Measuring Service Gap of Higher Education in Bangladesh: A comparative study between Public University and Private University

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Abstract: *In the era of globalization, the demand for quality of higher education is increasing day by day in Bangladesh. But most of the public and private universities fail to meet the emerging demand of high quality education and service quality. To compare and contrast the quality of higher education in public and private universities of Bangladesh, a study was conducted. This paper critically examines the factors of service quality on the viewpoint of students' expectation and perception studying in public and private universities.The study tried to explore the root factors affecting service quality of higher education in Bangladesh to get the competitive edge in education sector. The study investigates the gap between students' expectations and perceptions regarding various services provided by the universities with a special focus on SERVQUAL model along with the five core dimensions such as tangibility, reliability, responsiveness, assurance and empathy.However, SERVQUAL model is used to find out the services gap as well as ensure the service quality in public and private universities in Bangladesh and to recommend some strategies to minimize these gaps as well as to enhance service quality to benefit customers, policy makers, and service providers.*
Key Words: *Higher Education, SERVQUAL Model, Service Quality, Service Gap.*

I. Introduction

Education is the backbone of a nation. Bangladesh is a developing country and standard of living is relatively low. To improve present situation and convert Bangladesh into a developed country, proper higher education is much needed.

In Bangladesh, there was a time when higher education was considered as luxury in a society. However, towards the turn of the last century, the need for highly skilled manpower started to be critically felt every sphere of the society for self-sustained development and poverty alleviation. Highly skilled and trained manpower contributes towards human resource development of a society through supplying teachers, instructors, researchers and scholars in the institutions like schools, colleges, technical institutions and universities. They are also instrumental in bringing about technological revolution in the field of agriculture, industry, business and commerce, medicine, engineering, transport and communication etc.

Institutions which are grouped together to comprise the higher education sector vary from country to country. In the case of Bangladesh, higher education also called the Tertiary level education is generally used to comprehend the entire range and dynamics of post higher secondary education.

The development of a modern society depends to a large extent on the nature and standard of higher education. The growing importance of knowledge in the modern world can hardly be overemphasized, especially in the era of globalization and in a global environment which is fiercely competitive. Particularly, higher education has enormous potential to promote prosperity in the developing nations.

Statement of the problem

There is demand of skilled and trained human resource in various sectors in Bangladesh. But the question is that whether the public and private universities and institutions are providing such quality education to meet the demands and requirements of such sectors in the country. Very few studies have been conducted on this issue in Bangladesh. For this reason our intention is to determine the level of service quality in higher education and identify gap if any by using SERVQUAL model.

Objectives of the study

The main objective of the study is to find out the service gap, i.e. the gap between the expectation and perception of the students regarding various services incurred by public and private universities to the development of quality of higher education in Bangladesh.

With the light of the main objective, we also consider the following specific objectives:

• To identify the factors or services incorporated for the quality of higher education.
• To know the expectation of the students regarding those services.
• To know the existing services available in the selected universities.
• To calculate the deviation between expectation and perception.

Importance of the study

Bangladesh has a bright prospect to develop a strong educational environment. The number of public and private university is increasing day by day but there are some problems in quality of services. The present study will helpful in the identification of the problems faced by the university authority and taking necessary corrective measures. As there has been no major study covering this area, it is expected that this study will provide sufficient information regarding present scenario of higher education in Bangladesh. Besides, policy makers, service providers, and academicians will also be benefited from a study like this. This study helps to reveal the problem regarding this sector so that respective authority of any public and private university can solve the problem faced by the students. By the helps of the research findings, authority of the respected university can redesign their management activities for satisfying the students. It is hopeful that the findings and analysis of this research may be considered by the government and policy makers while formulating both short and long term policies for the development of higher education in Bangladesh.

II.   Literature Review

The literature review has shown that numerous studies used the SERVQUAL model to measure service quality in higher education. Legcevic, J. (2009) studied to the students' expectations and perceptions of service quality in the faculty of law at Osijek University in Croatia and found that students' expectations exceeded their perceptions. Zeshan, A., Afridi, T. & Khan, S. M. (2010) assessed service quality among eight business schools in Pakistan showing that the students perceived low quality in all five dimensions of service quality (tangibles, reliability, responsiveness, assurance, and empathy) in all institutes. Abu Hasan, H. F., Ilias, A., AbdRahman, R. &AbdRazak, M. Z. (2008) studied service quality in private higher education institutions and found that five dimensions and overall service quality had a significant relationship. Khodayari, F. &Khodayari, B. (2011) examined the perceptions and expectations of Islamic Azad University in Iran, their results showed that there was a gap between student's expectations and perceptions among the dimensions of the service quality. MohamadYusof, A.R., Hassan, Z., Abdul Rahman, S. &Ghouri, A. M. (2012) studied to service quality in higher education between research universities and non-research universities finding that the tangibles dimension was most important, whereas empathy and assurance were least important. Al-Alak, B. A. &Alnaser, A. S. M. (2012) examined the relationship between service quality dimensions (tangibles, responsiveness, reliability, assurance and empathy) and overall service quality with undergraduate students' satisfaction in the Faculty of Business at the University of Jordan. Their findings indicated that the assurance and reliability dimensions of service quality were two most important dimensions related to improvement. Amelia, L., Hidayanto, A. N. &Hapsari, I. C. (2011) reported that the quality of IS/IT service at STMK MDP Palembang in Indonesia had gaps between expectation and service performance with the highest and lowest gaps on the reliability and the assurance dimensions respectively.

Bagherzadeh, K. M. &Bagherzadeh, F. (2010) evaluated the higher educational services in Tabriz through SERVQUAL model. They found that higher educational institutes in Tabriz failed to deliver quality education as he got negative signs for all the five dimensions of SERVQUAL model. Arbuni, F., Shoghli, A. R., Badriposhteh, S. &Mohajeri, M. (2009) measured the service quality while using SERVQUAL model in Zanjan university of Medical Sciences. They found negative signs for five dimensions. They found the highest gap for empathy and the least for assurance. Aghamolaie, T., Zare, S. H. &Abedini, S. (2007) measured the service quality in Hurmuzgan University of medical sciences. Their results showed gap among all the five dimensions of SERVQUAL model. They found the highest in responsiveness and least in reliability. Ahmadi, A. A. &Ghelichli, B. (2006) evaluated service quality in Payamenoor University using SERVQUAL model. They got the gap of -0.7, hence shows that students' expectations were higher than perceptions. Karassavidou, E., Glaveli, N. & Papadopoulos, C. T. (2009) used SERVQUAL model in NSH (National Service Hospital) in Greek. They found all dimensions highly reliable and got significant gap between patient expectations and perceived service quality.

Oliveria, O. J. &Ferreira, E.C. (2008) used the same five dimensions SERVQUAL model to measure the higher educational institutes' service quality in Brazil and designed instrument consists of 19 questions. They

found negative signs for all the 19 items, which shows that student expectations are higher in higher education in Brazil than perception. Bradley, R., (2006) measured the service quality of Chinese post graduate students and found the perceptions of students lower than expectations. Arambewela, R. & Hall, J. (2006) did proportional study of overseas education and its satisfaction level. They used SERVQUAL model and conducted research on different nationals in same university. According to their finding the most effective dimension of SERVQUAL model was tangibility and least was empathy. Arbuni, F., Shoghli, A. R., Badriposhteh, S. &Mohajeri, M. (2009) used the famous SERVQUAL model to assess the service quality in Zanjan University of Medical Sciences. They found that all the dimensions of SERVQUAL model were lacking behind the expectations of customers. Zavar, T., Behrangi, M. R., Asgarian, M. &Naderi, E. (2007) did the same study in Payamenoor University Azarbaijan and they also got the same results, such as students expectations were higher than perception in Payamenoor University.

Overview of higher education in Bangladesh

Higher education in Bangladesh has grown in an exponential rate during the last two decades. There were only a few higher educational institutions in Bangladesh at independence and despite huge cumulative demand of higher education during the next decades.

Higher education has enormous potential to promote prosperity, especially in the developing nations *(Monem, M., &Baniamin, H. M. 2010).* For instance, according to the websiteof University Grants Commission (UGC), at present Bangladesh has 37 public universities and 92 private universitieswhile in 2013 the figure was 31 and 51 respectively (The Economist Intelligent Unit, 2013). Among these 37 public universities, 13 are general, 5 engineering and technology, 8 science and technology universities, 4 agricultural universities, and the rest 7 universities are specialized universities in medical science, animal science, maritime, textile engineering, defense professionals, etc. All the public universities except two are residential i.e. having classroom, residential accommodation, and other physical facilities in their own campus. The rest two universities namely National University (NU) and Bangladesh Open University (BOU) are of a special type. The National University is an affiliating university offering graduate and post-graduate courses via affiliated degree colleges or professional institutions. As displayed in national university webpage, presently more than two million students are seeking their higher education through 2154 affiliated colleges or Professional institutions. The Bangladesh Open University (BOU) on the other hand, offers various formal and non-formal educational programs via Open and Distance Learning (ODL) mode for the potential students scattered throughout the country.

Conceptual Model of Service Quality Gaps

SERVQUAL model is based on the concept of "service quality gap" that exists between the customers expected level of services (from the previous experience and word-of-mouth communication) and their perception of actual level of service delivery. The model also identifies four core gaps that cause unsuccessful delivery.
The gaps of SERVQUAL model are stated below:
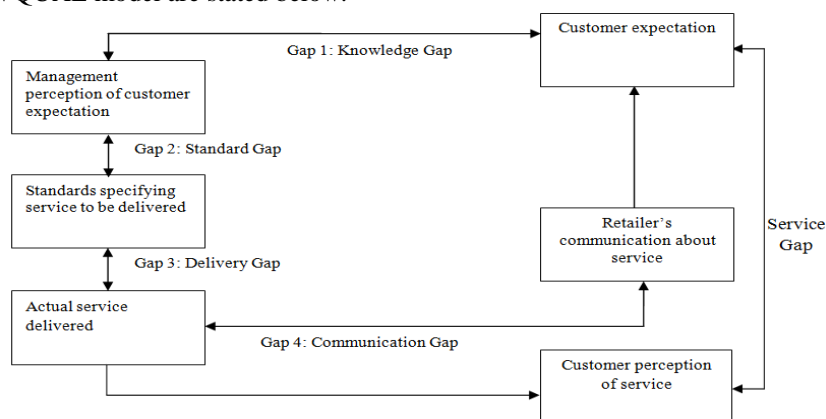
Fig.1: Model of Service Quality Gaps
Source: Adapted from A. Parasuraman, Valerie Zeithami, and Leonard Berry, "A Conceptual Model of Service Quality and Its Implications for Service Quality Research," Journal of Marketing 49(Fall 1985),pp. 41-50.

From the above figure 1, the gaps are as follows:
GAP-1: Knowledge Gap
Gap between consumer expectation and management perception: This gap arises when the management does not correctly perceive what the customers want.
GAP-2: Standard Gap

Gap between management perception and service quality specification: The management might correctly perceive what the customer wants but may not set a performance standard.

GAP-3: Delivery Gap

Gap between service quality specification and service delivery: This gap may arise owing to the service personnel. The reasons are poor training, incapability or unwillingness to meet the set service standard.

GAP-4: Communication Gap

Gap between service delivery and external communication: Consumers' expectation is highly influenced by statements made by company representatives and advertisements. The gap arises when these assumed expectations are not fulfilled at the time of delivery of services.

Parasuraman, A., Zeithaml, V. A., & Berry, L. (1988) determined five dimensions for the measurement of service quality in different service oriented industries. The dimensions identified by them are as follows:

1. Tangible Dimension: It includes the physical evidence of the service. In our study, library facility, modern teaching equipments (multimedia, internet connection, loud speaker etc.), accommodation and healthcare facility, transportation facility are included in the dimension.

2. Reliability Dimension: It involves how consistently organization is providing quality service and how much customer can rely on the firm. In our study, better admission procedure, regular class, transparency of marking system, awards to meritorious students (scholarship, financial aid, stipend etc.) and up-to-date university curriculum are considered in the reliability dimension.

3. Responsiveness Dimension: It includes how much the staff members are ready and willing to provide services. In our study, teachers' carefulness for the students, availability of personnel, addressing students' complaint and teachers' response to students' requests are considered under the dimension.

4. Assurance Dimension: It refers to the skills of the service providers. In our study, academic credentials of the lecturers, research efficiency of lecturers, staff knowledge on rules and procedures, friendly behavior and courtesy of staff are taken into account.

5. Empathy Dimension: It shows how much organization understands customers' requirements. In our study, teachers' individual attention to students, students' best interest at heart, convenience of computer facility, convenience of study room, sympathetic and supportive to the need of students are considered under the dimension.

Based on these five dimensions, we have developed 22- item SERVQUAL model. These are listed below:

1. Tangibles:
• Modern Library with better collection
• Modern teaching equipments
• Better accommodation and healthcare facility
• Transportation facility

2. Reliability:
• Better admission procedure
• Regular class
• Transparency of marking system
• Award for meritorious students
• Up-to-date university curriculum

3. Responsiveness:
• Carefulness for the students
• Availability of personnel
• Addressing students complaint
• Teachers' response to students' requests.

4. Assurance:
• Academic credential of Lecturer
• Research efficiency of Lecturer
• Staff knowledge on rules and procedures
• Friendly behavior and courtesy of staff

5. Empathy:
• Individual attention to students
• Students' best interest at heart
• Convenience of computer facility
• Convenience of study room
• Sympathetic and supportive to the need of students

III. Research Methodology

Based on the SERVQUAL model, 22 set of questions or statements are developed. The model includes questions covering five dimensions of the service quality which are tangibility, reliability, responsiveness, assurance and empathy. The dimensions are divided into two segments which are expectation and perception. A Likert scale is used to question the respondents on the five point scale. To measure the level of expectation, the respondents are asked to rate on the scale between very unimportant (1) to very important (5). Again to know the level of perception, the respondents are asked to rate on the value between very dissatisfied (1) to very satisfied (5). The data is analyzed through SPSS (15 Version).

Population of the study

There are many public and private universities in Bangladesh. But for the convenience of the study, we have selected some public and private universities to collect data from the respondents. Thus, all the students of selected public and private universities are the population of the study.

Sample of data

There are 37 public universities and 92 private universities presently continuing in Bangladesh. To conduct the study, we have selected only 10 universities (5 public and 5 private) as sample. Among 5 public universities, 2 universities are from Rangpur division, 2 universities are from Dhaka division, and 1 university is from Rajshahi division. Again, 5 private universities are from Dhaka division. Therefore, the students of those universities are considered as respondents of the study.

Sample area

For the convenience of the study and due to time limitation, we have selected only 10 universities (5 public and 5 private) from three divisions namely Rangpur, Rajshahi and Dhaka division. Among 5 public universities, Hajee Mohammad Danesh Science and Technology University (HSTU) and Begum Rokeya University (BRU) are from Rangpur division; Rajshahi University (RU) is from Rajshahi division; Dhaka University (DU) and Jagannath University (JNU) are from Dhaka division. Again, 5 private universities namely Ahsanullah University of Science and Technology (AUST), American International University Bangladesh (AIUB), BRAC University (BRACU), Daffodil International University (DIU) and City University (CU) are from Dhaka division. We have physically communicated with the students of selected universities to collect data for the study.

Sample size

Sample size is very important factor for getting expected result of research work. From the mentioned area, we have selected 150 students for conducting the study. From the 10 selected universities (5 public and 5 private), we collect data by 15 respondents from each mentioned universities. Thus total sample size is 150. According to Rosco, sample size >30 and < 500 are appropriate for most research.

Sample Selection method

We have used judgmental as well as convenience sampling method for the study. In order to get the appropriate data, we have selected these two non-probability sampling methods.

IV. Analysis and findings
Comparative position of the dimensions based on students' expectation

Dimensions	Expectation (Mean Score)	
	Public University	Private University
Tangibility	4.623	4.840
Reliability	4.762	4.925
Responsiveness	4.440	4.460
Assurance	4.637	4.663
Empathy	4.445	4.677

Interpretation

The above table represents expectation (mean score) in service quality dimensions of public and private universities in Bangladesh. The above expectation scores clearly indicate that all the expectation scores of private universities are higher than that of public universities. But there is a variation of differences in service quality dimensions.

The following figure represents the above table:

Fig. 2: Comparative position of the dimensions based on students' expectation
Comparative position of the dimensions based on students' perception

Dimensions	Perception (Mean Score)	
	Public University	Private University
Tangibility	3.749	3.957
Reliability	4.419	4.347
Responsiveness	3.697	3.953
Assurance	3.897	4.003
Empathy	4.112	4.051

Interpretation
      The above table indicates the perception (mean score) of service quality dimensions of different public and private universities in Bangladesh. The perception scores of public universities are greater than that of private universities in reliability and empathy dimensions. Again, the perception scores of private universities are greater than that of public universities in tangibility, responsiveness and assurance dimensions.
The above table is represented in the below way:

Fig. 3: Comparative position of the dimensions based on students' perception
Comparative position of the dimensions based on service gap

Dimensions	Service gap	
	Public University	Private University
Tangibility	0.873	0.883
Reliability	0.344	0.578
Responsiveness	0.743	0.506
Assurance	0.740	0.659
Empathy	0.333	0.626

Interpretation
      From the above table, it is clear that tangibility dimension (0.873) has the highest gap and empathy dimension (0.333) has the lowest gap in case of public university. On the other hand, tangibility dimension (0.883) also has the highest gap and responsiveness dimension (0.506) has the lowest gap in case of private university. Thus, we can conclude that the service gap scores of public universities are greater than that of private universities in responsiveness and assurance dimensions. On the other hand, the service gap scores of private universities are greater than that of public universities in tangibility, reliability and empathy dimensions. The gaps are based on the students' expectation and perception regarding services offered to them by the universities. The following figure represents above table:

Fig. 4: Comparative position of the dimensions based on service gaps

Recommendations
Service gap is the combination of four gaps such as knowledge gap, standard gap, delivery gap, communication gap. To reduce the service gap, the following prescriptions are given which will help any public or private university to minimize service gap:

For Knowledge Gap:
• Understand students' expectation through research, complaint analysis etc.
• Use of good Customer Relationship Management (CRM) techniques to know students' expectation, need and demand.
• University authority should find out the actual need of students according to the degree of importance.
For Standard Gap:
• Management should set a standard performance.
• University authority should set a student advisory panel which can offer feedback and advice on service performance.
• Trained up teachers to deliver quality services to students.
For Delivery Gap:
• The personnel and staffs in a public or private university should give more time to listen to students and serve them fast.
• The university authority should early identify the employees' role.

• Train personnel in interpersonal skills, especially for dealing with students.

For Communication Gap:
• Ensure the advertised messages with the reliable features.
• Use of good communication skills and avoid ambiguous terms to confuse or mislead the students.
• Offer students different levels of service by explaining the distinctions.

Finally, it is clearly evident that if the above prescriptions are strictly followed by the public or private university, they can reduce the service gap and can provide better services to students.

V. Conclusion

Service quality is the important variable for competitive advantage in Bangladesh. Service quality in education sector is very important as public and private universities are growing rapidly in our country which enhances competition. To become successful in such a challenging environment, it is very important for universities to maintain high quality service standard. Not only private universities but also public universities in Bangladesh are increasing day by day. Moreover, the students always want reliable and responsive services from the universities. They also want assurance, empathy, and tangible services from the universities. Moreover, it is clearly evident from the results of this study that there is a significant service gap in the dimensions of service quality. So, it is suggested that proper steps should be taken strictly by authorities of public and private universities in Bangladesh. This study also provides researchers with useful guidelines for future research that would result in more rigorous theoretical and methodological processes.

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