

## In search of quality: measuring Higher Education Service Quality (HiEduQual)

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The aim of the study is to develop and validate the construct HiEduQual (Higher Education Service Quality) to measure the level of service quality in higher education (HE) institutions. Scale development was undertaken through focus group discussions with four different stakeholders of HE that included students, parents, teachers, and employers. The scale was validated through data collection from seven different HE institutions. Based upon exploratory and confirmatory factor analysis the study found six determinants of service quality in HE. They were named as teacher quality, administrative services, knowledge services, activities, continuous improvement, and leadership quality. The final scale consisted of 37 items. The study covers three significant limitations that emerged from existing studies. Firstly, existing studies focused only on the students for generation of questionnaire items. The study takes into consideration other stakeholders to develop a measure for HE service quality provided to students. Secondly, existing studies neglect the fact that how level of service in education has changed over time, and thirdly, the current study found leadership as a significant dimension of quality in HE. Limitations and future research directions are discussed.

**Keywords:** service quality; higher education; scale development; higher education institutions

### Introduction

The education sector has been growing exponentially, and globally it has acquired the status of a full-fledged service industry. Currently, higher education (HE) institutions are increasingly recognised to be a part of the service industry (Galeeva, 2016). The USA, the UK, Australia, Canada, and other developed countries with renowned education structures invite and attract applications from students from all over the world, to acquire quality education in their HE institutions. This rapid expansion of HE in the world has highlighted the issue of quality (Üstünlüoğlu, 2017). Complimented by the dynamic national, regional and global advances that have constrained HE to change rapidly (Jain, Sinha, & Sahney, 2011; de Jager & Gbadamosi, 2013), the growing competition to increase enrolment figures has enforced the need to adopt a 'student as a customer' approach in the delivery of education (Simpson & Siguaw, 2000; Mahapatra & Khan, 2007a; Yildiz & Kara, 2015). This approach is driven by the fact that historically the main focus of the HE institutions was geared towards their internal academic needs rather than focus on the students themselves who are arguably the primary stakeholders. The former approach had served the universities well due to the higher level of demand for the education when at that time the available supply

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was comparably lower (Sharabi, 2013). However, in recent times the education sector has established itself into a fast-growing and competitive industry to cater for the increasing demand of HE.

Globally, new academic colleges and universities (virtual and real) have been established (Sharabi, 2013). The change and imbalance in demand and supply are forcing universities to move out of their comfort zone and seriously ponder upon how they can improve the various aspects of service quality perceived as valuable by different stakeholders. Hence, service quality within HE has received significant attention from managers and academics due to its prominence in business performance, cost reduction, and student satisfaction (Noaman, Ragab, Fayoumi, Khedra, & Madbouly, 2013; Ali & Mohamed, 2014; Noaman, Ragab, Madbouly, Khedra, & Fayoumi, 2017).

The HE sector is confronted with novel challenges which it has not experienced before. The challenges stem from the increasing global competition, advancement in technology and increasing number of universities that offer prospective students a wider variety of choices. This is important since, in a market driven by competition, contentment with services will make the difference (Zeithaml, Berry, & Parasuraman, 1996; Kerlin, 2000; Zeithaml, 2000). It is important to note that a student's approval of the institution may impact the student's desire to accept or not accept offers. Furthermore, increasing competition on HE imposed by economic forces has resulted in the development of global education markets and reduction of government funds has forced institutions to seek other financial sources (Abdullah, 2006).

Job markets have become highly competitive, with employers having the opportunity to choose from a wider pool of potential applicants. The prospective students thoroughly evaluate universities before seeking admission. The students' decision to take admission in a university is strongly influenced by the university's ability to differentiate its graduates from competitors. These challenges call on the university administration to make sure that optimum service is delivered to ensure growth and development alongside a supreme student experience. This would require institutions to measure service quality as this value-based driver could provide opportunities for the industry to re-conceptualise what is really meant by quality in HE. It would be critical to address the issue of enhancing student satisfaction to be competitive in the HE sector (Chanaka Ushantha & Samantha Kumara, 2016). In efforts to increase student satisfaction and behaviour loyalty intentions, school administrators or managers should implement surveys and various service quality evaluation tools to monitor service quality throughout the organisation (Ham & Hayduk, 2003).

Crucially, to manage and improve the quality of services provided, universities need to regularly measure service quality (Abdullah, 2006; Chong & Ahmed, 2012). For this to work an important factor would be to implement a measurement system (Sunder & Sunder, 2016). Strong quantitative measures can provide universities with factual information on all manners of service issues that would enable clear strategy for management. These measures could arguably help the universities in prioritising service quality dimensions that affect students' satisfaction. However, it remains a major challenge to develop an adequate model for measuring service quality in HE (Chong & Ahmed, 2012). A number of different studies have utilised SERVQUAL developed by Parasuraman, Zeithaml, and Berry (1985) to measure effectiveness of service quality in HE. Most relevant studies that have utilised SERVQUAL to measure HE service quality include the following: Cuthbert (1996), Soutar and McNeil (1996), Pariseau and McDaniel (1997), Arambewela and Hall (2009), Wong, Tunku, and Rahman (2012), and Kashif,

Ramayah, and Sarifuddin (2016). However, despite the popularity of the SERVQUAL instrument, it has received its share of criticisms.

Although, SERVQUAL claims to concentrate on areas of service quality important to customers, there have been issues pertinent to its dimensionality, validation and applicability (Cronin & Taylor, 1992; Cook, 1997; Clewes, 2003; Trivellas & Dargenidou, 2009; Galeeva, 2016). Ladhari (2009) argues that the SERVQUAL scale is not comprehensive and that there is a need to add further dimensions to the model in order to measure service quality in a more robust manner. Furthermore, De Oliveira and Ferreira (2009) argued that HE institutions are also in search of enhancements in teaching service quality to satisfy the expectations of students and market. However, education services have very particular characteristics that SERVQUAL scale would not fulfil. To this end, Clewes (2003) noted that the studies where SERVQUAL is applied the questionnaire needs to be amended, and currently no consensus exists about the dimensions of service quality or the importance of each dimension in the HE context.

The service experience of students is complex and differs from the experience of consumers in any other service firms. Thus, it is acknowledged that the industry-specific service measures are to be utilised to gauge the level of services quality in each industry (Chanaka Ushantha & Samantha Kumara, 2016). There is still no consensus over the critical success factors of quality management, in particular in HE in developing countries (Asif, Awan, Khan, & Ahmad, 2013). Studies have attempted to develop scales for measurement of service quality in HE (LeBlanc & Nguyen, 1997; Ford, Joseph, & Joseph, 1999; Hill, Lomas, & MacGregor, 2003; Lagrosen, Seyyed-Hashemi, & Leitner, 2004; Abdullah, 2006; Senthilkumar & Arulraj, 2011; Asif et al., 2013; Teeroovengadam, Kamalanabhan, & Seebaluck, 2016). Limitations emerge from the above-mentioned studies.

Either the studies have only generated items from one of the stakeholders, the students, to identify determinants of HE service quality (Abdullah, 2006; Senthilkumar & Arulraj, 2011; Teeroovengadam et al., 2016), from university staff to identify factors of quality management in HE pertinent to the staff (Asif et al., 2013) or employment markets to identify determinants of institutional quality of HE institutions (Rodman, Biloslavo, & Bratož, 2013). Another limitation is that the studies are context specific, focusing on business education (LeBlanc and Nguyen, 1997) or technical HE (Mahapatra & Khan, 2007a; Jain, Sahney, & Sinha, 2013).

Teeroovengadam et al. (2016) suggested that future research may take into account the perspectives of other stakeholders of HE. Rodman et al. (2013) assessing institutional quality also argued for inclusion of other stakeholder groups to enhance the validity of the model of institutional quality of an HE establishment. It is certain that in the case of HE the student is the primary customer (Brochado, 2009). However, there are other stakeholders that hold prime importance. They include parents, teachers (de Jager & Gbadamosi, 2013) and potential employers (Nicolescu, 2009; Senthilkumar & Arulraj, 2011).

Parents invest their earnings in educating their children and hence carry an expectation regarding the level of service quality delivered so they can reap the rewards of their investment (Senthilkumar & Arulraj, 2011). Furthermore, teachers are the primary source of service delivery. They are intrinsic to planning some of the service design (Quinn, Lemay, Larsen, & Johnson, 2009). Teachers can provide valuable knowledge as to what could make the service experience in education valuable. Employers provide jobs to the graduates and heavily rely on their services to gain competitive advantages and enhanced organisational performance. Hence, employers demand that competencies achieved by graduates match the business's competency needs (Martensen & Grønholdt, 2009). In

the present study different stakeholders would be consulted to provide their viewpoint on what services they expect to be provided to the primary customer in HE. The approach adopted is similar to the one utilised by Turker (2009) who also held focus group discussions with different stakeholders to develop an instrument for measuring corporate social responsibility, while responses on the questionnaire were gathered only from employees who are in a better position to answer whether their organisation is socially responsible or not.

In view of bridging the highlighted gaps, this study sought to develop a comprehensive model to measure service quality provided to students in HE. The study aims to develop, refine and validate a scale for measuring service quality in HE institutions.

## Literature review

### *HE Service Quality*

Dynamic regional, national and global developments have forced HE to transform rapidly and these modifications have received increasing attention during the past two decades (de Jager & Gbadamosi, 2013). This is also evident by the fact that the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) began with eight members in 1991. Its total membership exceeded 250 Full and Associate members in 2016 (INQAAHE, 2016). The globalisation in education has made it imperative for the HE institutions to enhance their level of service quality (Kristoffersen & Woodhouse, 2005). Hence, there is an impetus on the institutions of HE to engage in more competitive educational practices that are based on quality assessment. This is also necessitated by the fact that the competitiveness of unique products and services is ultimately based on branding that could help attract a larger market share for increased profitability (Yeo, 2008). Consequently, the HE sector would need to brand itself in a manner that would attract customers and help attain profitability. Service quality in the education sector differs from that in the manufacturing sector where tangible products are involved. Furthermore, it also differs from services where a one-time interaction may decide the value of the service received. Since in the education sector there is no real product involved, the only competitive differentiator would be through creation and provision of unique service experiences (Khodayari & Khodayari, 2011). Continuous improvement for HE institutions can only be implemented by triggering the deficiencies through appropriate measurement of service quality (Zakariah, Zakariah, & Pyeman, 2016).

Service quality in education is a continuous process (Nikel & Lowe, 2010) that evolves over time with opportunity in the hands of the universities for continuous improvement in service for the same customers (students), thus providing ample time to the service providers to improve their level of service provision. HE institutions have an opportunity to learn from their mistakes and exceed student expectations (Henderson-Smart, Winning, Gerzina, King, & Hyde, 2006).

Service quality in education is perceived as the competitive segregation among HE institutions in terms of their dominance in creating unique learning experiences (Yeo, 2008). These experiences can result from a variety of means namely: classroom teaching, extra-curricular activities, supervision, administrative support, or leadership. Universities in order to create unique experiences have started to adapt quality management concepts and methodologies. Unique experience can be attained through a customer-oriented approach to quality. This customer-centric-oriented approach is critical to the quality of services since service quality in general is subjective in nature while quality of products on the other hand can be measured objectively. Thus,

a fitting manner in which one can measure service quality is by assessing the perception of consumers. Management can design and deliver service to further enhance customer satisfaction through an understanding of how consumers form impressions of quality (Seymour, 1992). Furthermore, in the educational sector, management can enhance customer (student) satisfaction by adapting the institute environment to the customers' needs (Jain et al., 2011). Universities need to think like corporations which continuously innovate, diversify, and re-engineer their structure to provide optimum services to their customers. Similar to the corporations, if HE institutions need to stand out in the minds of the customers, they should be concerned not only with investment returns and increasing student count but also with comprehending customer satisfaction and service perceptions. Service evaluation should be a continuous process rather than a procedural activity at the end of the term; if universities seek maximum benefit they should make service evaluation a continuous process with designated department responsible for service evaluation.

### *Measurement of service quality*

Service is an elusive concept; this makes its measurement much more difficult. This is because the word 'service' has a substantial richness and diversity of meaning (Abdullah, 2006). Service cannot be evaluated through the perspective of the *providers*; the most apt choice to test the value of service provided is through the receiver of service. Existing research has identified a number of different tools that have been utilised for the measurement of service quality. The most widely utilised instrument for measuring service quality in education has been SERVQUAL by Parasuraman et al. (1985). However, on the other hand, use of SERVQUAL in the education sector may not be the best choice since education is a unique service and has different characteristics as compared to other services. Service in education is enhanced by a number of tangible feature, plus it is a continuous process where a student receives the service for a minimum of a few months at least three to four years and thus it perishes after a significant amount of time. Abdullah (2006) stressed that the use of SERVQUAL has been successfully utilised in measuring effectiveness of service quality in different marketing sectors. That said, its effectiveness in measuring service quality in education is questionable.

Human behaviour guides the provision of service quality; the dimensions of service quality may differ in different service settings. For instance, the healthcare services may have a significant level of 'empathy' and 'responsiveness', whereas transportation services may require a higher level of 'reliability'. Intangibility and lack of a substantial physical evidence of service makes the perception of service quality in HE a complex phenomenon and poses issues regarding analysis (Mahapatra & Khan, 2007b). Arguably, SERVQUAL determinants and their items should be adapted to suit a particular application (Saleh & Ryan, 1991). All these weaknesses and stringent requirements for utilising SERVQUAL highlight the need for developing a construct to measure service quality in HE.

HE service quality measurement is also necessitated by the advancement in globalisation. Students share their experiences over the internet and through surveys which are made available to prospective students. These new paradigms to information sharing require HE institutions to focus on service delivery. It is imperative for the HE institution to account for the quality of overall service experience that is being provided to the students (the ultimate customers). Thus, in this decade, one of the key issues that emerged in the academia is the identification of the determinants that point to service quality (Jain et al., 2013).

There have been studies that attempted to develop constructs to measure service quality in HE. One of the earlier attempts to measure service quality in HE came from Owlia and Aspinwall (1996). They identified six dimensions to service quality in HE, namely: competence, reliability, tangibles, delivery, attitude, and content. A significant contribution of the study was the generation of dimensions that could help measure service quality in HE. This notion was proposed after examination of different conceptual models proposed for varied environments for consistency with HE. Quality factors found in the relevant literature were reviewed and a new framework was presented for the dimensions of quality in HE. LeBlanc and Nguyen (1997) identified seven different dimensions, namely: contact personnel/faculty, reputation, access to facilities, physical evidence, curriculum, contact personnel/administration, and responsiveness.

One important limitation of their study is that only business school students were consulted for generating items. This may limit the generalisability of the instrument for evaluation of service quality from students of different disciplines. Ford et al. (1999), focusing on service quality perception, developed an instrument specifically from a business education setting with sample limited to business students in New Zealand and the mid-Atlantic region of the USA. A separate list of factors was drawn for each sample. Six factors were identified in the US data namely: programme issues, physical aspects, academic reputation, cost/time issues, choice influences, and other. Seven factors were identified from the New Zealand data namely: career opportunities, cost/time, physical aspects, programme issues, location, academic reputation, and other. Johnson and Golomskiis (1999) also based their identification of the quality concepts in education namely: understanding stakeholders, leadership, factual approach to decision making, process approach, involvement of people, and continual improvement on quality management principles identified through existing literature. Abdullah (2006) developed a 41-item scale to measure HE performance. The study generated items based on interviews from students. A total of six dimensions were identified, namely: academic, non-academic, access, reputation, understanding, and programme issues. Mahapatra and Khan (2007a) identified five different dimensions in technical HE service quality namely: responsiveness, learning outcomes, personality development, physical facilities, and academics. Senthilkumar and Arulraj (2011) developed a new model, namely service quality measurement in HE in India for the measurement of service quality in HE institutions. Data were collected from final year students and identified best faculty, excellent physical resources, and range of disciplines as dimensions of service quality. Jain et al. (2013) in their study for developing a scale to measure students' perception of service quality in the Indian context observed that service quality in the HE setting comprises seven dimensions namely, curriculum, input quality, industry interaction, academic facilities, support facilities, interaction quality, and non-academic processes. The study only focused on the students of HE with attention particularly to technical education in India. Teeroovengadum et al. (2016), in their study to develop a valid and reliable measuring instrument for assessing service quality in HE, collected data from students in a developing country and identified administrative quality, physical environment quality, core educational quality, support facilities quality, and transformative quality as key dimensions. Rodman et al. (2013) identified outcomes, financial and non-financial resources and inputs, value chain, and sustainable development as key dimensions to HE institutions' quality from the employer perspective. Asif et al. (2013), in their study focused on employees to identify dimensions of quality in HE institutions, identified five determinants, namely vision, leadership, measurement and evaluation, process control and evaluation, programme design and resources, and other stakeholders.



Furthermore, existing studies also neglect measuring how the level of service in education has improved over the time during which the student is studying at the institution. Continuous improvement is emphasised by Grönroos (1994, p. 6) as

Understanding the utility customers receive by consuming or using the offerings of the organization and how services alone or together with physical goods or other kinds of tangibles contribute to this utility, that is, to understand how total quality is perceived in customer relationships, and how it changes over time.

The need for continuous improvement in services is also highlighted by Henry Ford, a renowned American industrialist, who argued that in order to maintain quality there is a need for a consistent and conscientious effort; hence the need for a continuous pursuit of excellence (Yeo, 2008). Learning educational institutions are those where people, procedures and systems are dedicated to continuous training and improvement (Soria-García & Martínez-Lorente, 2014). Continuous improvement is crucial to the sustainability of service quality (Yeo, 2008; Sunder & Sunder, 2016). Continuous improvement is not only necessary for service quality; an institution's accreditation with various education standards could also be contingent upon the implementation of continuous improvement processes (Hess & Siciliano, 2007). The present study explores whether the service quality in respondents' institutions has improved during the time they were studying. Although there has been extensive research in the domain of service quality in HE, academics visualise certain gaps which must be recognised in the pursuit of study. The limitation highlighted in each of the aforementioned studies require further insight into the measurement of service quality in HE institutions. With reference to all the aforementioned limitations of the existing research, the current study seeks to bridge the existing gaps in the area of service quality in HE.

### Research methodology

The current study aimed at developing the measure of HE service quality from the perspective of different stakeholders involved in the following procedure.

- (1) Identification of domain for the construct
- (2) Item generation through literature and focus group *discussion*
- (3) Categorisation of items into determinants
- (4) Initial data collection and purification
  - (a) Expert validation
  - (b) Pilot testing
  - (c) Scale modification, refinement, and finalisation
- (5) Data collection on the statements proposed to evaluate service quality.
- (6) Exploratory factor analysis (EFA) conducted to identify the factor structure of the instrument.
- (7) Confirmatory factor analysis (CFA) performed to ascertain the model fit.
- (8) Construct validity established through convergent and discriminant validity.
- (9) Reliability assessment performed to assess internal consistency of the service quality determinants.

### Item generation

Once the domain HE Service Quality (HiEduQual) was finalised, the next step involved the generation of sample items that could measure the construct. A number of different procedures are highlighted in the research for this purpose. The present study specifically

utilised literature review and focus group discussion for the generation of items. Furthermore, as the present study involved a diverse set of stakeholders who were consulted for development of a generalised service quality instrument, separate focus group discussions were held for each of the stakeholders. Students being the primary customers and the direct recipient of the services are fundamental in discovering the key dimensions to service quality. Students were divided into three different categories with separate focus group discussions held with Bachelors, Masters and PhD level students with 11, 14, and 5 members in each focus group, respectively.

Parents who are normally the funding source and heavily concerned about the success of their children have their own expectations and experiences with reference to the quality of service offered by the universities. Parents were consulted and asked to volunteer for focus group discussion. A total of 13 parents volunteered and in-depth focus group discussions were held on their thoughts of service quality in HE and what the key determinants of service quality were for them. Teachers included those academicians who were also studying for their PhD, but at the same time were teaching at a university. This made them more suitable in providing an insight as to what are important aspects of service quality in HE. A total of nine teachers were involved in the in-depth focus group discussions. In addition, employers who employ the graduates from universities were consulted with the expectation of getting an insight into whether the service provided to the students is beneficial in practice of job marketability. Employers were consulted to allocate time for focus group discussions. Employers that were interviewed included an HR executive for a bank and an insurance company, a regional manager from a telecom company, a Dean from a University and an IT entrepreneur; a total of five employers were involved in the study.

Each of the focus group discussions started off with clearly highlighting the objectives of the research and the need for the focus group discussions. There were separate guidelines used for conducting the focus group discussion with different groups. The guidelines used for each of the stakeholders are attached in Appendix 1. Notes were taken during each of the focus group discussions. Upon completion of the focus group discussions, notes were analysed to identify the keywords that emerge from each of the focus group discussion – the keywords were then categorised. Upon categorisation, senior academicians were consulted. A total of three senior academicians were part of this stage that included head of departments (2) and a Dean who each have research and HE sector experience. This step was performed to highlight if there were any errors in the categorisation, and should any keywords need changing. Once this stage was completed – based on the keywords, statements were formulated. Initially a total of 59 statements were drafted that were grouped into nine different categories (teacher quality, administrative services, knowledge services, activities, continuous improvement, leadership quality, helpfulness, and market orientation). The item list is attached in Appendix 2. Another set of discussions was held with the academicians to identify if any of the statements were repeated or whether there are common themes in the questions. Academicians also focused if any of the items required any changes in the wording. Finally, upon completion of this stage a total of 53 items were left that were apportioned into seven different categories. Two categories, helpfulness and market orientation, were removed at this stage. Helpfulness only had two items, those items were moved to administrative services. Two items from market orientation were moved to activities, whilst another two items were removed since they were significantly close in meaning to some other items. One item each was removed from continuous improvement and cost of quality. Two items were removed from leadership quality.

There were two parts of the survey instrument. Part A comprised respondents' demographic and academic backgrounds. In Part B of the questionnaire, the respondents were



asked to rate their level of agreement for each statement of the seven dimensions of HE service quality on a seven-point Likert scale (1 representing 'Strongly Disagree' to 7 representing 'Strongly Agree').

### ***Initial data collection and purification***

After the generation of initial set of items, data were collected for a pilot study. A total of 33 undergraduate and graduate-level students participated in the study. A draft questionnaire was proposed. The draft questionnaire included questions pertinent to demographic factors and different elements of service quality in education. Afterwards the survey was submitted to an English Expert and five academicians/administrators for their feedback. The expert commented on the omissions/errors and perceived ambiguities pertinent to the questionnaire. Consequently, modifications were made accordingly to the draft questionnaire. At end of this stage there were 46 statements left in the questionnaire grouped into 7 categories. Some statements were removed due to their closeness in meaning with some other statements and some of the questions were merged together.

### ***Research locale: the HE system in Pakistan***

HE in Pakistan comprises both public and private sector universities. All these universities operate under the regulations of the HE Commission (HEC) which was established in 2002. Initially in 1947 after Partition, Punjab University established in 1882 was the only HE institution which is now in Pakistan. Initially the government was the solitary provider of HE. However, the demand for HE far exceeded the state's ability. The government realised that HE would continue to need a large infusion of funds. This led to the permission from the government to allow the establishment of private HE institutions. Currently there are a total of 183 public/private sector HE institutions operating in Pakistan. Quality in both public and private sector universities is regularly monitored through visits and a number of accreditation bodies like National Accreditation Council for Teachers Education (NACTE), National Business Education Accreditation Council (NBEAC) and National Computing Education Accreditation Council (NCEAC) who regularly conduct visits and provide workshops to monitor the quality of education in universities.

### ***Data collection***

For the purpose of generating items for the proposed questionnaire, input was taken from a number of different stakeholders as highlighted in previous sections. However, it is the students who are in a better position to divulge if they are receiving the service quality as expected by different stakeholders. The approach for questionnaire development and validation has been utilised previously by Turker (2009) who engaged multiple stakeholders to generate items for measuring corporate social responsibility. However, for the purpose of validation, questionnaires were only filled by company employees, since they are better equipped to provide information on whether the organisation fulfils the responsibility initiative identified by the stakeholders. Respondents from seven different HE institutions in Pakistan were contacted to fill out the questionnaire. Data were collected through personal visits to the institutions. Deans, Directors, and Heads of Departments were briefed about the study and were asked to permit the distribution of questionnaires among the students of different departments. The students of various fields of study were targeted to overcome the limitations of existing research on Service Quality in HE, where much of

the research has targeted specific student groups. A total of 543 students from 7 different public and private HE institutions were surveyed, out of which 340 were found complete, yielding a response rate of 62.61%. The study included three public sector universities and four private sector universities. Out of 340 students, a total of 194 (57.05%) respondents were in the range of 20–29 years, 128 (37.64%) were between 30 and –39 years, and 18 (5.29%) were in the 40–49 years range. A total of 238 (70%) respondents were males while 102 (30%) were females. The limited number of female respondents in the study can be attributed to the deep-rooted gender gap (Malik & Courtney, 2011). This situation has been prevalent in research studies conducted in Pakistan. Manan and David (2014) had only 14% female students. Sardar, Amjad, and Ali (2016) in their study of HE had 29.5% female respondents.

## Data analysis and results

### *Exploratory factor analysis*

The dimensional structure of HE service quality instrument was identified through the EFA technique. There are a number of different assumptions that need to be satisfied before factor analysis is conducted. First, adequate sample is available for factor analysis. Field (2005) recommended a sample size of 300 or for provision of a stable factor solution. The sample size in the present is 340, which is acceptable for the use of factor analysis.

An alternative method to ascertain the sample adequacy is the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy (Pallant, 2011). The KMO statistic ranges from 0 to 1, and a value over .60 is deemed as acceptable and shows that the sample is fit for application of factor analysis technique (Pallant, 2011; Huck, 2012) as values below this would mean that the factor analysis will not be able to account for much of the variability in the data (Hinton, 2004). The results of KMO measure indicate an index of .94 which is a good sign of sampling adequacy.

The second test is Bartlett's test of sphericity. This examines whether the correlation matrix fits an identity matrix. A significant Bartlett test indicates that the correlation matrix is significantly different from an identity matrix. The results were significant,  $\chi^2$  (1035,  $n = 340$ ) = 13,247.219 ( $p < .001$ ), a clear indication of suitability for factor analysis.

Principal component analysis with varimax rotation is utilised for factor analysis in the present study. The decision to ascertain the number of factors is based on the eigenvalue rule. Only factors with an eigenvalue of 1 or more are retained (Pallant, 2011). Once a factor structure is revealed, the next step is to decide which variables make up which factor (Field, 2005). The minimum factor loading was set to .50 (Leech, Barrett, & Morgan, 2005).

The variable's commonality, which indicates the amount of variance in each variable, was also assessed to ensure acceptable levels of explanation. The results show that all commonalities were over .50 except for one which was .478. The factor solution derived initially yielded nine factors of HE service quality as opposed to seven factors categorised in the item generation stage. The factors accounted for 69.028% of the variation in the data.

The factor loadings obtained from the EFA were further considered to analyse the dimensions of service quality in education and to eliminate the items that performed poorly. Initial factor structure showed a single item under the Cost of Quality dimension related to 'recommending the institution to others' on factor seven. The item was removed from the analysis. Three items from Cost of Quality Dimension namely, 'I feel that I would

be competitive in the job market after my graduation', 'I believe that my institution has instilled appropriate job behaviors in me', and 'I believe that I have acquired the necessary skills from my institutions to fit the job market' did not load onto their respective factor and loaded onto the factor with nine items relevant to teacher quality. The items were removed from the analysis. Removal of these items led to a six-factor solution.

Another, three items from the continuous improvement dimension namely 'The number of students leaving/migrating in middle of the studies continues to drop', 'Number of programmes and departments have also increased during my stay at the institution', and 'University Ranking continues to Improve during my stay at the institution' did not show acceptable loadings ( $<.50$ ) and hence were removed from further analysis. One item namely 'Well Qualified faculty is available to offer research supervision to the students' in the knowledge services dimension failed to load substantially on any factor ( $<.50$ ) and hence was removed. One item namely 'The institution provides access to research resources like digital libraries' from knowledge service failed to load onto its respective theoretical dimension and was therefore removed from further analysis.

After the removal of items that failed to load substantially, further items that did not load onto their respective factors were again subjected to factor analysis as were factors with only one item. The result of factor analysis shows that KMO MSA was .940. The results showed a six-factor solution with 70.277% variance explained by the items. Bartlett's test of sphericity proved to be significant. All communalities were  $>.50$ . Results of EFA in terms of the factor name, statements, and loadings are summarised in [Table 1](#).

The factors identified as part of the factor analysis can be described as follows:

Factor 1: Teacher quality (TQ) – Teacher quality factor measures the extent to which students are satisfied with the quality of teachers at their university.

Factor 2: Administrative services (AS) – This factor consists of items that describe the responsibility on part of the administration.

Factor 3: Knowledge services (KS) – This factor consists of the items that highlight whether the university is undertaking all necessary steps to impart knowledge through offering up-to-date courses, building strong theoretical foundation, and access to research facilities.

Factor 4: Activities (AC) – This factor consists of items that are relevant to extra-curricular and co-curricular activities undertaken by the university.

Factor 5: Continuous improvement (CI) – This factor consists of items that are pertinent to measurement of whether the institution has improved during the stay of the student at the university.

Factor 6: Leadership quality (LQ) – This dimension of service quality in education measures the level of consciousness educational leaders show towards quality of education.

The dimensions proposed for HE service quality instrument obtained support from both literature and focus group discussion. [Table 2](#) highlights the support for the sub-factors from literature and focus group discussions.

It is important to note that existing research on instrument development on service quality in education does not yield continuous improvement and leadership quality as explicit dimensions of service quality in Education. There is theoretical support for the dimensions in service quality literature in general.

Table 1. Factors, sub-items, and loadings.

Dimensions	Statement	Loadings
Teacher quality	Teacher performance is regularly audited/monitored	.590
	A number of different teaching methods are utilized to impart learning	.673
	Teachers and students share cordial relationship	.717
	Teachers encourage students to participate in the class	.750
	Specialized teachers are available for different set of courses	.659
	Teachers regularly conduct Quizzes/Assignments to assess the students' progress	.665
	The lectures are easy to follow and understand	.699
	The teachers regularly meet the necessary requirements of the courses	.701
	The teaching faculty is well trained in imparting quality education	.677
Administrative services	Administration shows respectful behavior towards the students	.605
	Rules and regulations are in place for smooth operation of academic activities	.610
	Classes schedule is easy to manage	.684
	Staff is selected through proper recruitment and selection procedures	.753
	Merit system is in place for admission of students into different programs	.769
	Institution has facilitation cell to facilitate student operations	.726
	Process of registration is hassle free	.679
Knowledge services	Adequate safety measures are in place at the campus	.668
	Course assessment is based on the nature of the course	.730
	The course contents cover the need of the Local and International Business	.674
	Students are equipped with academic knowledge that is current and up to date	.619
	Institution offers latest and up to date courses	.797
	Institutions focus on building strong theoretical foundation of its students	.663
	The institution offers specialized degree programs (HR, project management, marketing, finance, network, database, or others)	.746
	I feel I am receiving the value of education in comparison to the fee paid and time spent	.760
Activities	The institution arranges healthy physical activities for its students	.771
	The institution regularly arranges Seminars/workshops/ Trainings for its students	.732
	Job fairs are regularly arranged to improve student's job prospects	.806
	The institution continuously arranges research conferences	.764
	The institution believes in engaging/motivating its students to take part in different activities	.548
	Number of students seeking admission continues to increase	.791
Continuous improvement	The institutional infrastructure continues to improve	.745
	My conceptual and technical skills continue to improve over period of my stay at the institution	.801
	Institutions Research Ratings/Research Performance continues to improve	.631

(Continued)

Table 1. Continued.

Dimensions	Statement	Loadings
Leadership quality	The Institutions Leaders (VC, HoD, Dean, or Director) reinforce the need for quality education	.612
	The institutions leaders try to create an environment which is conducive for learning.	.692
	Leaders use strategies to build knowledge, Skills, and Attitudes consistent with educational objectives	.689
	The Institutions Leaders are responsive to the needs of the students	.581

Table 2. Support for service quality dimensions.

Dimensions	Literature support	Focus group support
Teacher quality	Shank et al. (1996), Jain et al. (2013), Hill (1995), Athiyaman (1997), Owlia and Aspinwall (1996), Holdford and Patkar (2003), Martínez-Argüelles et al. (2013), Arif et al. (2013)	Yes
Administrative services	Teeroovengadum et al. (2016), Nadiri et al. (2009), Joseph et al. (2005), Martínez-Argüelles et al. (2013), Arif et al. (2013)	Yes
Knowledge services	Abdullah (2006), Sharabi (2013), Chou (2004), Cook (1997), Arif et al. (2013)	Yes
Activities	Bhattacharyya et al. (2002), Mahapatra and Khan (2007a), Kwan and Ng (1999)	Yes
Continuous improvement	Self-developed based on focus group discussion	Yes
Leadership quality	Self-developed based on focus group discussion	Yes

### *Confirmatory factor analysis*

In order to assess the measurement model, data quality including construct reliability and construct validity CFA was utilised. A measurement model was developed based on the results of EFA. A total of 37 items were part of the structural model. Fit indices utilised in the present study to evaluate the model fit include CMIN, standardized root mean square residual (SRMR), comparative fit index (CFI), Tucker-Lewis index (TLI) and

Table 3. Fit indices.

Fit indices	Recommended value	Source	Value from CFA
$p$	$>.05$	Bagozzi and Yi (1988)	.000
CMIN ( $\chi^2/\text{df}$ )	$\leq 5$	Less than 2 (Ullman, 2001) to 5 (Schumacker & Lomax, 2004)	1370/605 (2.26)
SRMR	$\leq .08$	Hu and Bentler (1998)	.05
RMSEA	$\leq .06$	Hu and Bentler (1998)	.06
CFI	$\leq .90$	Bentler (1990)	.93
TLI	$\leq .90$	Bentler (1990)	.92

Table 4. Composite reliability and AVE.

Construct	Composite reliability	AVE
Teaching quality	.933	.61
Administrative services	.909	.56
Knowledge services	.911	.58
Activities	.880	.59
Continuous improvement	.928	.76
Leadership quality	.901	.69

RMSEA. None of the items were deleted due to low loading. The results of CFA on the 37 items showed a good fit to the data. The results are summarised in Table 3.

Based on the indices revealed after CFA, the results summarised in Table 3 indicated an acceptable fit for the six-factor model. A number of different ways were utilised to evaluate overall fit of the model to the data. When  $p$  for  $\chi^2$  is above a certain value (usually set to  $p > .05$ ) an exact fit of a model is indicated. A number of goodness-of-fit measures were proposed to eliminate or reduce the dependence on sample size. The root-mean-squared error of approximation (RMSEA) was reported and the value of .07 indicated a fair fit to the data (RMSEA  $< .05$  = close fit, RMSEA  $> .05$  to  $< .08$  = fair fit, RMSEA  $> .08$  to  $.10$  = poor fit; Kelloway, 1998; Chow, Snowden, & McConnell, 2001). The suggested value for SRMR was also  $\leq .05$ . Values for CFI and TLI were over .90.

### Reliability and validity analysis

Reliability analysis was conducted to ascertain the internal consistency of multiple indicators for each construct. A composite reliability coefficient was reported to assess the reliability for the factors. As shown in Table 4, all values of composite reliability were between .880 and .933, which shows that multiple measures in this study are reliable (Hair, Sarstedt, Ringle, & Mena, 2012).

Construct validity is established through convergent and discriminant validity (Bajpai, 2011). Convergent validity is confirmed when the concepts that should be related to each other are in fact correlated (Zikmund, Babin, Carr, & Griffin, 2013). Convergent validity is established when using factor analysis technique; the block of items measuring the same construct converges in their representation of the underlying construct. Based on the factor loadings from factor analysis, Average Variance Extracted (AVE) is calculated. Convergent validity is established if an AVE of .50 or greater is achieved for the constructs

Table 5. Discriminant validity.

	TQ	AS	KS	AC	CI	LQ
TQ	<b>.781</b>					
AS	.699	<b>.749</b>				
KS	.697	.605	<b>.761</b>			
AC	.657	.528	.660	<b>.768</b>		
CI	.570	.568	.544	.442	<b>.875</b>	
LQ	.760	.682	.635	.654	.422	<b>.833</b>

Note: TQ: teacher quality; AS: administrative services; KS: knowledge services; AC: activities; CI: continuous improvement; LQ: leadership quality.

(Fornell & Larcker, 1981). Since AVE value for each construct was over .50, this shows convergent validity is attained. Furthermore, all the six dimensions of service quality are correlated. The results showed moderate to high correlations (see Table 5), indicating evidence of convergent validity.

According to Zikmund et al. (2013), discriminant validity points to the distinctiveness of a construct. The criterion to evaluate discriminant validity is that square root of AVE for each construct must be greater than inter-correlations with other constructs (Gefen, Straub, & Boudreau, 2000). Table 5 shows that the square roots of AVE were greater than the correlation coefficients between each pair of constructs. The results provide evidence for the discriminant validity of the measures.

## Discussion

The study aimed at gaining a better insight into the determinants of HE service quality. According to the analysis, the students' perceptions of a HE service quality include a multidimensional construct formed by six factors namely:

- (1) Teacher quality
- (2) Administrative services
- (3) Knowledge services
- (4) Activities
- (5) Continuous improvement
- (6) Leadership quality

Teacher quality was identified as one of the determinants of service quality in HE. This factor subsumes nine indicators. These indicators were related to teacher performance, teaching methods, relationship between students and teachers, encouragement by teachers, specialised teachers, continuous assessment of students by teachers, understanding of lectures, meeting the requirements of courses, and well-trained teachers. The factor analysis results revealed that a teacher's encouragement and motivation of students to participate in class had the strongest association with the teacher quality factor followed by cordial relationship between teachers and students.

The weakest association with the underlying latent teaching quality was monitoring of teacher performance. The emergence of this factor clearly highlights the importance of teachers in delivering quality teaching to students. The dimension of teacher quality is supported in the current literature on identification of dimensions on service quality in education. The dimension and its items are similar to the findings of previous studies (Hill, 1995; Owlia & Aspinwall, 1996; Shank, Walker, & Hayes, 1996; Athiyaman, 1997; Holdford & Patkar, 2003; Arif, Ilyas, & Hameed, 2013; Martínez-Argüelles, Callejo, & Farrero, 2013). Teachers are the assets that produce and maintain the intellectual capital from which a high level of quality education is produced (Johnson & Golomskiis, 1999). Hazilah Abd Manaf, Ahmad, and Ahmed (2013) in their study found that teaching had a significant impact of quality of service in a graduate school. Quality of teaching is further emphasised in HE since it would significantly enhance students' impartiality, motivation, and satisfaction (Noaman et al., 2017). The quality of teaching is further enhanced when teachers teach with punctuality, accuracy, reasonability, and logical approach in a student-friendly manner (Palli & Mamilla, 2012).

Administrative services was also identified as determinant of service quality in HE. This factor consists of a total of eight indicators. Respectful behaviour, establishment of



rules and regulations, easy class schedules, staff recruitment and selection procedures, merit system, facilitation cell for student, hassle-free registration, and safety measures at campus. The factor analysis results revealed that a merit system for admission had the strongest association with administrative service followed by teacher selection procedures. The weakest association with the underlying latent factor was found for respectful behaviour by administration. The dimension of administrative service is supported in the current literature on identification of dimensions on service quality in education. The dimension and its items are similar to the findings of previous studies (see Joseph, Yakhou, & Stone, 2005; Nadiri, Kandampully, & Hussain, 2009; Teeroovengadum et al., 2016; Arif et al., 2013; Martínez-Argüelles et al., 2013). Administrative services included a broad range of services that allows HE institutions to operate efficiently. The dimension was discussed in terms of administrative quality by Teeroovengadum et al. (2016) that included the helpfulness and support received from the administration to ensure quality of services. Hazilah Abd Manaf et al. (2013) in their respective studies found that administrative services had a significant impact of quality of service in a graduate school.

The third dimension identified was named knowledge services. This factor consists of a total of seven indicators. The indicators consist of course assessment, course contents, update academic knowledge, latest courses, building strong theoretical foundation, specialised degree programmes, and value of education. The factor analysis results revealed that the latest and up-to-date courses had the strongest association with the knowledge service dimension followed by value of education for the time and money invested. The weakest association with the underlying latent factor was found for up-to-date academic knowledge. The dimension of knowledge service is supported in the current literature on the identification of dimensions on service quality in education. The dimension and its items are similar to the findings of previous studies (see Cook, 1997; Chou, 2004; Abdullah, 2006; Arif et al., 2013; Sharabi, 2013). One of the products of an education or training institution is knowledge resulting from the learning experience (Jain et al., 2011). Students value knowledge and expertise in their relative discipline and this can significantly enhance the quality (Arif et al., 2013). Building academic knowledge is a core service in customer-oriented HE (Julia Vauterin, Linnanen, & Marttila, 2011).

The fourth dimension in the study was activities. The factor consisted of a total of five indicators. These indicators included orchestrating healthy physical activities, arrangement of seminars/workshops/trainings, arrangement of job fairs, arrangement of research conferences and encouraging students to take part in provisioned activities. Factor analysis showed that the arrangement of job fairs had the strongest association with the activities factor followed by healthy physical activities. The weakest association to the activities factor was identified as encouraging students to take part in different activities. The dimension of activities is supported in the current literature on the identification of dimensions on service quality in education. The dimension and its items are similar to the findings of previous studies (see Kwan & Ng, 1999; Bhattacharyya, Rahman, & Sharma, 2002; Mahapatra & Khan, 2007a). Activities is referred to as an important educational factor that leads to student satisfaction (Arif et al., 2013). Academic activities like workshops, conferences, overseas collaborations, and seminars enrich the learning ambience. Any quality-enhancing effort should ensure these facilities and activities (Senthilkumar & Arulraj, 2011).

Two new dimensions that were identified as part of the study namely continuous improvement and leadership quality were developed through focus group discussions. There is dearth of existing research on dimensions of service quality in education that yielded these as explicit factors. Continuous improvement consisted of four indicators.

Continuous improvement has been identified as an important determinant of service quality in general (Yeo, 2008). Johnson and Golomskiis (1999) identified continual improvement as one of the necessities for improvement in HE. Yeo (2008) underlined that continuous improvement is critical to the sustainability of service quality. Competitive marketplaces continuously think to improve the services that they deliver. HE institutions therefore face the pressure of continuously improving the quality of their service in order to meet the demands of their customers (Emiliani, 2005). The continuous improvement provides the required channel for achieving academic excellence (Asif et al., 2013).

Leadership quality consisted of four indicators. Leadership quality provides clear direction from senior management and the strategic influence of leadership can help provide the vision for service quality. Leadership quality has been identified as a dimension of service quality. Arif et al. (2013) identified Leadership as a key predictor of satisfaction among students. This is achieved through leaders who establish the unity of purpose and direction of the education. Leaders create and maintain an internal environment where people can become fully involved in attaining the objectives (Johnson & Golomskiis, 1999). The role of leadership in improving service quality is very crucial. Although there are other dimensions to service quality, leadership has its own value and prominence in creating an optimum service quality experience. The success of the quality management systems and the essential change in the quality culture of HE institutions depend on the ability of its leaders (Trivellas & Dargenidou, 2009). The findings reiterate the pivotal role of leadership and its continued relevance as an essential quality management element even in entirely different contexts in terms of HE institutions (Asif et al., 2013).

## Implications

The study provides a scale to evaluate service quality in HE. The study has a number of significant implications. This reliable and valid scale can be applied as a diagnostic tool in various institutions to ascertain the problems areas in service provision. A multi-stakeholder-driven framework can aid in enhancing the quality of the service, thereby improving service quality of the institutes in ways that really matter to the different stakeholders of HE institutions. The scale can offer direction for academicians who utilise service quality as a critical component of an institution's competitive strategy. Failure to attain quality will lead to weak word of mouth resulting in the lack of quality intake of students; waste of resources and ultimately an *institution* will have difficulty in reaching its desired goals.

The proposed model allows for the analyses of service quality through various dimensions. Practitioners may use different sub-dimensions of service quality with respect to their requirements in order to focus on specific HE service quality determinants. For instance, heads of department may only utilise the teaching quality dimension to evaluate the quality of teaching in their department. The scale can aid HE institutions in evaluating the satisfaction with service quality at the HE level. The scale would help the senior management at HE institutions to evaluate the level of service quality. Furthermore, senior management could devise strategies to improve the level of service quality and enhance the level of effectiveness in a highly competitive HE sector. As HE continues to become more competitive, there is an increasing need for the institutions to continuously evolve and improve the quality of service. The instrument developed provides a useful tool for university management in their quest for continuously improving service quality.

Theoretically the findings of this study offer much additional insights to researchers in understanding the finer details of the concept of service quality when applied to the HE

context. Furthermore, replicating and testing this model in different HE institutions in different parts of the *world* can provide a detailed insight with regard to the quality at local and international levels.

### Limitations and directions for future research

The present study sought input from a diverse range of stakeholders (students, parents, teachers, and employers) to develop a reliable and valid scale to measure service quality in HE institutions. Future studies may include external stakeholders like government and community. Although the scale was developed based on the discussion with different stakeholders, the results are based on the input of students. Since students are the primary customers, the input from different stakeholders shaped in the form of a questionnaire was validated through the input of students who are the direct recipient of service in HE. Furthermore, the data in the present study were cross-sectional, collected at one point in time. Future studies may collect data at different points in time. This could help in evaluating whether the perception of service quality changes over time. Future studies may evaluate service quality at the start of the semester and at the culmination of studies to compare and contrast any change in satisfaction with service quality over a full life cycle of the student experience. Furthermore, it would be worthwhile that studies in different developing countries should test the HiEduQual scale with the aim of testing whether results are more consistent in terms of quality of education in developing countries.

### Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendices

### Appendix 1

#### *Students*

1. Comment on your experience at your current institution/university.
2. The education you receive/received, your thoughts and how it can be improved.
3. What do you think are the important determinants of service quality in higher education?
4. What do you expect in terms of higher educational service from your Institution?
5. How can service quality in education be improved?
6. Has the institution improved over time, if yes, How? If no, what needs to be done?
7. What is the cost of not providing quality education to students?
8. What role leadership can play in imparting quality education?
9. Any other comments relevant to the service quality in higher education.

#### *Parents*

1. Comment on your experience with institution/university where your child is studying.
2. What do you think are the important determinants of service quality in higher education?
3. How can service quality in education be improved?
4. What cost is incurred by parents of not providing quality education to their children?
5. What role leadership can play in imparting quality education?

#### *Teachers*

1. Comment on your experience with the Institution/University where you are teaching.
2. What do you think are the important determinants of service quality provided to students in higher education?
3. How can service quality in education be improved?
4. What is the cost of not providing quality education to students?
5. What role leadership can play in imparting quality education?

#### *Employers*

1. Comment on your experience with the graduates employed and their level of competence.
2. What do you think are the important determinants of service quality in higher education?
3. How can service quality in education be improved?
4. What cost is incurred by employers of not providing quality education to students?
5. What role leadership can play in imparting quality education?

### Appendix 2. Original list of items

#### Statements

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The institution arranges healthy physical activities for its students  
 Study tours are planned on regular basis  
 The institution regularly arranges Seminars for students  
 The institution continuously orchestrates research conferences  
 The institution offers training/workshops to develop students  
 The institution believes in engaging its students in different activities  
 Administration shows respectful behaviour towards the students  
 Rules and regulations are in place for smooth operation of academic activities  
 Classes schedule is easy to manage  
 Teachers are selected through proper recruitment and selection procedures  
 Merit system is in place for admission of students into different programs  
 Adequate Safety Measures are in place at the campus  
 Number of Students seeking admission continue to increase  
 The number of students leaving in middle of the studies continues to drop

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(Continued)

**Appendix 2.** Continued.Statements

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The number of students migrating in middle of the studies continues to drop  
 My conceptual and technical skills continue to improve over the period of my stay at the institution  
 The Institutions infrastructure continues to improve  
 Number of programs and departments have also increased during my stay at the institution  
 University Ranking continues to Improve during my stay at the institution  
 Institutional Facilities continue to improve over during my stay at the institution  
 Institutions Research Ratings/Research Performance continue to improve  
 I would recommend this institutions to others for higher studies  
 I perceive that I won't face lack of preference amongst employers in the job market  
 I would be able to meet the challenges of the modern world after graduation  
 I expect that my future would be secure after graduating from the institution  
 I feel that I would be competitive in the job market after my graduation  
 I believe I have strong career prospects after my graduation  
 I believe that my institution has instilled appropriate job behaviours in me  
 A number of different teaching methods are utilized to impart learning  
 The courses covers the need of the local and international businesses  
 Course assessment is based on the nature of the course  
 Students are equipped with academic knowledge that is current and up to date  
 Institution offers latest courses  
 Institutions focuses on building strong theoretical foundation of its students  
 The institution offers specialized degree programs (HR, Project Management, Marketing, or Finance)  
 Well Qualified faculty is available to offer research supervision to the students  
 The institution provides access to Research Resources Like Digital Libraries  
 The study is focused on imparting knowledge, skills, and attitudes demanded in the market  
 The students are provided with necessary know-how of the corporate world  
 I believe that I have acquired the necessary skills from my institutions to fit the job market  
 Job fairs are regularly arranged to improve students job prospects  
 Teachers performance is regularly audited/monitored  
 I feel I am receiving the Value of Education in comparison to the Fee Paid and Time Spent  
 Teachers and Students share cordial relationship  
 Teachers encourage students to participate in the class  
 Specialized teachers are available for different set of courses  
 Teachers regularly conduct Quizzes/Assignments to assess the students' progress  
 The lectures are easy to follow and understand  
 The teachers regularly meet the necessary requirements of the courses  
 The teaching faculty is well trained in imparting quality education  
 The Institutions Leaders (VC, HoD, Dean, or Director) reinforce the need for quality education  
 The institutions leaders try to create an environment which is conducive for learning  
 The institutions leaders constantly arrange meetings to monitor the progress of students  
 The institutions leaders constantly arrange meetings to monitor the progress of teachers  
 Leaders use strategies to build knowledge, Skills and Attitudes consistent with educational objectives  
 The Institutions Leaders establish best practices and ensure that they are followed  
 The Institutions Leaders are responsive to the needs of the students  
 Institution has facilitation cell (Student Services Office) to facilitate students operations  
 Process of registration is hassle free

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