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HIGHER EDUCATION SERVICE QUALITY MODEL (HESQUAL) TO IMPROVE SERVICE QUALITY OF HIGHER EDUCATION INSTITUTES

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ABSTRACT

Assessing and improving service quality specifically in the service industry is a herculean task considering the inherent nature of services which are high on experience and credence attributes, and hence cannot be evaluated prior to consumption. In consumption situations, consumers make use of decision heuristics which largely depend on the brand image of the options in the consideration set. Education industry of India is going through a massive transformation considering the widespread application of technology and increasing competition with the entry of corporate groups, the survival of private and self-financed institutes will largely depend on the brand image they manage to create which in turn will rely on the service quality they manage to offer to the consumers (students). A SERVQUAL scale has been in existence for long and has proven successful in measuring and improving the service quality of service organizations. This research paper aims to develop a and empirically test a HESQUAL model to measure service quality of education institutes taking cues from the SERVQUAL scale developed by Parasuraman et al. Based on literature review a conceptual model was built consisting of 72 attributes related to service quality. A Sample of 200 students was selected and data were analyzed using Exploratory Factor Analysis. The final model consisted of 5 dimensions with 45 items. This model will be useful for education institutes to continuously improve their service quality.

KEYWORDS: *SERVQUAL, Brand Image, Education Branding, Services Marketing*

INTRODUCTION

Improving service quality is these days considered to be a mandatory task for higher education institutes. The current higher education sphere is increasingly competitive and dynamic. (Dehghan et al., 2014; Cheung et al.,2011), where universities have to put their maximum efforts to improve service quality. The factors that have led to the current state of affairs include an increase in the number of private universities (Halai, 2013), globalization of education (Williams and Harvey, 2010; Sultan and Wong, 2010). As business organizations face continuous demand from their customers to satisfy them similarly universities need to satisfy their students by providing quality education (Srikanthan and Dalrymple, 2007). Hence universities need to constantly measure their service quality and regularly improve the same (Kwek et al., 2010; Chong and Ahmed, 2012). If service quality needs to improve it has to be correctly assessed (Nadiri et al, 2009). It is therefore, the need of the hour to develop an instrument for measuring service quality of universities engaged in higher education. However it remains a challenge to develop a service quality measurement scale in education as most of the studies on service quality has done till date have adopted the popular SERVQUAL scale developed by Parasuraman et al. (1988), but in the context of education the SERVQUAL scale does not fit into the scheme of things like the field of

education demand a few other dimensions other than the 5 dimensions proposed in the SERVQUAL model. Earlier researchers have tried to identify a few dimensions to measure service quality in education, however their lacks a model that can take into consideration a holistic approach for measuring service quality. Hence there is a need to develop a scale that can take into consideration a few added dimensions that are essential for assessing the service quality in higher education.

LITERATURE REVIEW

Existing Literature suggests that it is a challenge to identify appropriate service quality dimensions while attempting to develop an instrument for measuring service quality (Brady et al., 2002; Abdullah, 2006). The most popular to measure service quality is the SERVQUAL scale developed by Parasuraman et al. (1985,1988). Service Quality is defined as a form of attitude, related but not equivalent to satisfaction, and results from the comparison of expectations with perceptions of performance". In the context of higher education, service quality can be defined as the difference between what a student expects to receive and his perception of actual delivery (O Neil and Palmer,2004), SERVQUAL instrument however, does not possess the sufficient dimensions to measure service quality with respect to the field of education and hence Cronin and Taylor (1992) have proposed another instrument termed as SERVPERF to measure service quality emphasizing performance level attributes to measure service quality. As per existing literature several other studies have been done to measure service quality in the context of higher education (Cuthbert, 1996; Wong et al., 2012), these studies have adopted to measure service quality using SERVQUAL dimensions which proposes 5 service quality dimensions namely responsiveness, assurance, tangibles, reliability and empathy. There are a number of other studies that have identified several other dimensions of education service quality by using qualitative research methods, one such study was conducted by Leblanc and Nguyen (1997) who identified 38 service quality attributes that were grouped into seven dimensions: curriculum, administration, physical evidence, contact personnel, responsiveness, reputation and access to facilities. Another study conducted by Lagrosen et al. (2004) identified 11 factors comprising of 31 items. These were courses offered, campus facilities, teaching practices, corporate collaboration, information and responsiveness, internal evaluations, external evaluations, poststudy factors, and library resources. The proposed model in this study takes into consideration all dimensions used in previous studies and comes up with a more comprehensive model to measure service quality in the context of education. The conceptual model proposed in this study aims to integrate the quality of continuous development in students which consists of two components knowledge and self-confidence. The first component includes adding value to students in terms of knowledge and skills (Harvey and Green,1993), The second element of continuous development in students include adding self-confidence in students which makes them capable of taking charge of their own self-development. This study aims to add the dimension of continuous development in the servqual dimensions to measure service quality among higher education institutes.

CONCEPTUAL FRAMEWORK

On the basis of extant literature, a model has been developed that consists of six dimensions of higher education service quality which includes physical evidence, administrative support, teaching and learning environment, continuous development, career development services, events, and experiences. These dimensions identified from the literature were found to be consistent with the findings of in-depth interviews with students.

RESEARCH METHODOLOGY

In the first phase of this research, an extant review of the literature was done to identify service quality dimensions to prepare a service quality scale, the content validity of the scale was done using expert reviews and focus group discussions. The findings of the group discussions were in line with the dimensions identified through literature review.

In the second phase, the quantitative research method was used whereby a questionnaire was developed on the basis of items identified through the literature review. A survey was conducted among students of Gujarat Technological University. A five-point Likert Scale was used to measure the responses on various servqual dimensions. The sample size was determined on the basis of requirement of Exploratory Factor Analysis. A self-administered questionnaire was designed which was 250 respondents were selected using non-probability convenience sampling out of which 200 questionnaires were considered for further analysis. The quantitative phase of this research also aimed at testing the reliability and validity of the scales. Reliability of the scales was done using Cronbach's alpha and values greater than.70 were considered to be acceptable. Construct validity was tested using EFA whereby items having factor loading greater than.40 were retained.

ANALYSIS AND DISCUSSIONS

Tests for Determining Suitability for EFA

For the appropriateness of factor analysis, KMO and Barlett's test of sphericity was conducted for all six dimensions and the results were positive whereby KMO values for all dimensions ranged between.82 to.87. The Barlett's test of Sphericity for all six dimensions was (<.05) which was suited for performing EFA. Thus all tests provided enough support for going ahead with EFA.

Factor Analysis was conducted separately for the six dimensions identified to measure service quality using several variables:

- Physical Evidence (15 Variables)
- Administrative Support (8 Variables) -
- Teaching and Learning Environment (20 Variables)
- Continuous development (10 Variables)
- Career development services (11 Variables)
- Events and experiences. (8 Variables)

Exploratory Factor Analysis and Reliability Analysis for Physical Evidence

EFA concluded that within the construct physical evidence there are 3 factors having eigen-values more than 1, this was also confirmed with scree plot, items that were loading on 2 factors were removed and items having a loading of more than.40 were retained. The first factor was named Complementary Services Infrastructure and consisted of 4 items having factor loadings ranging from.77 to.89, this scale was found to be reliable with a Cronbach's alpha of.875. The second factor was named Teaching aids and consisted of 3 items having factor loadings between.71 to.74, Cronbach's

alpha was.776 suggesting that this scale was reliable. The third factor was named General Infrastructure and consisted of 3 items having factor loadings between.72 and.81, the value of Cronbach's alpha was.73 suggesting that this scale was reliable.

Exploratory Factor Analysis and Reliability Analysis for Administrative Support

EFA concluded that within the construct administrative support there are 2 factors having eigen-values more than 1, this was also confirmed with scree plot, items that were loading on 2 factors were removed and items having a loading of more than.40 were retained. The first factor was named Etiquettes and Behavior of Admin Staff and consisted of 3 items having factor loadings ranging from.81 to.91, this scale was found to be reliable with a Cronbach's alpha of.819. The second factor was named Administrative Systems and Processes and consisted of 3 items having factor loadings between.96 to.83, Cronbach's alpha was.863 suggesting that this scale was reliable.

Exploratory Factor Analysis and Reliability Analysis for Teaching and Learning Environment

EFA concluded that within the construct teaching and learning environment there are 4 factors having eigen-values more than 1, this was also confirmed with scree plot, items that were loading on 2 factors were removed and items having a loading of more than.40 were retained. The first factor was named faculty quality and consisted of 3 items having factor loadings ranging from.87 to.89, this scale was found to be reliable with a Cronbach's alpha of.756. The second factor was named Faculty Behavior and Attitude and consisted of 4 items having factor loadings between.75 to.86, Cronbach's alpha was.893 suggesting that this scale was reliable. The third factor was named Teaching tools and consisted of 4 items having factor loadings between.71 to.88, Cronbach's alpha was.803 suggesting that this scale was reliable. The fourth factor was named Course content and consisted of 4 items having factor loadings between.71 to.88, Cronbach's alpha was.771 suggesting that this scale was reliable.

Exploratory Factor Analysis and Reliability Analysis for Continuous Development

EFA concluded that within the construct teaching and learning environment there are 2 factors having eigen-values more than 1, this was also confirmed with scree plot, items that were loading on 2 factors were removed and items having a loading of more than.40 were retained. The first factor was named Personality Development and consisted of 3 items having factor loadings ranging from.75 to.81, this scale was found to be reliable with a Cronbach's alpha of.743. The second factor was named Academic Development and consisted of 3 items having factor loadings between.82 to.89, Cronbach's alpha was.826 suggesting that this scale was reliable.

Exploratory Factor Analysis and Reliability Analysis for Career Development Services

EFA concluded that within the construct teaching and learning environment there are 2 factors having eigen-values more than 1, this was also confirmed with scree plot, items that were loading on 2 factors were removed and items having a loading of more than.40 were retained. The first factor was named Placement Opportunities and consisted of 4 items having factor loadings ranging from.77 to.89, this scale was found to be reliable with a Cronbach's alpha of.882. The second factor was named Entrepreneurship Development Support and consisted of 2 items having factor loadings between.75 to.76, Cronbach's alpha was.731 suggesting that this scale was reliable.

Exploratory Factor Analysis and Reliability Analysis for Events and Experiences

EFA concluded this construct to be unidimensional as all 4 items loaded under one dimension with factor loadings between.70 to.81; Cronbach's alpha was.717 suggesting that this scale was reliable.

Table 1: Servqual Dimensions, Sub-Dimensions, Factor Loading and Alpa Values

Factors (%Variance Explained)	Service Quality Dimensions and Attributes	Factor Loading	α
Physical Evidence			
Complemetary Services Infrastructure (50.1%)	Adequate Canteen Facilities Adequate Library Facilities Adequate Sports Infrastructure Adequate Transportation Facilities	.895 .835 .776 .854	.875
Teaching Aids (10.3%)	Spacious Classrooms Comfortable Seating Arrangements Audio-Video Support in Classrooms	.727 .711 .741	.776
General Infrastructure (11.6%)	Pollution Free Campus Natural Surroundings in Campus Appearance of Buildings	.815 .751 .725	.732
Administrative Support			
Etiquettes and Behavior of Staff (43.6%)	Responsiveness of Administration staff in solving student problems Ability of Administration staff to solve student problems Politeness of Administration Staff while dealing with students	.891 .916 .817	.819
Administration Systems and Processes (21.7%)	Hassle-Free and Well defined system for solving student problems Less Bureaucratic and fast processes for solving student problems Transparency in dealing with student affairs	.961 832 .886	.863
Teaching Learning Environment			
Faculty Quality (31.7%)	Qualified and Well Experienced Faculties Communication skills of faculties Faculties updated on current trends and developments	.893 .876 .889	.756
Faculty Behavior and Attitude (26.7%)	Faculties are willing to respond to students needs Faculties are easily approachable Faculties give personal attention to students Proper coordination and teamwork among faculties	.867 .796 .821 751	.893
Teaching tools (18.3%)	Use of Projector in classroom teaching Use of case studies and current examples in the class Encouraging students for classroom discussions Role-Plays and Quiz to support classroom discussions	.711 .836 .883 .711	.803
Course Content (26.3%)	Curriculum should be developed and updated as per current market needs Course content should be more practical and application oriented Choice-Based Credit System Course content should be shared at the beginning of the semester	.887 .834 .716 .742	.771

Table 1: Contd.,			
Continuous Development			
Personality Development (31.6%)	Platform should be provided to students for public speaking Students should be encouraged to speak in public Personality development sessions for confidence building	.811 .763 .751	.743
Academic Development (13.7%)	Special Classes to improve examination performance and grades Scholarship provision fro students performing well in exams Focus on Research	.836 .893 .822	.826
Career Development Services			
Placement Opportunities (33.9%)	Resume Building and Career Development Counseling Availability of Training and Placement Cell On Campus and Off Campus Placement Opportunities Multiple Placement Opportunities	.777 .891 .843 .886	.882
Entrepreneurship Development Support	Mentorship and Incubation facility for Entrepreneurship Development Workshops and Seminars on Entrepreneurship development	.764 .753	.731
Events and Experiences	Industrial Visits across India Cultural and Music Festivals Workshops, Seminars and Conferences Sports Tournaments Technical Competitions	.732 .796 .813 .701 .732	..717

Higher Education Service Quality Model (HESQUAL)

To summarise, EFA suggested that five primary dimensions consisted of sub-dimensions, namely, Physical Evidence, Administrative Support, Teaching Learning Environment, Continuous Development, and Career Development Services. The physical evidence dimension was further divided into three factors: “Complementary Services Infrastructure”, “Teaching Aids” and “General Infrastructure”. Administrative Support consisted of two sub-dimensions: “Etiquettes and Behavior of Staff” and “Administration Systems and Processes”. For teaching-learning environment, the proposed sub-dimensions were “faculty quality”, “faculty behavior and attitude”, “teaching tools and course content”. For continuous development, the sub-dimensions were “personality development” and “academic development”. For career development services the sub-dimensions were “placement support” and “entrepreneurship support”. The dimension Events and Experiences did not have any sub-dimension.

Limitations and Future Research

The model developed in this research was made taking into consideration only the viewpoint of students; it is also a known fact that there are also other stakeholders whose viewpoint can be considered for developing this model further; academic staff can be of help. Furthermore, this model has only taken the viewpoint of management students and hence will require modification to be used for measuring the service quality of other faculties.

CONCLUSIONS

Throughout this research, an effort was made to develop a comprehensive model that can be used to measure the service quality of higher education institutes (particularly management institutes). The result of this effort was a

HESQUAL model with 6 dimensions, 13 sub-dimensions, and 48 items. This model can be used to measure the service quality of management institutions and efforts can be made to improve areas which are lagging in terms of performance to improve the overall service quality of the institute.

With the mushrooming of management institutes, this model will be helpful to institutes for improving their service quality. This model provides a novel construct "Continuous Development" which has been ignored in previous instruments. This construct is important as it considers the final output that a student would want to seek after spending a considerable amount of time in an institute.

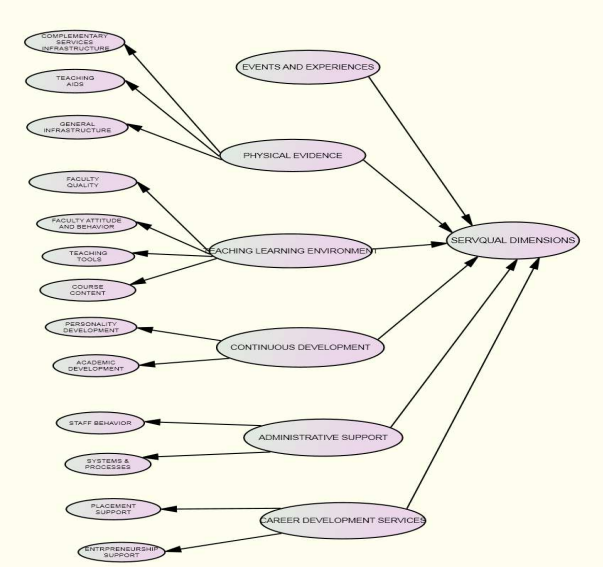

Figure 1: Higher Education Service Quality Model

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