

# Application of RIDIT Analysis in Prioritizing Perceived Service Quality Dimensions of Management Graduates in Indian Universities

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## Abstract

The transformations in the present socioeconomic situation have compelled the management education in the higher-education sector to behave as a business entity. They are required to focus more on delivering superior quality of educational services to the students. The universities are forced to recognize and give emphasis to the factors which are influencing students' satisfaction and their future behavioural intentions. Based on these prevailing facts, the present study tried to explore the various dimensions of service quality as perceived by the management graduates of public universities. Further, the study attempted to prioritize the dimensions along with their items to draw meaningful conclusions for the management education sector. The study analyzed survey responses of 401 management graduates using factor analysis in order to diagnose the underlying relationships between the questionnaire items. These resulted in formation of related groups by the items and were named according to their collective characteristics. The study also employed the RIDIT analysis methodology independently to establish the relative importance of each item to the management graduates who participated in the survey. Based on the RIDIT analysis results, a priority ranking was allotted to each individual item. An analysis interpretation was then carried out to find out the extent to which the items grouped into each particular factor tended to have low or high priority rankings. The results of the study may be obliging to the university managers, particularly in a management education setting, to focus their strategies and plan their efforts in line with the findings to gain superior students'/graduates' satisfaction and favourable future behavioural intentions.

**Keywords :** perceived service quality, management education, higher education, RIDIT analysis, India

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Management education in India has witnessed a phenomenal growth and notable transformations in the last few decades, since its inception in 1950s (Mahajan, Agrawal, Sharma, & Nangia, 2014). This happened because of various reasons, including globalization and global competition ; rapid technological, social, and economic developments ; changing as well as demanding behaviour of students ; and shifting business environments (Choudhury, 2015 ; Temtime & Mmerekki, 2011; Sahney, 2011a). The demand for programmes in business management increased radically across industry verticals (Jagadeesh, 2000) due to its nurturing role in developing future corporate leaders and executives (Temtime & Mmerekki, 2011). Due to its bright

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prospects, it rapidly got acknowledged as a popular choice among the young graduates and professionals (Jagadeesh, 2000) for their career advancements. Following this, there has been a huge quantitative growth in the institutions imparting management education in the recent past (Mahajan, Agrawal, Sharma, & Nangia, 2016). This sudden quantitative growth in business schools in the country augmented the challenges for their survival (Choudhury, 2015 ; Mahajan et al., 2014). As a result, the higher education sector of India in management education has been experiencing a tough situation at present. These challenges were escalated further after the international educational institutions started showing their interest for their entry in the Indian higher education market, including management programmes. As a result, the Indian higher education sector was forced to initiate improvement measures in educational service quality with student centric approaches (Choudhury, 2015). These competitive situations have, in fact, attracted the attention of academic decision makers and researchers to explore the educational service quality from the students' view point (Bhardwaj, 2015). There is an increase in the studies accounting for how the students perceive the educational service quality influencing their satisfaction levels and their future behavioural intentions (Choudhury, 2015 ; Mahajan et al., 2016 ; Narang, 2012; Sahney, 2011a; Sahney, 2011b ; Yusof, Hassan, Rahman, & Ghouri, 2012 ).

The present management education sector is in fact experiencing a highly competitive and complex environment in India. Viewing this, the universities and other higher educational institutions have realized the importance of being distinct from their competitors. This can be done through maintaining superior educational service quality by focusing on effective defensive marketing strategies including retention of the students or developing positive bonding with the students (Fornell & Wernerfelt, 1987; Phadke, 2011). The universities, acting as education service providers across the globe, are thriving to maintain and deliver good quality of educational services to the students (Clemes, Cohen, & Wang, 2013) in order to gain and maintain sustainability in the prevailing environment (DeShields, Kara, & Kaynak, 2005).

Hence, the present study is carried out to conceptualize a multi-dimensional model of service quality construct in a management education setting. The specific objectives of the present study are to explore the dimensions influencing the service quality in management education, particularly in a public university system and to prioritize the dimensions from the perspective of management graduates.

## **Review of Literature**

Service quality research achieved impetus in the early 1980s, and various researchers had put forward their profound views on the service quality phenomenon. After all, the most accepted conceptualization of service quality was conferred by Parasuraman, Zeithaml, and Berry (1985), which is still widely accepted. They had designed a service quality measurement scale SERVQUAL that was further applied successfully in different verticals of service settings. Even though the SERVQUAL model has been extensively used for evaluating quality of service in various service industry verticals, it was criticized by several researchers theoretically as well as empirically both. Researchers argued that the model cannot be standard for all the service settings across the globe and hence, was advocated to have industry specific dimensions for accessing the service quality (Asubonteng, McCleary, & Swan, 1996; Choudhury, 2015 ; Ladhari, 2009) in future studies. Many researchers also argued that customers of service sectors might make different assessments about service quality depending upon environmental and cultural dissimilarities and their sway on customers (Mattila, 1999 ; Malhotra, Ulgado, Agarwal, Shainesh, & Wu, 2005).

Since, demographic, geographic, and cultural diversity of the Indian subcontinent is different ; the generic dimensions of service quality may not be able to measure the right perspectives of the management graduates. Therefore, exploring the key dimensions of service quality in the context of management education becomes mandatory. Many studies conducted in the recent years made attempts to get service quality in higher education defined (Becket & Brookes, 2006) and develop multidimensional scales to measure the service quality as

perceived by the students (Gupta, 2016). The definition of quality in education has been given by various authors and the most recognized in the context of service quality measurement in education sector has been “meeting or exceeding customers' expectations of education” given by Parasuraman et al. (1985).

Similarly, Clemes, Ozanne, and Tram (2001) proposed accessibility, attitude and behaviour, competence, personal interaction, physical environment, reliability, tangible aspects and Sohail and Shaikh (2004) proposed physical evidence, reputation and responsiveness, contact personnel, access to facilities, and curriculum as students' perceived service quality dimensions for measuring service quality. Further, Abdullah (2006) proposed academic aspects, non-academic aspects, reliability, reputation, access, programme issues, and understanding as perceived service quality dimensions for measuring higher educational service quality. Among the contemporary studies, Sultan and Wong (2010) proposed assurance, capability, competencies, dependability, effectiveness, efficiency, semester-syllabus, unusual situation management and Annamdevula and Bellamkonda (2012) proposed academic facilities, administrative services, campus infrastructure, support services, teaching and course content as primary dimensions for measuring students' perceived service quality.

Following the notion of higher education, service quality in management education too depends on a number of dimensions for its assessment. Sahney (2011a) projected five dimensions (attitude, competence, content, delivery, and reliability) to measure perceived service quality of management students. In another study, Yusof et al. (2012) proposed a different set of dimensions to assess perceived service quality in management education namely assurance, communication, empathy, knowledge/expertise, reliability, responsiveness, self-development, social responsibility, systems/secondary services, and tangibles (program quality and services). In her study, Narang (2012) proposed academics, learning outcomes, personality development, physical facilities, and responsiveness as service quality dimensions. Yet in another study by Mahajan et al. (2014), academic standards, industry linkages, organization structure and practices, research & consultancy, accreditation, placements, infrastructure, branding, abiding by regulatory bodies, financial resources, leadership, extra-curricular activities, and location were used for measuring management students' perceived service quality. Later, Choudhury (2015) proposed four dimensions sufficient for assessing perceived service quality of management students as competence, tangibles, responsiveness, and convenience.

It is evident from the discussion that there has been a large amount of research into higher education as well as management education to assess students' perceived service quality ; although, there seems to be a deficiency in comprehensive studies that focused on identifying and prioritizing the perceived service quality dimensions from students' perspective (Pradhan, 2009), specifically in the management education sector in the Indian context. Few researchers attempted item ranking in agribusiness (Panda & Sreekumar, 2012) and healthcare (Panda & Kondasani, 2017) in the recent past. However, there is very limited evidence of studies that have assessed and prioritized service quality dimensions in the management education context. Hence, the present research study becomes vital, as it attempts to develop a perceived service quality scale in the context of the management education sector in India and prioritize the scale items based on management graduates' viewpoint using factor analysis and RIDIT analysis, respectively. The outcomes of the research may help academic service providers/managers with valuable insights to sensitize management education services and also help university authorities to bring meaningful, valuable, and systematic changes in the Indian management education sector.

## **Data and Methods**

The research sample for the present study comprises of management graduates holding a post graduate degree in management, that is, MBA during 2012-14, 2013-15, and 2014-16 and who showed their willingness to contribute to the survey. In total, 14 public universities were considered for data collection between February 2016 and February 2017 and the samples were proportionally divided among all the universities. The questionnaires were sent to the participants through e-mail along with a cover letter explaining the purpose of the study and assurance of

the privacy of their information shared with us. Finally, 417 out of 726 distributed e-questionnaires were received through Google document receiver with a response rate of 57.43%, which is acceptable for analysis (Nulty, 2008 ; Sheehan, 2001). All 417 responses were screened and 16 were found to be non-usable and were excluded (Sekaran & Bougie, 2016). Finally, 401 usable filled up e-questionnaires were used for further analysis of the data fulfilling the minimum requirement of sample size between 100-500 observations (Hair, Black, Babin, Anderson, & Tatham, 2010 ; Kline, 2005). The research instrument was divided into two sections, first included nine questions about management graduates' socio-demographic profile and the second included 21 questions referring to the management graduates' perceived service quality (PSQ) items. Each Likert-type scale item comprised of seven opinions ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), as the 7-point likert scale is optimum and effective in studies focusing upon social science and marketing domain (Schall, 2003 ; Vaus, 2002). The questionnaire was pretested to ensure that the wordings, sequencing, and length of questions and range of scale were proper. Please refer to Appendix I for the survey items, as it can serve as a data dictionary that links the survey questions and the factor labels.

## Data Analysis and Results

The present study utilizes the Bartlett's test and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy with the intention to test and confirm the suitability of the sample data for exploratory factor analysis (EFA). The results of both the tests are satisfactory with the KMO score of 0.892 and score of Bartlett's test of Sphericity as  $\chi^2=4674.444$ ,  $df=210$ ,  $p < 001$ . The results of the KMO score in the present study are above 0.80, and hence, it is supported that the variables are considerably interrelated and they share common factors (Kaiser, 1974). In addition to this, the Bartlett's test of sphericity confirms that the data can be used for principal component analysis or in other words, for structure detection (Field, 2009). The results of the two tests also fulfil the requirements of the factor analysis feasibility and hence, it shows that the data are suitable in all respects for factor analysis (Hair et al., 2010).

Cronbach alpha ( $\alpha$ ) was computed for reliability test of the items and overall  $\alpha$  is found to be 0.900, indicating good consistency among items (Nunnally & Bernstein, 1994). Principal component analysis (PCA) was used for selecting varimax rotation and Kaiser normalization to get 21 elements culminated into four factors, which represent 65.773% of the explained variance (see Table 1). All the four factors show more than 0.5 loading values of all the items and ,therefore, all the four factors are retained. The factors also show high internal consistency as these show acceptable score of Cronbach's alpha ( $\alpha$ ), which is used to test the factor reliability. The alpha coefficient ranges from 0.780 to 0.913, which is higher than the recommended threshold of 0.7 (Nunnally & Bernstein, 1994).

The individual Cronbach's alpha of the factors - Academic Aspects (*AA*) is 0.913, Infrastructure (*IN*) is 0.897, Placement (*PL*) is 0.824, and of Industry Collaborations (*IC*) is 0.780. Eigen values of all the factors are greater than or equal to 1.0, which facilitates in deciding the factors for analysis as recommended by Gorsuch (1990). The communalities of the attributes presented in Table 1 are in the range of 0.427 to 0.784, indicating that all the items have an adequate amount of shared variance with other items (MacCallum, Widaman, Zhang, & Hong, 1999).

The four factors identified are as follows: Factor 1 - Academic Aspects (*AA*), Factor 2 - Infrastructure (*IN*), Factor 3 - Placements (*PL*), and Factor 4 - Industry Collaboration (*IC*). Factor 1 consists of six elements and explains 34.274% of the variance in the data with an Eigen value of 7.198. This factor represents items that are associated with academic characteristics of management education in a university.

The Factor 2 also represents six items that describe the nature of infrastructure and physical facilities at the university and this accounts for 12.960% of the variance in the data with an Eigen value of 2.722. The Factor 3 explains 9.448 % of the variance with an Eigen value of 1.984 and addresses placements related queries of the programme. The Factor 4 is the last with relation to the industry collaborations of the universities with variance of

**Table 1. Rotated Component Matrix**

	Component				Communality
	1	2	3	4	
AA03	.863				.784
AA04	.824				.771
AA05	.817				.747
AA01	.804				.664
AA06	.801				.696
AA02	.726				.596
IN04		.844			.763
IN05		.838			.774
IN03		.836			.746
IN01		.807			.729
IN02		.709			.552
IN06		.600			.427
PL02			.809		.668
PL01			.795		.640
PL03			.770		.630
PL04			.698		.603
PL05			.602		.547
IC02				.821	.687
IC03				.804	.700
IC01				.722	.569
IC04				.658	.519

Note : \*Rotation converged in five iterations. The extraction method is principal component analysis and the rotation method is varimax with Kaiser normalization.

9.090 % in the data with an Eigen value of 1.909. The Table 1 shows rotated component matrix for the data used in determining the constructs of management graduates' perceived service quality. Generally, factor loading represents how much a factor explains a particular variable. High loading indicates that the factor strongly influences the variables. A thumb rule of factor loading score  $>0.7$  has a high impact on the variables (Hair et al., 2010). The Table 2 shows all factor loading scores, where it can be seen that one variable from each of the Infrastructure, Industry Collaboration factors and two from Placements factor is  $< 0.7$ , which needs immediate attention for improvements.

The term "RIDIT" originally stands for 'relative to an identified distribution' initially proposed by Bross (1958) and it is a probability transformation based on some empirical distribution that is taken as a reference population or group. RIDIT analysis distribution is a free technique because it does not make any assumptions about normality or any other form for the distribution under study (Fleiss, Levin, & Paik 2013 ; Uwawunkonye & Anaene, 2013). RIDIT is basically a weight allotted to a response group which reflects the probability of that group appearing in the reference distributions. This is predominantly helpful in statistical analysis for items involving ratings on a 3-point scale or more and the indices which are made up of several items and ratings based on universal ratings (Beder & Heim, 1990). A RIDIT value has a range that comes within reach of 0.00 to 1.00. RIDIT analysis uses computing an average RIDIT value for a class rather than the proportion of respondents, giving each of the responses in the dependent variable.



**Table 2. RIDIT Values for the Reference Dataset**

Variable	1	2	3	4	5	6	7	$\pi_{ix}$
PL01	7	0	9	13	0	187	185	401
PL02	15	0	16	43	0	198	129	401
PL03	5	0	15	36	0	198	147	401
PL04	14	0	24	60	0	163	140	401
PL05	7	0	32	54	0	168	140	401
IN01	10	0	41	39	0	133	178	401
IN02	5	0	37	40	0	218	101	401
IN03	9	0	42	52	0	200	98	401
IN04	8	0	59	46	0	178	110	401
IN05	13	0	51	34	0	132	171	401
IN06	13	0	29	43	0	154	162	401
AA01	72	0	73	53	0	121	82	401
AA02	29	0	67	27	0	154	124	401
AA03	69	0	77	52	0	119	84	401
AA04	36	0	73	51	0	160	81	401
AA05	35	0	64	57	0	157	88	401
AA06	44	0	44	29	0	157	127	401
IC01	12	0	61	49	0	202	77	401
IC02	6	0	39	55	0	214	87	401
IC03	9	0	40	59	0	211	82	401
IC04	6	0	31	51	0	222	91	401
$F_j$	<b>424</b>	<b>0</b>	<b>924</b>	<b>943</b>	<b>0</b>	<b>3646</b>	<b>2484</b>	
$1/2 F_j$	<b>212</b>	<b>0</b>	<b>462</b>	<b>471.5</b>	<b>0</b>	<b>1823</b>	<b>1242</b>	<b>8421</b>
$F_j$	<b>212</b>	<b>424</b>	<b>886</b>	<b>1819.5</b>	<b>2291</b>	<b>4114</b>	<b>7179</b>	
$R_j$	<b>0.0252</b>	<b>0.0504</b>	<b>0.1052</b>	<b>0.2161</b>	<b>0.2721</b>	<b>0.4885</b>	<b>0.8525</b>	

The survey data of management graduates' perceived service quality in public universities of North Eastern region of India is selected as the reference data set for the RIDIT calculation and analysis. The frequencies of the responses thereof are shown in the Table 2. Last row of the reference data set in the table shows the RIDITs of the reference data set for each item category. Further, Table 3 shows the weights that are summed to derive RIDIT values and the priority rankings associated with those RIDIT scores. For example, considering the first row in Table 3 that deals with variable *PL01*, the value of 0.0004 is derived from the Table 2 by multiplying the frequency of 7 (from the row marked *PL01* in Table 2) by the reference group RIDIT values of 0.0252 (found in the bottom row of Table 2) and then dividing by the *n* of 401 (from the last column of Table 2).

The weights from the seven columns are then summed to get RIDIT scores. Mathematically, the average RIDIT value will be 0.5. Those items with relatively more responses of 7 and 6 will tend to have a RIDIT value of more than 0.5. Those items with relatively more responses of 2 and 1 will have a RIDIT value of less than 0.5. Consequently, the higher the RIDIT value, the higher will be the priority the sample places on the item (Kumar & Bhattacharyya, 2017). We assign priority rankings to the items with the highest priority going to the highest RIDIT value. The Kruskal-Wallis *W* is calculated to be 421.7604. Because the *W* (421.7604) is significantly greater than  $\chi^2 (21 - 1) = 31.4104$ , it can be surmised that the view about the scale items among the respondents are

**Table 3. Computation of the RIDIT Values for the Comparison Datasets and Prioritization**

Variables	1	2	3	4	5	6	7	$\rho_i$	Lower	Upper	Priority
									Bound	Bound	Ranking
PL01	0.0004	0.0000	0.0024	0.0070	0.0000	0.2278	0.3933	0.6309	0.5634	0.6985	<b>1</b>
PL02	0.0009	0.0000	0.0042	0.0232	0.0000	0.2412	0.2743	0.5438	0.4909	0.5967	<b>6</b>
PL03	0.0003	0.0000	0.0039	0.0194	0.0000	0.2412	0.3125	0.5774	0.5198	0.6349	<b>2</b>
PL04	0.0009	0.0000	0.0063	0.0323	0.0000	0.1986	0.2976	0.5357	0.4839	0.5876	<b>8</b>
PL05	0.0004	0.0000	0.0084	0.0291	0.0000	0.2047	0.2976	0.5402	0.4880	0.5925	<b>7</b>
IN01	0.0006	0.0000	0.0108	0.0210	0.0000	0.1620	0.3784	0.5729	0.5116	0.6341	<b>3</b>
IN02	0.0003	0.0000	0.0097	0.0216	0.0000	0.2656	0.2147	0.5119	0.4626	0.5612	<b>9</b>
IN03	0.0006	0.0000	0.0110	0.0280	0.0000	0.2437	0.2083	0.4916	0.4457	0.5375	<b>11</b>
IN04	0.0005	0.0000	0.0155	0.0248	0.0000	0.2169	0.2339	0.4915	0.4459	0.5370	<b>12</b>
IN05	0.0008	0.0000	0.0134	0.0183	0.0000	0.1608	0.3635	0.5569	0.4979	0.6159	<b>5</b>
IN06	0.0008	0.0000	0.0076	0.0232	0.0000	0.1876	0.3444	0.5636	0.5060	0.6213	<b>4</b>
AA01	0.0045	0.0000	0.0192	0.0286	0.0000	0.1474	0.1743	0.3740	0.3421	0.4059	<b>21</b>
AA02	0.0018	0.0000	0.0176	0.0146	0.0000	0.1876	0.2636	0.4852	0.4385	0.5319	<b>15</b>
AA03	0.0043	0.0000	0.0202	0.0280	0.0000	0.1450	0.1786	0.3761	0.3440	0.4083	<b>20</b>
AA04	0.0023	0.0000	0.0192	0.0275	0.0000	0.1949	0.1722	0.4160	0.3794	0.4527	<b>19</b>
AA05	0.0022	0.0000	0.0168	0.0307	0.0000	0.1913	0.1871	0.4281	0.3904	0.4658	<b>18</b>
AA06	0.0028	0.0000	0.0115	0.0156	0.0000	0.1913	0.2700	0.4912	0.4433	0.5392	<b>13</b>
IC01	0.0008	0.0000	0.0160	0.0264	0.0000	0.2461	0.1637	0.4530	0.4105	0.4954	<b>17</b>
IC02	0.0004	0.0000	0.0102	0.0296	0.0000	0.2607	0.1850	0.4859	0.4399	0.5319	<b>14</b>
IC03	0.0006	0.0000	0.0105	0.0318	0.0000	0.2571	0.1743	0.4742	0.4296	0.5189	<b>16</b>
IC04	0.0004	0.0000	0.0081	0.0275	0.0000	0.2705	0.1935	0.4999	0.4519	0.5480	<b>10</b>

statistically dissimilar one way or another. This assessment is a rank-based nonparametric assessment that has a fair chance to be implemented in order to establish the existence of statistically significant differences between two or more groups of an independent variable. It does not call for the data to be normal, but instead uses the rank of the data values for the analysis.

From the RIDIT ranking analysis (Table 3), it is found that out of all the perceived service quality dimensions, Placements item (*PL01*) - 'the university has genuinely helped the students in placements,' is the highest priority item followed by (*PL03*) - 'the university placement cell facilitated personality development and employability enhancement programmes.' The third priority preference item emerged to be from the Infrastructure dimensions, that is, (*IN01*) – 'the university provided hostels with modern and appealing facilities like Internet connectivity, gymnasium etc.' The results of RIDIT priority index show that Placements are the most important and significant dimension in the case of management education in public universities of the North Eastern region of India as far as perception of service quality is concerned.

Further, the lowest priority ranking among the items is found to be (*AA01*) - 'the teaching and learning methodologies were up-to-date as promised by the university' from the Academic aspects dimension. The results clearly show that the lowest four items (*AA01*, *AA03*, *AA04*, and *AA05*) belong to the Academic aspects dimension. This means that the university academic services are inadequate and need to be considered for improvements. The study shows that the students are more focused on their return on investments, which are their placements rather than the academic aspects. This becomes a challenging task for the universities and in particular, the public

universities, to balance the programme of study between academic excellence resulting in good placements of the graduates.

## **Discussion and Conclusion**

The present study fundamentally revolves around the issues of service quality in management education with special reference to perceived service quality of management graduates from public universities of the North Eastern region of India. Assessing and managing service quality must be based on the graduates' perceptions because they are directly involved in identifying, evaluating, and availing the educational services.

In the Indian management education sector, there exist various factors that influence the graduates' perceived service quality. Therefore, it is imperative to identify and classify those factors in order to highlight the most important factors requiring instant attention. The empirical results of the present study present an evidence that management graduates' perceived service quality can reliably be measured with 21 items loaded on four quality dimensions as Academic Aspects (*AA*), Infrastructure (*IN*), Placements (*PL*), and Industry Collaboration (*IC*). In addition to this, the study also confirms the multidimensional nature of service quality in higher education, particularly in management education, which is consistent with the findings of previous studies (Choudhury, 2015; Mahajan et al., 2014; Sohail & Shaikh, 2004; Sahney, 2011a; Sahney, 2011b; Yusof et al., 2012).

The study contributes in proposing an appropriate method, the RIDIT methodology, to assess and prioritize the dimensions to manage superior performance in the management education setting in the public universities of NER. Prioritization helps in better decision making by university managers in identifying the best service quality practices that can be adopted to improve the overall performance of a university. Hence, an independent RIDIT analysis was done on the service quality dimensions. It is very interesting to note that the items with the two highest values (implying that individuals place the most importance on these items) are the two items (*PL01* and *PL03*) in the factor related to placements. On the same note, the items - *AA01* and *AA03* fall in the least important zone of graduates' radar, and are a part of the factor related to academic aspects. There is also an approximate similarity between other rankings of items and their cohesiveness and belongingness toward one factor. This necessarily means that the groupings of the variables being done by factor analysis under each construct in a way justifies their rankings being done by RIDIT analysis.

## **Managerial Implications**

There are some managerial implications for the university managers/decision makers that can be drawn from the present study. First, the study suggests a roadmap to determine which service quality dimension guides toward higher or lower level of graduates' overall satisfaction. They should also concentrate on the items constituting the dimensions for better service quality improvement plans. Second, the study puts forward a direction for the university managers/decision makers to formulate an effective strategy to gain competitive advantage over others. The third implication of the study is the suggestion to have regular surveys and students/graduates interactions in order to monitor the implications of service quality program and/or track their expectations of the educational services over time.

## **Limitations of the Study and Scope for Further Research**

Even though the present study makes significant contributions to the literature of management graduates' perceived service quality, it has a few limitations. First, the data for this study were collected from management graduates of 14 North Eastern public universities of India. Therefore, the results and findings cannot be generalized for pan - India. In the future, the researchers should attempt to extend the geographical area including more



locations in India, and increasing the size of samples to get more insights towards generalizing the findings of the present study. Second, the study proposes four primary dimensions of service quality as perceived by management graduates, which may not be pertinent and generic for other programmes of the higher educational sector as well as other service industry verticals.

Future studies may consider adding or modifying the primary dimensions of perceived service quality to measure the educational service quality. Also, the future researchers should consider adding or modifying the items constituting the dimensions to get more comprehensive conclusions as the items used in the present study are specific to management graduates of public universities of NER. The future studies should consider different prioritizing techniques to rank the items and the dimensions of the perceived service quality in the higher education sector. Future research can consider replicating the present study in different cultural and demographic contexts, which will serve the purpose necessary for generalizing the findings of this study.

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### Appendix I . Extracted Service Quality Dimensions

Item	Variable
AA01	The teaching and learning methodologies were up-to-date as promised by the University.
AA02	The Examination papers were evaluated and graded fairly and in time.
AA03	The University facilitated the case study and research based classroom teaching for the students.
AA04	The University faculty were well qualified and knowledgeable.
AA05	The faculty encouraged the students to be participative for a two-way communication in the classroom.
AA06	The University course curriculum provided were practical and application-oriented.
IN01	The University provided hostels with modern and appealing facilities like Internet connectivity, gymnasium etc.
IN02	The University had modern and updated library facilities.
IN03	The University had visually appealing infrastructure like buildings, roads etc.
IN04	The University canteens were hygienic and provided a wide range of servings of food and beverages.
IN05	The University provided excellent recreational facilities for the students.
IN06	The University provided excellent sports facilities and adequate medical facilities to the students.
PL01	The University genuinely helped the students in placements.
PL02	The University placement cell infused employment confidence among the students.
PL03	The University placement cell facilitated personality development and employability enhancement programmes for the students.
PL04	The University had a dedicated placement cell with good database of recruiters.
PL05	The University had a good campus placement record.
IC01	The University had good industry collaborations.
IC02	The University provided opportunities for industrial/corporate exposures to the students.
IC03	The University facilitated industrial visits for the students on regular intervals.
IC04	The University facilitated guest lectures/sessions with the industry experts.

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