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BSCQUAL: A Measuring Instrument of Service Quality for the B-Schools

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Abstract--- *The purpose of this study was to develop and validate BSCQUAL, a new measurement scale of service quality specifically designed for B-School. SERVPREF, SERVQUAL and HEdPERF are the most developed scale in the literature to measure service quality in higher education. A 27 item questionnaire on service quality in B-school was developed and tested for reliability and validity using both exploratory and confirmatory factor analyses. 800 questionnaires were collected out of which only 600 were usable. 300 questionnaires were used for exploratory factor analysis and 300 were used for confirmatory factor analysis SPSS 19 and AMOS 20 were used and exploratory and confirmatory factor analyses were applied. The recommended goodness-of-fit indices of the model were found to be within tolerable ranges, suggesting that the model provides a close fit to the data. The study identified six factors namely Physical evidence, Reliability, Development, Responsiveness, Competence and Delivery as the key dimensions of service quality. Existing literature on services quality has been used in this paper to find the student's perception and to develops an instrument that provides insights into measuring service quality for B-School.*

Keywords--- *Physical Evidence, Reliability, Development, Responsiveness, Competence.*

I. INTRODUCTION

Education is a significant institution given the shift to a knowledge economy. Scholars Ansary, Jayashree and Malarvizhi (2014) report that the service sector is the fastest-growing sector in the world, and plenty of the countries are moving from producing to services. Higher education is a "pure service as it possesses all the unique characteristics of a service". More recently, Gruber et al. (2010) found that higher education is having following characteristics of service that is perishable, heterogeneous and intangible. It is very difficult to standardize higher education. As service experience vary from one situation to the another, it makes service difficult to standardize. As it is difficult to store higher education it also satisfies the perishability criterion. However, there are several ways through which we can overcome this, for instance, the emergence of and video technology and e-learning (Cuthbert, 1996a) during the last fifteen years. Through the assistance technological and innovation advances, service sectors have overcome the perishability characteristic. Higher education is in recognized as a fastest growing service industry and, as such, is placing greater emphasis on meeting the needs and expectations of its participating customers, that is, the students. As per the literature it can be said that service quality in the education industry is considerably undeveloped. Historically, many efforts have been made on commercial services (Sultan and Wong, 2010). Oldfield and Baron, 2000 explained that previously institutions that operates in the higher education sector are not considered as "profit-making organizations," but nowadays are making so much efforts to gain a competitive advantage. But due to this, universities should not forget themselves as a "profit-making organization" that is operating in aggressive marketplace (Oldfield and Baron, 2000).

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Nadiri et al. (2009) point out that the higher education must understand students' perceptions and expectations to attract the students and fulfill their needs. DeShields et al. (2005) concluded that higher education must focus on market-orientated strategies and principles to retain in this competitive world. Institutions increasingly realize the significance of service quality in higher education and are greately emphasizing on meeting the needs and expectations of students (DeShields et al., 2005).

The Indian education sector is in need of elevation of the level of service quality. Keeping in mind the end goal to accomplish this objective, there is a requirement for a model for B-school service quality applied and tested on the B-schools as well as a scale to empower researchers to measure service quality in the B-schools aiming to pin-point areas of service quality short-falls for short and long-term improvement strategies. At present, there is absence of existing knowledge about a B-schools service quality model that takes into consideration a total scope of all the constructs and sub-constructs that consumers use in evaluating B-schools service quality that is probably quite different than those used for other industries and in other countries. It was found from the literature that there is a lot of pressure from stakeholders, parents, employers and students to close the gap between their expectations and institutional quality. Due to the competition in the educational sector, there is a pressure on institution to improve their quality and increases the importance of service quality measurement at b-schools (Gbadamosi, Gbolahan & De Jager, Johan 2008). Due to increased competition among institutes service quality in b-schools has gained great momentum.

Stakeholder for B-school

Education is one of the services that has the highest interaction between client and service provider, which requires development of a relationship that would not end at the time of completion of the program but is a lifetime relationship (Rojas-Méndez, Vasquez-Parraga, Kara & Cerda-Urrutia, 2009). Cuthber (1996) found that it is very problematic to identify the primary stakeholder in B-School. This can be combined with the issue that if the service providers know what the customer wants then only they can only deliver an effective service (Gruber et al., 2010), so it become very important to identify the primary stakeholder. Hill (1995) claims in UK the students are the primary stakeholders of education industry, which demonstrates that have an important role in the delivery process and production of the service. As it was found that the students are the primary target audience for B-school so it is very important to understand the requirements of the students which can later be fulfilled by providing the quality service based in their requirements. This will help the b-school to achieve competitive advantage, mainly in terms of communication between current, potential and future students and generating positive word-of-mouth (Alves and Raposo, 2009). This study found many stakeholders in B-School but as students are the primary and end user of B-school SQ, the focus is on the students of B-school and the aim of the study is to find what student actually think, which may contradict or support with other representatives of B-school. Therefore, all further discussion related to the stakeholders in B-school will consider the student as the main stakeholder.

Literature review and Existing Scales for Service Quality

A review of the literature reveals that the most popular scales used to measure service quality (in higher education and other service sectors) are SERVQUAL, SERVPREF and HEDPREF. The SERVQUAL scale contains

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22 items, which are used to identify the expectation of the client. The SERVQUAL authors identified 5 factor of SQ:

- **Reliability:** It is the capacity to perform the promised service precisely and dependably.
- **Assurance:** It is the employee's courtesy and knowledge and the capacity of the organization firm and its workers to motivate confidence and trust.
- **Tangibles:** Tangibles are defined as the personnel and communication materials, equipment's and physical facilities.
- **Empathy:** It is characterized as the individualized, caring consideration the organization provides to its clients.
- **Responsiveness:** It is defined as the readiness to help the client and to give prompt service.

Cronin and Taylor (1992) criticize the validity and reliability of the SERVQUAL model and designed the SERVPERF scale to meet the limitations of SERVQUAL model. The authors trust that SQ of any organization is based on perceptions of customers. In SERVPERF approach the client was asked to rate the performance of service provider in a specific service encounter. It was found that SERVPERF is more reliable than SERVQUAL, as expectations of the client is not regarded for assessment in SERVPREF (Cronin and Taylor, 1992). In response to this, SERVPERF model is more utilized in the higher education than SERVQUAL model. Most of the researchers have used an adapted performance version of SERVQUAL to evaluate students' course experience and measure the perceptions of SQ (Abdullah, 2006a; Hill, 1995; McElwee and Redman, 1993; Oldfield and Baron, 2000; Rigotti and Pitt, 1992).

Firdaus Abdullah suggested a general measuring model and based on performance which tries to find important determiners from quality of services in high education part. This instrument aims at considering not only academic components but also aspects of the total service environment as experienced by the student. The author identified five dimensions of the SQ concept. The 41 scales experimentally have been tested for being one dimensional, reliable and valid, using analysis of exploratory and acceptability factors. So the important point which in this research is mentioned is comparing different measuring from construction of quality of services in an empirical study using customers of a single and separated industry named as higher education. The author identified six dimensions of the SQ concept:

1. Non-academic aspects: items that are basic to enable students to satisfy their study obligations, and related to the responsibilities accomplished out by non-academic staff.
2. Reputation: significance of higher learning foundations in projecting a professional image.
3. Academic aspects: Duties of academics.
4. Access: incorporates issues such as ease of contact, approachability, convenience and availability.
5. Program issues: significance of offering a wide ranging and reputable academic programs/ specializations with flexible structure and syllabus.
6. Understanding: It involves items related to understanding student's specific need in terms of health services and counseling.

Khan et al., (2007), used twenty statements to measure the SQ in technical institutes. Owlia and Aspinwall

(1997) found thirty-nine service quality variables to measure quality of HE in engineering education.

Svensson and Wood, (2007) argued that a customer metaphor for describing the university service exchange from the perspective of students is unsuitable. It shows that if students are not treated as "customers", then it will be inappropriate to improve the service and to measure SQ. It appears that "refuting the idea of the student as a university customer on such grounds is narrow, and ignores the fact that the university experience is wider than just the contact between students and academics". Choosing a university is a very uncertain and high risk decision, "the student will look for evidence of service quality, Confirming its importance in the university's function" (Donaldson and McNicholas, 2004). It will be a disadvantage to the institution if they will not make any efforts in attracting students in today's world of competition, the university must focus on their service. Sines and Duckworth (1994) has claimed the importance and summarized this position and said that: "it's time for educational institutions to face two facts: they are in a competitive battle for students, and students are customers".

Sander et al., 2000; Hill, (1995) explained that if a B-school is successful in knowing student's expectations then the B-school can respond in more realistic way. But this is duty of university to inform student about what is realistic to expect from professors (Hill, 1995). Lecturer can also design teaching programmes accordingly if they are aware about student expectations (Sander et al., 2000). Several studies have been found that there is positive correlation of values and expectations on variables. Telford and Masson (2005) examined that it is crucial for B-school to understand value and expectations of students.

Winsted (2000) and Zeithaml et al. (1990) examined that service providers should deliver service in such a way that satisfy customers but this can be achieved if they know the expectation of the customers in general. If expectation is known to lecturers then they can their behaviour accordingly, which have a positive impact their satisfaction.

Joseph et al. (2005) examined that point out that SQ research in HE is dependent on academic insiders and it does not take input from the students who are primary stakeholder. They believe that traditional approaches leave "decisions about what constitutes quality of service (e.g. such as deciding what is most important to students) exclusively in the hands of administrators and/or academics". The authors, suggest that academician should focus on primary customer and they should try to understand student's need.

Higher education comes under service sector due its characteristics, education consist of following characteristics: intangible, heterogeneous and inseparability. In the delivery process it is consumed and produced simultaneously. This meets the criterion of inseparability. Finally, education is perishable for it is impossible to store, despite the technology of video (Cuthert, 1996) Li-Wei Mai (2005) found that the US students are more satisfied than UK students with the education they receive and there is a high degree of correlation between SQ dimensions and overall satisfaction.

Husain, Hanim, Fernando and Netaji (2009) examined the relationship between perceived service deliveries that influences student satisfaction in private colleges in Malaysia. They found that the "physical environment, interaction and support, feedback and assessment, and administration are strong factors" which affect student satisfaction.

Zeshan, Afridi and Khan (2014) done a survey in institutes of Pakistan using SERVQUAL model and it was observed that student's perception is low about quality in all the dimensions. Therefore, institutions must focus on the dimensions of SERVQUAL to improve their quality according to the perceptions of student.

Ford et al., (1999) identified reputation, program issues, location, physical aspects and career opportunities as important factors measuring SQ of educational service. The author also suggest that institutions and business education must emphasize on the quality and nature of service offered to the students.

Kaleem & Rahmat (2004) conducted a research in public and private sector b-schools using SERVQUAL and found that b-school SQ is below the student's expectation and students are not satisfied with the quality. The survey also found that due to higher fee in private b-schools the students studying in private sector has higher expectation than students studying in public sector.

Morales & Calderon (2010) conducted a survey using SERVQUAL to measure SQ of executive education in b-schools and found that in the perception of b-school's empathy and reliability are the most important dimension and next important dimension is tangibility.

Gao & Wei (2010) found that students have low perception in china which shows that the b-schools of china needs to improve their quality and it was also found that students of China have high expectations from business schools

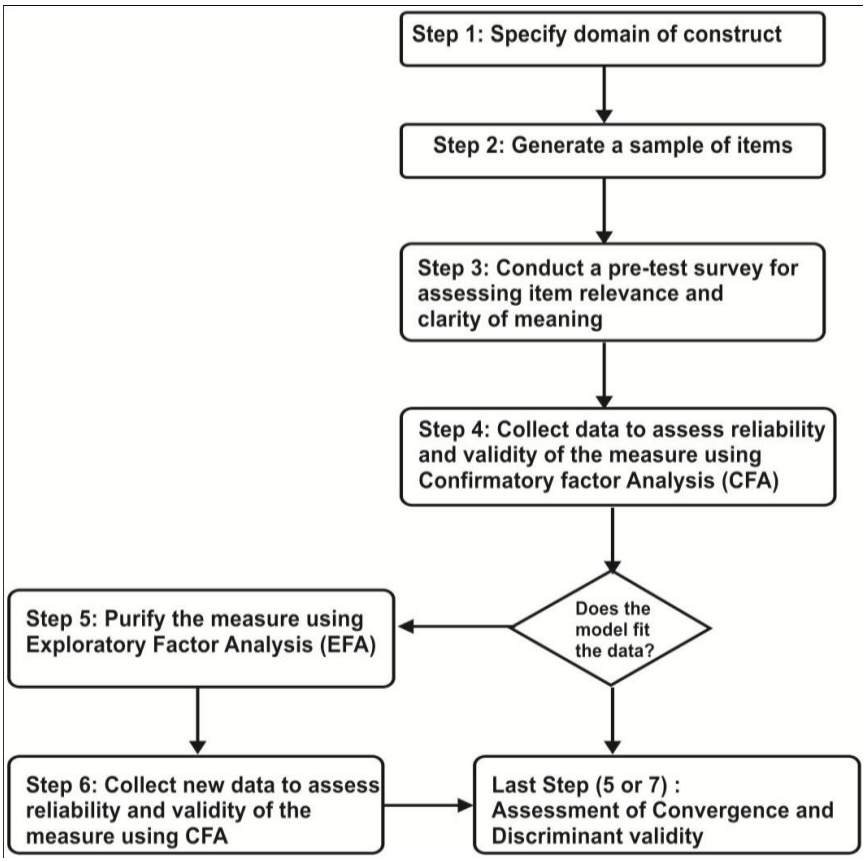

Figure 1: The Process of Scale Development

Phase 1

Item Generation The scale development process begins with the creation of items to assess a construct under examination. This process can be conducted inductively, by generating items first, from which scales are then derived, or deductively, beginning with a theoretical definition from which items are then generated. Both of these approaches have been used by behavioral researchers and the decision must be made about which is most appropriate in a particular situation. This involves in-depth searching of the literature to ascertain the determinants of service quality. This was done qualitatively through reviewing literature and in-depth interviews of students and experts. 63 items were found through reviewing literature and in-depth interviews of students and experts.

Phase 2

Content Validity

Content validity focuses on the similarity amongst test questions and the substance or branch of knowledge they are anticipated to review or evaluate. This consideration of similarity is here and there alluded to as an arrangement, while the substance or branch of knowledge of the test could possibly be alluded to as an execution area. The content validity of the scale was examined through pilot testing. To check the significance of the correlation matrix bartlett's test is used" to judge the significance of the correlation matrix and the to check sampling adequacy KMO test was used. The factor reliability was analyzed through Cronbach's alpha and item to total correlation. A correlation matrix examined the inter item correlation. Initial instrument was developed by generating items from review of literature. For pilot testing the draft questionnaire was filled by a total of 300 students, and they were asked to comment on any omissions or errors and perceived ambiguities concerning the draft questionnaire. Only minor changes were made from the feedback received, few items which were not in the questionnaire has been added from the feedback. After the pilot study the items were reduced from 62 to 28. Further the revised questionnaire was sent to three experts (a researcher, an academician and a practitioner) for feedback before going for a full-scale survey. The expert found that the questionnaire is appropriate for measuring service quality in B-school. The scale development procedures employed followed the procedures provided by PZB augmented by Cronin and Taylor, 1992 and utilized by many researchers.

Phase 3

Data Collection

The data was collected from B-School's students who were doing MBA with the help of a well-designed Questionnaire. 300 to 400 respondents sample from b-school. NCR was divided into into zones and the data was collected twice from B-schools. Once for the exploratory factor analysis and next time for the confirmatory factor analysis. Quota sampling is used for this research. The population was divided into the four zones in NCR. The sample is drawn by selecting convenient population units. For the the study, primary data was collected through Questionnaire. Convenience sampling is used, as it is appropriate for exploratory studies. Further for the second data collection all the MBA students were considered. Around 300-400 students were collected from NCR using quota sampling dividing into the four zones in NCR and in every zones non-random of Judgemental sampling is used. The sample is obtained by selecting convenient population units.

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Phase 4

Data were entered into the statistical software package SPSS and checked for incorrect entries and missing data. The preliminary analyses examined whether basic characteristics of the data set, that is, means, standard deviations, percentages, skewness and kurtosis were acceptable for further analyses. This also included the assessment of reliability coefficients and relationships between the variables and of the factor structure of the service quality measure. The purpose of examining estimates of internal consistency from the sample was to determine if the measures that were used had acceptable reliability levels or reliability estimates. Bivariate relation between the factors of service quality was conducted to determine how each variable associate itself with other variables. Multivariate analysis and parametric tests were utilized. The data was analyzed with SPSS.

Multivariate analysis and parametric tests are utilized for examination –. Information gathered was procedure with SPSS.

As the number of respondents were more than 200, parametric tests are based on the assumption that the samples were drawn from normally distributed population, or more accurately that the sample means were normally distributed. According to the theorem of central tendencies if the value of N is more than 200 the data can be assumed to be normally distributed (*N=300*). The Multivariate analysis is used for data analysis. Exploratory Factor Analysis (EFA) to purify the measure is used. It is recommended to perform confirmatory factor analysis (CFA) when seeking to validate new assessment instruments following exploratory factor analysis (EFA) (DeVellis, 2003; Worthington & Whittaker, 2006). To verify the reliability for each dimension, Cronbach's alpha was assessed and the composite reliability (ρ) was calculated. For the purpose of validating the five service quality constructs, the following validity tests, namely, face validity, content validity, and construct validity (convergent and discriminant validity) were conducted.

II. DATA ANALYSIS AND RESULTS

Exploratory Factor Analysis

Exploratory factor analysis was used to explore the dimensions of the BSCQUAL scale to ensure that all items only loaded onto their respective dimensions. We used the method of principal component analysis with varimax rotation based on the assumption that any extracted factors relevant to BSCQUAL should be inter-correlated. We applied one standards to identify the number of factors in the BSCQUAL construct (Hair et al. 2010). Items that had less than a 0.50 loading. We applied an eigenvalue of 1 as the cut-off value for extraction. The Eigen values for six factors were 13.810, 12.510, 11.662, 10.873, 9.590 and 9.310 respectively. The index for present solution accounts for 67.755%of the total variations for compensatory consumption. As 28 factors has been reduced to six factors it can be said that it is quiet good extraction while 32.25% information content has been lost for factors for measuring service quality in B-Schools. KMO value for this survey is 0.913 shown in Table 1, which is quite high and the significance of Bartlett's Test of Sphercity is also appropriate, so on the basis of both the test it was found that it is appropriate to use Exploratory Factor Analysis shown in Table 2. Table 2 summarizes the factor loadings for the condensed 28-item scale. The significant loading of all items on the single factor indicated unidimensionality. No item had multiple cross-loadings on any factor, which supported the preliminary discriminant validity of the scale.

The reliability coefficients for all six factors were above 0.70, indicating acceptable reliability.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	5198.893
	Df	378
	Sig.	.000

Table 2: 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	11.021	39.360	39.360	11.021	39.360	39.360	3.867	13.810	13.810
2	2.620	9.359	48.719	2.620	9.359	48.719	3.503	12.510	26.320
3	1.754	6.265	54.984	1.754	6.265	54.984	3.265	11.662	37.981
4	1.377	4.917	59.900	1.377	4.917	59.900	3.044	10.873	48.855
5	1.177	4.205	64.106	1.177	4.205	64.106	2.685	9.590	58.445
6	1.022	3.649	67.755	1.022	3.649	67.755	2.607	9.310	67.755
7	.824	2.942	70.697						
8	.748	2.670	73.367						
9	.727	2.598	75.965						
10	.676	2.414	78.379						
11	.583	2.083	80.462						
12	.535	1.911	82.374						
13	.521	1.860	84.234						
14	.494	1.763	85.998						
15	.456	1.629	87.627						
16	.429	1.532	89.159						
17	.398	1.421	90.579						
18	.360	1.285	91.864						
19	.323	1.154	93.018						
20	.288	1.028	94.046						
21	.284	1.015	95.061						
22	.247	.882	95.943						
23	.243	.867	96.810						
24	.222	.793	97.603						
25	.194	.694	98.297						
26	.181	.646	98.943						
27	.166	.593	99.536						
28	.130	.464	100.000						

Extraction Method: Principal Component Analysis.

Interpretation of Factors

The factors which are extracted from Principle Component Analysis in the Exploratory Factor Analysis is explained below. Factor loading of all the factors are discussed below:

1. Physical Evidence

The first dimension is Physical evidence and it has the with the highest value of Total Variance Explained

(13.81%). Physical evidence is the space by which you are surrounded when you consume the service. It demonstrates the quality of service that the provider provides and wants to convey to its consumers. Physical evidence provides representation or image that customer will use to evaluate the quality (Zeithmal and Bitner, 1996). On the basis of physical evidence, the customer forms impression of the service quality of the firm. Physical evidence has therefore a strong influence on the perceived quality of the educational service encounter. It is the most important dimension in measuring B-school service quality. The items have been derived from the review of literature. Items included measuring service quality in B-Schools Physical evidence, as displayed in table 3 below: -

Table 3

The B - School has well-equipped library	.789
The B - School has appealing physical amenities	.753
The B - School has up to date equipment to support learning process	.695
The B - school has recreation facilities.	.631
Lawns and cafeteria of B-School are good enough to meet the needs of students	.630
The B - School has a backup facility for power failure	.601
The B-School has a clean environment	.539

2. Reliability

The second dimension is reliability and it has second highest Total Variance Explained (12.51, %), the items has been derived from the review of literature. Reliability is "ability to perform the promised service dependably and accurately". The study shows that the second important factor that influences the overall service quality as perceived by customers is 'Reliability'. This finding is consistent with the finding of Morales & Calderon (2010) who also found that reliability important dimension in the perception of business schools. Items included measuring service quality in B-Schools reliability, as displayed in table 4 below: -

Table 4

B-School keeps student's records accurate.	.773
The B-School has up to date study material.	.607
B-School's student support cell are competent to solve student's problem.	.605

3. Development

The third dimension is Development and its Total Variance Explained value is (11.66%), the items has been derived from the review of literature and through personal interview of students. Development is "the ways that a student grows, progresses, or increases their developmental capabilities as a result of enrollment in an institution of higher education". From expert opinion it was found that in today's world of competition student development is a very important dimension of service quality of B-School. B-School needs to take care of overall development of student so that he can meet the challenges of competitive world. Items included in measuring service quality in B-Schools Development as displayed in table 5 below: -

Table 5

The B-School conducts extra-Curricular activities for the overall development of students and also to create social responsibility in them.	.774
The B-School organizes industrial visit for students.	.771
B-School conduct conferences for students.	.727
B-School provide highly specialized training courses adapted to the needs of economic and social life.	.632
B-School conduct seminars for students to cope up with current scenarios, opportunities and challenges	.613

4. Responsiveness

The fourth dimension is responsiveness and its Total Variance Explained value is (10.87%), the items has been derived from the review of literature for dimension responsiveness. Responsiveness is "willingness to help customers and provide prompt service. It is the ability to update, adjust or customize the contents and delivery within a particular Peter" (1988) explained that customer accords greater priority to the care and responsiveness of the organization. Items included in measuring service quality in B-Schools Responsiveness, as displayed in table 6 below: -

Table 6

The B-School provides scholarship to students with outstanding performance.	.751
The B-School provides good counseling session for course selection.	.727
B-School lecturer's gives relevant and appropriate task.	.699
The B-School provides good administrative support for fee payment	.577

5. Competence

The fifth dimension is Competence and it has the second lowest Total Variance Explained value (9.59%), the items has been derived from the review of literature for dimension Competence. Competence is "connected the knowledge and skills of contact personnel, operational support personnel" (and also research capability) that are needed for delivering the service. It assures whether the staff of the service provider have the knowledge and skills required for delivering the service in a proper way. This finding is consistent with the finding of Sangeeta et al (2004) who also found that Competence important dimension of service quality of business schools. Items included in measuring service quality in B-Schools Competence, as displayed in table 7 below: -

Table 7

B-School's faculties are competent to answer the student's doubt.	.740
B-School's faculties have good communication skills.	.697
The B - school provides adequate placement services for the students.	.666
B-School's faculties have up to date knowledge.	.536

6. Delivery

The sixth dimension is delivery and it has the lowest Total Variance Explained value (9.31%)**,** the items has been derived from the review of literature for dimension delivery. Delivery is the act or manner of delivering something. It is a set of principles, standards, policies and constraints to be used to guide the designs, development, deployment, operation and retirement of services delivered by a service provider with a view to offering a consistent service experience to a specific user community in a specific business context. This finding is consistent with the finding of

Owlia and Aspinwall (1996), who also found that Delivery as a important dimension of service quality of business schools. Items included in B-Schools Delivery, are displayed in table 8 below: -

Table 8

B-School faculties are easily accessible.	.740
B-School administrative staff are easily accessible.	.733
B-School has adequate and appropriate classroom	.696
B-School gives clear notice about relevant information.	.505

Reliability

Reliability refers to the "precision of measurement scores, or how accurately such scores will be reproduced with repeated measurement" (Dillon, Madden, & Firtle, 1994). The reliability of the construct items was evaluated using Cronbach's coefficient alpha. Cronbach's coefficient alpha of all the constructs is ranged from .80 which is above the cut-off value .70 (Nunnally, 1978). As all the values is above .70, it can be said that all the factors are reliable.

Table 9: Reliability of Measurements

Construct	*Cronbach's Alpha*
PHYSICAL EVIDENCE	.879
RELIABILITY	.846
DEVELOPMENT	.857
RESPONSIVENESS	.853
COMPETENCE	.809
DELIEVERY	.801

Confirmatory Factor Analysis

The main aim of this research was to design a scale to measure service quality in B-Schools of Delhi/NCR. After the EFA the next step is to analyze the data through CFA. Before analyzing the data those questionnaires were removed which were not completely filled by the students. Before going for analysis the data was filtered and the respondents who did not respond at least 90% of the survey items were removed. After EFA reliability test was conducted to fulfil the objective and then the zero-order CFA was conducted using AMOS 20 followed by 1st order CFA and then validity test was conducted using AMOS 20. The confirmatory factor analytic model was estimated via the Maximum Likelihood method (Fig.2).Consistent with the structural equation modeling literature (Chen, Curran, Bollen, Kirby, & Paxton, 2008; Fan & Sivo, 2005) a range of indices were used to asses model fit. The measurement model demonstrated broadly satisfactory levels of fit across all samples (Browne Cudeck, 1993; Hu & Bentler, 1999). We used several indices to evaluate the goodness-of-fit of a construct: 1) the value of the v2 statistic, where v2 /df < 5.0 (Wheaton et al. 1977); 2) the comparative-fit index (CFI), and the non-normed-fit index (NNFI), which should be >0.90 (Medsker, Williams and Holahan 1994); and 3) the root mean square error of approximation (RMSEA) value should be <0.08 (Browne and Cudeck 1992). We applied specific CFA techniques such as convergent validity, construct reliability, and discriminant validity to confirm the measurement.

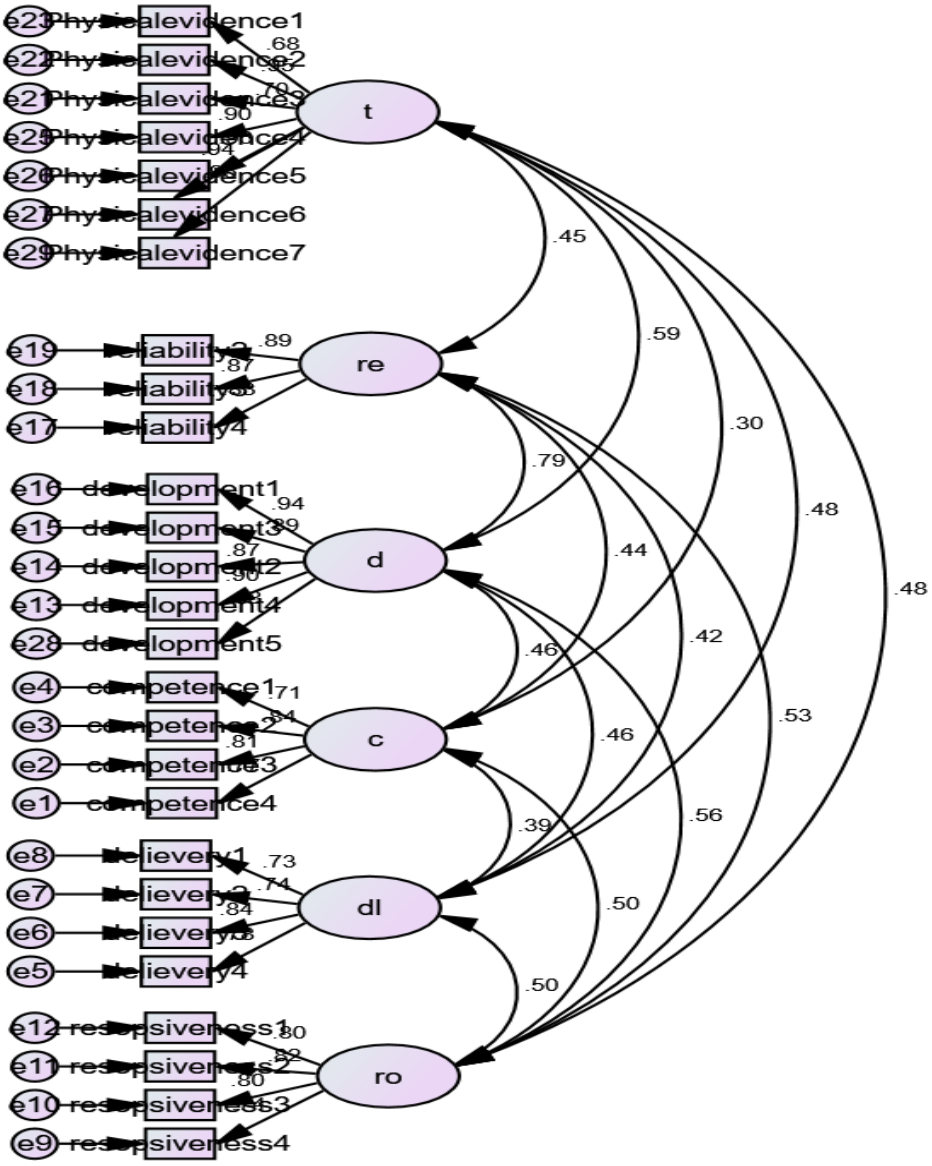

Figure 2: Higher Order Factor

The chi-square value of overall model fit is 919.719 with 309 degrees of freedom with probability value of less than.000. The 309 "degrees of freedom represent the level of over identification of the model".

Table 10: Summary Table-CFA

Fit Statistic	***Final CFA Model***	***Desired Value***
CMIN/DF	2.976	Acceptable values are in the 3/1 or 2/1 range.
The Normed Fit Index (NFI)	.883	It should be more than .90 (Byrne, 1994)
The Tucker-Lewis Index (TLI)	.908	It should be nearer to 1
Incremental fit index, IFI	.919	It should be equal to or greater than .90
The Comparative Fit Index	.919	It should be more than .93 (Byrne, 1994)
The Goodness of Fit Index	.822	It should be more than .90 (Byrne, 1994)
RSMEA	.08	It should be less than .08 (good models < .08)
RMR	.148	The smaller the RMR the better, with RMR = 0 indicating a perfect fit.

It shows the model fit indices of all the constructs namely Physical evidence, Reliability, Development, Responsiveness, Competence and Delivery. All value of indices found to be above the threshold, which implies that model is good fit in Indian Context. The CMIN/DF value is in the acceptable range. The value of IFI, TLI, CFI is also above the cut-off level, the value of GFI and NFI value also very near to the cut-off value, RMSEA and RMR value is also good.

Convergent Validity

First, we examined the convergent validity to verify that all of the proposed measurement items represented the construct itself. "Convergent validity shows the degree to which the measures of a construct are positively related to each other "(Malhotra, 2010). It is obtained by "comparing Cronbach alpha of the construct with Average Variance Explained (AVE) by the measures "(Hair et.al, 2010). The AVE is square of average of the factor loadings. The Convergent validity is achieved if:

1) Cronbach Alpha co-efficient> Average Variance Explained 2) Cronbach Alpha co-efficient is greater than 0.7 3) Average Variance Explained > 0.5.

Table 11: Convergent Validity

	Cronbach's Alpha	*AVE*
1	0.899	0.749
2	0.866	0.618
3	0.855	0.596
4	0.870	0.626
5	0.952	0.800
6	0.959	0.772

The above table shows the validity and reliability of all the dimensions. As the value of Cronbach alpha is above .07 for all dimensions this shows all dimensions have good reliability and internal consistency. AVE is also above 0.4 which is threshold value**.** Therefore, the six constructs met the norms of convergent validity.

Discriminant Validity

"Discriminant validity shows the extent to which the constructs differ from each other. It is assessed by comparing the squared correlation (R2) of the paired constructs with the AVEs of each construct (Fornell & Larcker, 1981)". Maximum Shared Variance (MSV) is calculated by taking maximum of the two correlation coefficients is and doing their squared. Hair et.al, (2010) explained that discriminant validity can be achieved if MSV of a pair of constructs is less than the Average Variance Explained for every corresponding construct. Discriminant Validity: AVE>ASV, MSV < AVE.

Table 12: Discriminant Validity

	AVE	*MSV*	*ASV*
1	0.749	0.630	0.296
2	0.618	0.251	0.180
3	0.596	0.252	0.204
4	0.626	0.318	0.265
5	0.800	0.630	0.344
6	0.772	0.348	0.220

As the MSE is below AVE and ASV is below AVE it shows that the constructs differ from each other. Convergent validity and discriminant validity was checked and found appropriate. One statement has been dropped as there was a cross loading problem with the statement due to which there was a problem is discriminate validity. The reliability test was also done on individual factor and it was found that all the factors are reliable. Therefore, it is proved that BSCQUAL model developed in this study valid and reliable instrument to measure service quality in B-school.

Concluding Remarks

Service quality is the password to customer satisfaction. Therefore, universities must focus on service quality and should rather oblige customers' perceptions of service quality by prioritizing their activities. It was found that good quality of services impacts positively on customer satisfaction. The future of any country depends upon its students. A country's name and fame rest on the educated youth. In other words, the students are the real treasure of any country. So it's very important that they get a quality education for that there should be good quality education institute in the country. Almost every service sector has its own scale to measure their service quality but after extensive research but I could not find any scale that can measure service quality specifically for B-school. The objective of this study was to design and validate the scale for measuring service quality for B-School. This is an exploratory study, and based on the accessible literature, and consultation with pioneer educators, students and researchers in this field. Various test has been conducted to examine the appropriateness of BSCQUAL for B-School such as reliability and validity test. BSCQUAL contains 27 items and six factor structures (Physical evidence, Reliability, Development, Responsiveness, Competence and Delivery as the key dimensions of service quality). From all the tests it appears that BSCQUAL is an appropriate instrument to measure service quality in B-schools. The availability of a services quality measurement instrument, such as BSCQUAL, which is specifically designed for the B-School, contributes significantly to the literature and practitioners.

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