring consumer expectations and perceptions of service quality. It consists of 22 parallel expectation (E) and perception (P) statements on eight service quality dimensions. In order to obtain view for the statement, consumers are required to select a response on 7 point Likert scales that range from strongly disagree to strongly agree. This then allows for the difference scores for each dimension has been calculated. The difference ($P-E = Q$) represents the measure of service quality (Q). Where Q is negative a service gap exists. However, Q is positive, customer expectations are being exceeded.

In the present research an instrument was designed which provides the measurement of the relative importance associated with each dimension on management education. After the mean for each dimension has been calculated, the relative importance score and weighted average score was calculated for each dimension. The instrument was developed with the intention that it could be applied in measuring the quality of services of management education in the broad framework of research investigations.

2.2 Service Quality in Higher Education

Service quality in higher education is a relative concept, with respect to the stakeholders in higher education and circumstances in which it is involved. In other words, quality means different things to different people as well as person may adopt different conceptualizations at different moments (Zafiroopoulos *et al.* 2005). However, (Sahney *et al.* 2004) highlighted that definitions of quality in education follow the general definitions of quality. The applicability of service quality in the educational sector attracted the interest of many theorists and researcher (Edwell, 1993; Sherr & Lozier, 1991; Tribus, 1994; Brigham, 1993). Educational institutions are perceived as organizations designed to transform teaching, curriculum, organizational and management education processes in a way which serves students interests for their career. Substantial interest in service quality in management education has begun to emerge (Sallis, 1993), and this interest has been focused primarily on higher education institutes (Coate, 1990; Cope & Sherr, 1991; Masters & Leiker, 1992; Saunders & Walker, 1991; Sutcliffe & Pollock, 1992; Van Vught & Westerheijden, 1992; Winter, 1991). As with other services, the concept of quality when applied to higher education has been inclusive (Williams, 1990; Staropli, 1992; Liaison committee of records' conferences, 1993; Cheng & Tam, 1997) service quality in higher education has been defined variedly as, excellence in education (Peters & Waterman, 1982), value in addition (Feigenbaum, 1951), fitness for purpose (Reynolds, 1986; Brennan *et al.*, 1992; Tang & Zairi, 1998), fitness of educational outcome and experience for use (Juran & Gryna, 1998), conformance of education output to planned goals, specifications and requirements (Gilmore, 1974; Crosby, 1979), defect avoidance in education process (Crosby, 1979), and meeting or exceeding customer's expectations of education (Parasuraman *et al.* 1985).

Quality initiatives have been the subject of enormous amount of practitioner and academic discourse, and various levels have found a gateway into higher education (Avdjieva & Wilson, 2002). Many academic institutions have implemented such policies in response to a reduction in student funding, complaints by employers and parents, as well as the pioneering success of such drivers in many corporate businesses (Kanji and Tambi, 1999). However, since the early to mid 1990s a stream of work has explored aspects of service quality relating to the teaching and learning factors, and the environmental attributes influencing higher education (Harrop & Douglas, 1996; Narasimhan, 1997; and Shank *et al.* 1995), with the majority of such investigations using students' evaluations to assess quality (Rowley, 1997; Aldridge & Rowley, 1998). It may be concluded that service quality in higher education is a multiple concept with varying conceptualizations and this poses problems in formulating a single, comprehensive definition. It concludes within its ambit the quality of inputs in the form of students, faculty, support staff and infrastructure; the quality of processes in the form of learning and teaching activity; and the quality of outputs in the form of the enlightened students that move out of the system. In fact, it is all permeating covering the different aspects of academic life.

2.3 Gap analysis in Higher Education

Gap analysis is not new in higher educational context, and a number of studies have been influenced by the work of Parasuraman *et al.*, 1985. For example, Long *et al.* (1999) used 'gap analysis' to develop a number of questions in order to compare what students 'look for' (expect) and what they 'experience' on a course. Sander *et al.* (2000) meanwhile examined undergraduates' expectations and preferences in teaching, learning and assessment. LaBay & Comm (2003) also developed a number of measures to evaluate student expectations and perceptions, concerning their faculty members, on a sample of undergraduate student. Using a wide range of scale, Lampley (2001) formed a number of question statements relating to responsiveness/caring, records/paperwork, university services, accessibility/safety, knowledge/scheduling, facilities/equipment, and public relations to measure expectations and perceptions among the doctoral students in six universities.

3. RESEARCH DESIGN

The major goal of this study is to identify key factors affecting student's satisfaction with service quality of higher education institutions offering management education in India. Respondents were selected on simple random basis from various formats of management institutions viz university department, institutes affiliated to universities,

government recognized autonomous institutes and private institutes to cover all aspects of service quality prevalent. Primary data was collected using structured questionnaire from various cities in north India. Personal Survey method was used for collection of data and responses from both first year as well as second year students were captured. Total number of respondents approached was 600. The responses received were 434 (72%) and the questionnaire in the usable form was 412 (69%). So the effective sample size of the study was 412. For collection of data utmost care was taken. It was clarified that the data collection is for academic purposes only and not for any commercial purpose so that the respondents could feel free in stating their true opinions. While approaching respondents it was ensured that the time of data collection was convenient to them and it did not interfere with their normal schedule. Though a blank space for giving name was included in the questionnaire, respondents were told that giving name was optional. This was done to emphasize the point that individual's identity did not matter in the study, what was important was to obtain their true and honest responses.

Customers judge actually quality according to their expectations (Ghobadian *et al.*, 1994; Dotchin & Oakland, 1994; Kandampully, 1997; Fergusson *et al.*, 1999, Lee *et al.*, 2000; Walter & Germunden, 2000). The ultimate measure of quality is whether or not the product or service lives up to the expectations of customers. The most widely used and tested service quality instrument 'SERVQUAL' based on the service quality 'gap model' (Parasuraman *et al.*, 1988, 1991, 1993, 1994), which defines service quality as a function of gap between customers' expectations of a service and their perceptions of the actual service delivery by organization. In brief, SERVQUAL is recognized as a tried and tested instrument that has been successfully applied in many different service contexts (Buttle, 1996). Its strengths more than outweigh any deficiencies, and the results can be presented in a format useful for targeting specific service improvements (O'Neill & Palmer, 2001). Over recent years the higher education sector has become more quality conscious, which has been fuelled by increasing competition, a reduction in state funding, and greater consumer demands (Ford *et al.*, 1999; Kanji & Tambi, 1999). In response, a growing number of institutions and academics have grappled with such quality issues and have undertaken research with the aim of addressing some of the key concerns (Lau, 2003; Oldfield & Baron, 2000). In the present study also researchers have used SERVQUAL scale with some modifications. In the present study, eight dimensions which composed distinct components of perceived service quality have been taken as factor determining the quality of management education. On these eight factors, 43 items were taken into consideration. The reliability of each factor dimension were checked and found α value above .60 and thus the instrument has been highly reliable and used for further process. Items pertaining to service quality assessment were measured on a 7 point Likert scale (1 = strongly disagree to 7 = strongly agree). The instrument used to investigate the research questions was tested for its validity and reliability in order to assess the goodness of use. The designed questionnaire was put to content validity (Face), construct validity (convergent and discriminant) and cross validity. As the variables under different dimensions are developed with the help of pertinent secondary and primary sources, it is implied that the questionnaire is appropriate for the task at hand and thus passes the test of face validity. The attributes have high correlation with the related constructs (loading in excess of 0.5) and low correlation with unrelated construct (loading less than 0.4) and thus the questionnaire passes the test of convergent and discriminant validity. According to Kline (1986), cronbach coefficient alpha is the most efficient measure of reliability and should always be computed and it should always be greater than 0.7 when items are selected for test. So cronbach alpha reliability analysis was conducted for the items included in the study. The internal consistency – cronbach alpha value for reliability of the questionnaire was found to be 0.851. All items were well above the 0.70 which was the commonly accepted thresholds. All individual scale items had statistically significant (at $p < 0.05$ level) item-to-total correlations. Hence, all items are deemed reliable.

The data obtained were executed with factor analysis using principle component analysis utilizing Varimax rotation method with Kaiser Normalization in order to reduce the information in many variables into a set of weighted linear combinations of those variables. Factor analysis helped in identifying the latent variables, which were contributing to the common variance in a set of measured variables. Kaiser – Meyer – Olkin measure of sampling adequacy was used to examine the appropriateness of factor analysis. Since KMO value was greater than 5 it has been decided to use factor analysis. Berlett's test of sphericity was used to test the hypothesis that the variables with each dimension are uncorrelated in the population. A large value of the test statistic favored the rejection of null hypothesis and thus it supported the use of factor analysis for data analysis.

4. DATA ANALYSIS AND FINDINGS

Exploratory factor analysis (EFA) was performed on data obtained to examine the underlying (or latent) relationships between the variables contributing to student's satisfaction. The various steps followed in conducting factor analysis are extraction of the initial factors, rotation to a terminal solution and selection of the number of factors. Tests like Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity tests were conducted to justify the appropriateness of EFA.

Table 1 shows two tests that indicate the suitability of your data for structure detection. Kaiser-Meyer-Olkin Measure of Sampling Adequacy indicated that the proportion of variance in the variables might have been caused by underlying factors. KMO value obtained is 0.839, which is closure to 1.0, indicates that factor analysis is appropriate with data obtained. Bartlett's test of sphericity tests was used to test the hypothesis that correlation matrix is an identity matrix, which would indicate that our variables are unrelated and therefore unsuitable for structure detection. Since the value obtained is less than 0.05 of the significance level, it indicates that a factor analysis can be used with our data.

Table 1- KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.839
Bartlett's Test of Sphericity	Approx. Chi-Square	3.428E3
	df	903
	Sig.	.000

Initial communalities were calculated for correlation analyses i.e. to find out the proportion of variance accounted for in each variable by the rest of the variables. Extraction communalities were calculated to estimate the variance in each variable accounted for by the factors in the factor solution. The communalities ranged from 0.610 to 0.757 suggesting that the variance of the original values was fairly explained by the common factors.

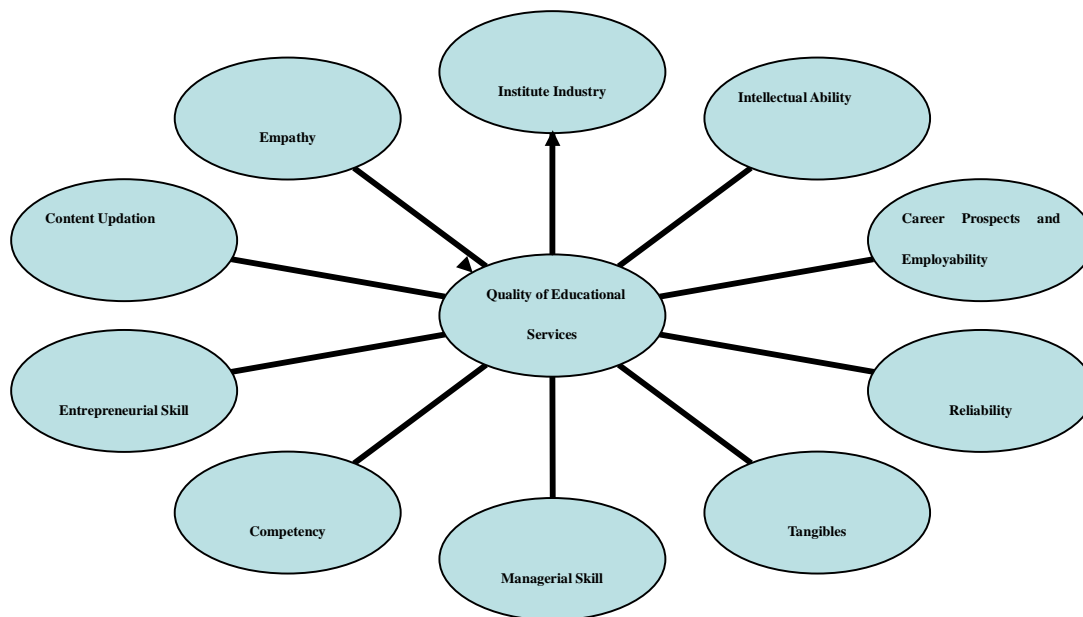
Using Varimax rotation, the results of the factor analysis suggested a 10-factor solution and explained more than 68% of the variance in the data with eigenvalues greater than 1. Table 2 presents the final rotated factors and the management institute selection indicators of each factor as well as the statistical data relating to each factor and indicator. The results of the factor analysis produced a clean factor structure with relatively high loadings for the factors. Most variables loaded heavily on one factor and this reflected that there was minimal overlap among factors and that all factors were independently structured. The higher loadings signaled the correlations of the variables with the factors on which they were loaded.

Table 2- Rotated Factor Output

S.N	Service Quality Factors in Higher Educational Institutions offering Management Education	Factor loading	E Value	Variance explained
1	Career Prospects and Employability		4.113	10.565
	Students experiences refinement in knowledge/ skill and entrepreneurial spirit	0.662		
	Institute arranges for campus placement	0.698		
	Employability improves after completion of management course	0.547		
	There is academic value addition after completion of management course	0.553		
2	Intellectual Ability			9.124
	Institute have sufficient faculty and support staff	0.755		
	Institute have experienced faculty	0.748		

	Faculty members have theoretical knowledge and adequate qualification	0.705	3.493	
	Faculties have up-to-date academic knowledge	0.503		
3	Institute Industry Interface			
	Institute invites industry experts to deliver lectures	0.696	2.902	7.748
	Institute facilitates students to work on industrial projects	0.706		
	Institute provides industrial exposure on regular basis	0.520		
	Institute establish industry institute partnership cell	0.552		
4	Reliability			
	Institute delivers promised service on time	0.712	2.725	7.338
	Institute has ability to solve trouble & complaints of students	0.693		
	Institute perform the services right the first time	0.631		
5	Tangibles			
	Institute has all required equipments	0.656	2.534	6.892
	Institute has good support services like library, computer lab, career counseling			
	Institute has all required software support services			
6	Managerial Skill Development			
	Institute facilitates short term on the job training to students	0.616	2.290	6.327
	Institute encourages teamwork	0.503		
	Institute encourages coordination and communication skill among students	0.590		
7	Competency Development			
	Probability of getting pre-placement offer in the organization internship is	0.651	2.108	5.903
	Practical experience, expertise and exposure gained is significant with this course	0.691		
8	Entrepreneurial Skill Development			
	Course/syllabus inculcates entrepreneurial spirit among students	0.614	1.509	4.509
	Faculty tries to implant entrepreneurial seed in students	0.549		
9	Content Updation			
	Institute updates syllabus from time to time	0.707	1.331	3.096
10	Empathy			
	This institute takes sincere interest in solving the problems of students	0.775	1.324	3.080

As it can seen from table 2, there are ten main factors that students consider of high priority while selecting a management institute in India. Career Prospects and Employability and Intellectual Ability were the most important factors showing that the placement with prudence is a more prerequisite factor in the management institutions than the other factors. Also, the institute industry interface which contributes significantly in improving employability of students seems to a major reason while comparing to management institutes, as indicated by the respondents. Reliability also plays an important role in differentiation. With the intense competition entering into education services, good infrastructure including the high-speed internet services is playing a pivotal role. The relevance of course structure in terms of managerial skill development, competency building and building entrepreneurial skills also contributes in creating differentiation among tier 1 and tier 2 institutes. Students also want continuous updation in course content to suit the practical demand of corporate life and whenever there is any grievance or suggestions institute should welcome them. Fig. 1 demonstrates the main institute selection factors model for prioritizing and selecting the appropriate management institute in India.



The score of importance and perception on each service quality factor have been measured by the mean score of service quality variables in each service quality factor. The mean of importance and perception are also measured in order to exhibit the level of expectation and perception on each service quality factors among the students. The ‘t’ test has been administered to find out the significant difference among the importance and perception on service quality factors among the students. The results are given in Table 3.

Table 3: Mean of Importance and Perception on Factors among the Students

S.No.	Factors	Mean of		GAP SCORE	T-Statistics
		Importance	Perception		
1.	Tangibility	6.159398	4.554887	1.604511	2.2382*
2.	Reliability	5.840461	4.618045	1.222416	2.1141*
3.	Competence	6.147368	5.160902	0.986466	3.1089*
4.	Industry Institute Interaction	6.154135	4.288221	1.865914	3.0122*
5.	Course structure	6.340852	5.030075	1.310777	1.2708
6.	Internship Output	6.097744	4.656642	1.441102	2.1364*
7.	Inculcation of Entrepreneurial Spirit	6.108271	4.557895	1.550376	1.9111*
8.	Employability	6.320301	4.972932	1.347369	2.0231*

*Significant at five per cent level

The highly viewed service quality factors to select the business schools among the students are course structure and employability since their mean scores are 6.340852 and 6.320301 respectively whereas the lesser viewed factors are reliability and internship output since their mean scores are 5.840461 and 6.097744 respectively. The

highly perceived service quality factors among the students are competence and course structure since their mean score are 5.160902 and 5.030075 respectively. The score on perception on each service quality factors in all the cases is lesser than its score on importance given on each factor. The significant mean difference among the importance given and perception on the service quality factors is identified in all service quality factors at five percent significance level. The gap between expectations and perceptions is presented in figure 1

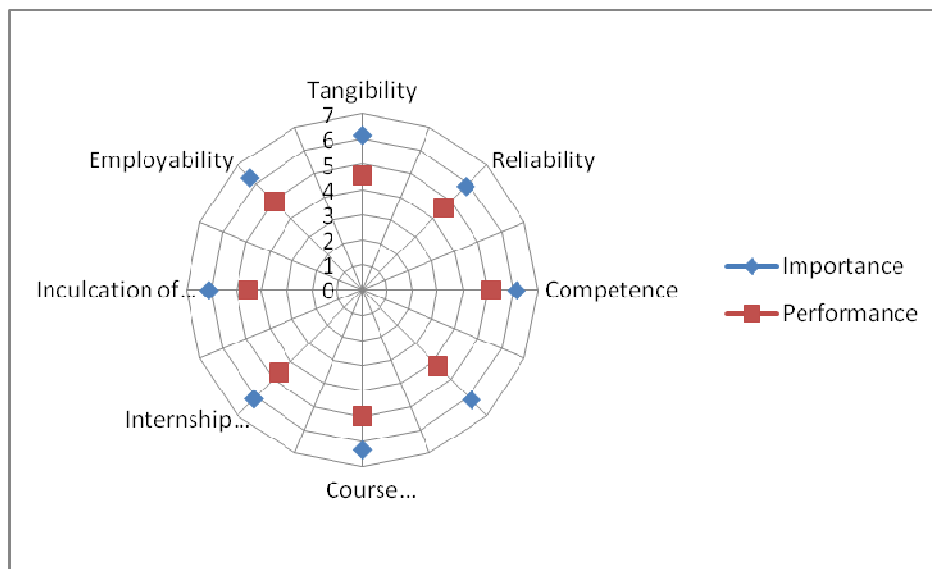


Fig 1: Gap Score

6. Conclusion

The service quality of educational institutions decides the kind and volume of students opting for it. In recent times there were evidences that various educational institutes have to close its operations due to non availability of students either because of lack of interest in type of programme they offer or service quality issues. There are ten main factors that students consider while making a choice for educational service provider out of which career prospects and employability with intellectual ability plays the most important role. The service process and its various components like reliability, empathy and tangibles plays a important role in differentiation of service quality but the major choice enabler has become the end outcome i.e. the placement which student receive after completion of such programme. One interesting finding of this study indicates that students also want educational service provider to inculcate entrepreneurial skills in them. Emphasis has been laid in development of competency and managerial skill development so that recipient of education should become more competent in facing complex business problems and challenges. Present era student has become more value conscious and want the optimum output for time they invest in pursuing the degree or diploma programme. Findings of this study indicate sharp deviations in performance from expectation on various service quality dimensions. Educational practitioners and administrators must pay attention to such issues and come up with a strategy for holistic development of students to empower them for bright future prospects.

7. Implications for Education Administrators

It is obvious that there is a perceptual problem with students when sample indicates poor performance on service quality factors across important service quality dimensions. It is alarming that most of the expectations were unmet and educational administrators should realize the relative importance given by the students before they allocate their efforts and funds. Educational planners should follow importance-performance matrix for resource allocation to reap better benefit on their invested efforts. An

important/perception instrument to measure service quality in education can be used to track performance over a period of time, as well as a current diagnostic tool. Such instruments may prove to be useful in identifying possible areas of concern before they become problems that could lead to dissatisfaction. Due to increasing competition from global education service providers and mushrooming growth of business school within country service quality problems may create the survival problems to the existing institutions. If the administrators understand the real situation and ready to cope with their customers' expectation then only they can survive and succeed.

8. Suggestions for Future Research

The increasing parity in fee structure and duration of various management programmes, future studies can be conducted to identify the impact of demographic variables on choice of educational service providers. A comparative study on gender basis, income level basis, occupation basis etc may be conducted to know the differences between various segments towards education service quality. Another area for future research may be the linking of internal customer satisfaction with external customer satisfaction in educational services. The perception of faculty, students, parents and employers can be contrasted and a new scale can be developed for measuring education service quality by combining inputs from various stakeholders. Such studies may be conducted in other types of institutions also like medical colleges, engineering colleges, commerce colleges etc since the expectations various with the type of course and its outcome.

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