DETERMINANTS OF STUDENT SATISFACTION IN THE CONTEXT OF HIGHER EDUCATION: A COMPLETE STRUCTURAL EQUATION MODELING APPROACH

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ABSTRACT: *The objective of this study is to investigate the relationship between service quality, program quality and student satisfaction in the context of higher education. In the context of higher education, most of the private universities are incapable of upholding the quality of higher studies in Bangladesh. Subsequently, student dissatisfaction has been detected, and institutions have failed to establish a positive image in the minds of employers. Moreover, in depth investigation on student satisfaction is under-researched in respect of private universities of Bangladesh. Past researchers have examined the only direct affiliation between service quality and student satisfaction, ignored program quality absolutely. The Structural Equation Modeling (SEM) is used to analyze the influence of independent variables and hypotheses testing. The population of this study was fourth-year business students of nine 'grade one' private universities in Bangladesh. Data (n=331) were gathered from students pursuing studies at different private universities in Bangladesh. The study has discovered that service quality and program quality both have statistically strong significant impact on student satisfaction but program quality has explained more variance on student satisfaction. These unique findings imply that academic authorities should nurture the program quality rigorously in order to enhance student satisfaction without ignoring service quality. The findings of this study would bring benefits to both practitioners and academics for formulating appropriate strategies to ensure student satisfaction, especially in the perspective of private higher education.*

KEY WORDS: Service quality, program quality, institutional image, and student satisfaction.

INTRODUCTION

The higher studies in Bangladesh have gone through enormous growth in recent times and it is broadly perceived that future attainment in a globalized global economy entirely depends on superior service, which it turns leads to customer satisfaction. Superior service quality as recognized by the customer, can contribute any organization an economical gain (Albrecht, 1991). In recent times, student satisfaction has gained ample focus and has ended up with the leading focusing point of entire tertiary level educational institutions (Temizer & Turkyilmax, 2012). Arambewela and Hall (2009) also stressed that student satisfaction was the key basis of competitive lead and it had become a main contest for the universities. The Annual Report of UGC (2015) disclosed that there were 375,000 students in 2015, pursuing education at different private universities of Bangladesh. Faruky, Uddin, and Hossain (2012) revealed that only 47 percent of the students were satisfied with their educational services in perspective of private universities of Bangladesh.

Higher education institutions are the grounds for producing and dissemination of knowledge. However, the quality of education is not visible in the universities of Bangladesh, and it is steadily deteriorating (Annual Report UGC, 2004). Rouf et al. (2015) also revealed that students' satisfaction status was poor regarding campus facilities, lab, and library services. Researchers also pointed out that a few private institutions had focused on quality, and the rests of them were far away from quality education. The Education Minister, Nurul Islam Nahid lamented that majority of nongovernment universities were ineligible to maintain the quality of higher studies in Bangladesh (The Daily Prothom Alo, 2010). Monem and Baniamin (2010) expressed their grievance in similar fashion that the progress of the private higher education institutions must be controlled both in terms of their number and quality in Bangladesh. Mohsin and Kamal (2012) postulated in their study that the quality of both public and private higher educational institutions of Bangladesh had been at a miserable stage. The rank of Bangladesh is 142th, according to the Human Development Index (HDI) in the world in comparison with Singapore and Malaysia which are 26th and 61th position respectively out of 188 countries, and this account is displayed according to the report of HDI, 2014. Above discussions inspired researchers to conduct research on student satisfaction of private higher education context. In addition, in depth investigation on student satisfaction is under-researched, especially in private university perspective of Bangladesh. Past researchers have examined the only direct association between service quality and student satisfaction, ignored program quality absolutely thus researchers motivated to conduct the study in this respect. This study endeavors to explore the relationship between service quality, program quality and student satisfaction by using structural equation modeling (SEM) which is also a unique and rare effort.

LITERATURE REVIEW

Student satisfaction

Customers are the decisive evaluator of service quality (Sakthivel et al., 2005). Thus, student satisfaction and its consequences are vital for sustainability in the arena of higher education. Quite a few studies noted that retention of current customers was five times cost effective than inviting new customers in terms of resources usage (Naumann, 1995). This creates a competition among organizations for maintaining superior service, better understanding of customer expectations and upgrading of services and products. Above discussion indicates that customer satisfaction is obligatory for developing quality of services and it is a vital thing to embrace and to survive in the competitive market environment. Furthermore, customer satisfaction ultimately retains existing customers and it is the cost savings approach in all senses. Customer satisfaction has become a strategic issue to companies because it has an emotional impact on customer faith (Omar, Nazri, Abu, & Omar, 2009). Lee and Hwan (2005) pointed out that customer satisfaction was a vital part for service organization and it was extremely connected to service excellence. In this respect, Sapri and Finch (2009) asserted that customers were life force of any organization, for both government and non-government organizations.

Being a service organization, tertiary education institutions think about students as clients, or the 'leading interested party' who is engaged in the acquisition of higher education programs and services (Ravindran & Kalpana, 2012). Student satisfaction can express biased assessment for students, in respects of how well an acquiring knowledge atmosphere assists its educational accomplishments (Lo, 2010, p. 47). Satisfaction aids students to shape their self-assurance,

which, eventually, dominates to the progress of necessary expertise and the gaining of intellectual abilities (Letcher & Neves, 2010). Arambewela and Hall (2013) indicated in their study that student satisfaction was profoundly influenced by the quality of the services provided. Parahoo, Harvey, and Tamim (2013) claimed that customer satisfaction was a universal concept for foreseeing customer behavior, and the term is also well-known in academic research.

Service quality

Service quality is a critical aspect for establishing and sustaining relationship with customers (Park et al., 2006). Since it has significant merit on customer satisfaction thus this construct has valued as a major determining factor of organization's success or failure in a competitive environment (Lin et al., 2009). Hernon and Nitecki (2001) postulated that definitions of service quality were based on four main perspectives. The first perspective was 'excellence', which was often externally defined. The second perspective was 'value', which integrated several features and focused on benefit to the customer. The third perspective was 'conformance to specifications', which indicated precise measurement. Finally, 'meeting or exceeding expectations', which were related to customers' satisfaction. Excitingly, various studies have highlighted the significance of service quality in educational institutions (Airey & Bennett, 2007; Shakarhizadeh et al., 2011; and Annamdevula & Bellamkonda, 2012). Annamdevula and Bellamkonda (2012) developed a measuring instrument of service quality called HiEDQUAL. This new measuring instrument consisted of 27 items separated into five dimensions, which they found to have significant positive influence on overall students' perceived service quality. The five factors are: teaching and course content, administrative services, academic facilities, campus infrastructure and support services within the higher education sector. Firdaus (2005) designed HEDPERF (Higher Education Performance) which categorized 5determinants of service quality in higher education. They are non-academic aspects, academic aspects, reputation, access, and program issues. Non-academic aspects refer to aspects that are essential to enable students to fulfill their study obligation and relate to duties carried out by non-academic staff. Academic aspects refer to aspects include positive attitudes, good communication skills, sufficient consultation, regular feedback to students, and outstanding ability of the teaching staff which relate to the responsibilities of academics. Reputation of university is the professional image projected by the university. Access is the availability, approach ability, and convenience of both academics and non-academic staffs. Program issues were defined as offering wide ranging and reputable academic programs or specifications with flexible structures. Parasuraman et al. (1985) developed SERVQUAL (gap model), a widely accepted instrument for measuring service quality. Alternatively, the SERVPERF (purely-performance measure) another popular device was developed by Cronin and Taylor (1992). They argued that SERVPERF clarified a greater amount of variance in a complete measure of service quality than does SERVQUAL. Due to the less predictable power of gap model, this study has installed SERVPERF model to minimize the shortcoming.

Program quality

According to Aminuzzaman (2007), the quality education and its prerequisites are method of teaching, curriculum and its improvement, and upgrading professional knowledge and skills. These components are basically representing 'program quality' but the research was not comprehensive enough in terms of covering wide geographical areas of Bangladesh. Lamagna (2002) expressed her view regarding tertiary education that quality teaching and research were indispensible to ensure quality education but her study was merely conceptual in nature.

Therefore, empirical study is necessary to occupy this gap for robust evidence in future. The current study has fulfilled this gap and discovered unique findings. Andaleeb (2003) postulated a few important aspects of quality education such as; teaching quality, teaching methods, curriculum, and direct and indirect facilities for teaching. These are sufficiently connected with 'program quality' which is incorporated in this current study for further justification of student satisfaction. Navarro et al. (2005) suggested that student satisfaction substantially depends upon teaching staff, teaching method, and course administration. Mai (2005) indicated several influential factors related with student satisfaction such as; teacher's expertise and their interest in their subjects, IT facilities, and students careers. Aldemir and Gulcan (2004) examined the Turkish students' satisfaction in higher education. They highlighted that quality of instructors and quality education was greatly responsible for student satisfaction. Deshields et al. (2005) also emphasized that faculty performance, classroom atmosphere, learning facilities and institution reputation were essentially influential factors for student satisfaction. Ashraf et al. (2016) concluded that faculty credentials, curriculum structure, and career prospects were notable aspects and they were statistically significant towards quality education.

Service quality and Student satisfaction

Service quality is an insightful assessment of customer, which has a strong contribution to satisfaction (Jamali, 2007; and Zeithaml & Bitner, 2003). Therefore, service quality is treated as a predecessor of customer satisfaction and not adequate studies have been conducted to investigate in services (Prabhakar & Ram, 2013). Arambewela and Hall (2013) indicated that student satisfaction profoundly influenced by the service quality. Recent service quality literature confirmed that the influence of service quality towards satisfaction (Abili et al., 2011; Rashidi et al., 2012; and Fernandes et al., 2013). One study reveals that satisfaction is affected by service quality and service quality is passing through perceived value in tertiary education setting (Brown & Mazzarol, 2009). On the other hand, one more investigation verifies service quality-satisfaction relationship through applying ECSI model, reveals that service quality straightforwardly influences satisfaction (Alves & Rapaso, 2009). Thus, it can be concluded that if service aspects are executed in a sound manner then student satisfaction would be ensured. Thus, hypothesis can be formulated in this manner below:

H1: Service quality has a significant relationship on student satisfaction.
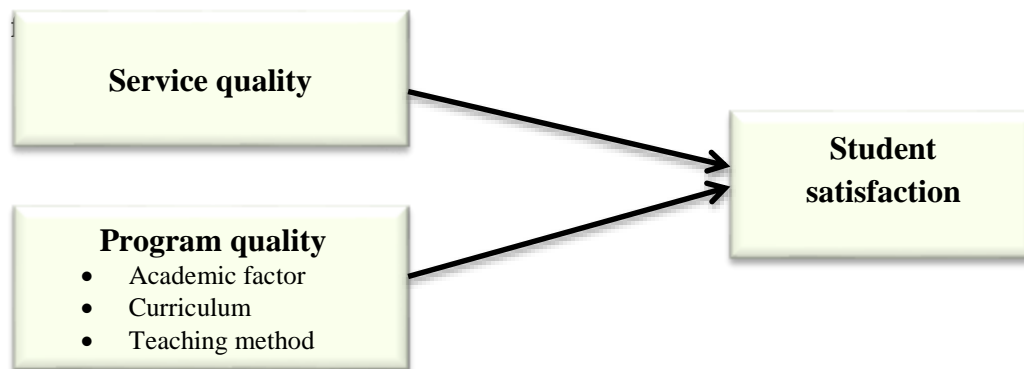
Program quality and Student satisfaction

Several investigations suggest that there are more precise factors are applicable for measuring quality in higher education (Rowley, 1997; and Jamil, 2007). Program quality is found and suggested to be an additional variable that is suitable for the higher education context and it is evident that academic factors, curriculum, and teaching method are the most essential determinants of student satisfaction (Abdullah, 2006; Angell et al., 2008; Ford et al., 1999; and Peng & Samah, 2006). Babar and Kashif (2010) communicated that teachers' knowledge was the most dominant factor for student satisfaction in higher education perspective. Firdaus (2005) confirmed that academic aspects were critical service quality indicators. The academic aspects had a very strong positive relationship with student satisfaction too. Hill (1995) disclosed that teaching method was antecedents of student satisfaction. In this respect, Kuh and Hu (2001) proposed that program issue was a predictor of student satisfaction. Furthermore, Ford, Joseph, and Joseph (1999) revealed that student satisfaction would increase with the improving effort in program quality. Therefore, hypothesis can be articulated in this manner:

H2: Program quality has a significant relationship on student satisfaction.

RESEARCH FRAMEWORK

Based on the above literature review, a research model was established to explore the influence of service quality and program quality towards student satisfaction, where service quality and program quality are independent variables and are positively related to student satisfaction. The supporting underpinning theory was the 'Equity Theory' developed by John Stacey Adams in 1963.The objective of the theory was to explain relational satisfaction in terms of the perception of fair/unfair distribution of resources with interpersonal relationships. In addition, The Equity Theory has earned an extensive recognition recently in explaining customer behavior and customer satisfaction (Grigoroudis & Siskos, 2010). The research framework is illustrated in Figure 1.

Figure 1: The Conceptual Model

RESEARCH HYPOTHESES

The conceptual framework of the study and reviewed literature suggest some imperative affiliation among service quality, program quality, and student satisfaction. On the basis of such evidence following hypotheses are established.

H1: Service quality is positively related to students' satisfaction.

H2: Program quality is positively related to students' satisfaction.

RESEARCH METHODS

Population and Sampling

In evaluating the hypotheses of this research, the target population was 5397 final-year students pursuing education in business management program at nine 'grade one' private universities

in Bangladesh. According to the recommendation of Gay and Airasian (2003), if population is more than 5,000 then sample size of 400 would be quite enough. Thus, a total of 450 samples were chosen through the systematic random sampling technique and 334 (74.22%) were returned. Three samples were eliminated due to the incomplete responses and left total useable samples of 331 in this study. The reason behind the systematic sampling was to let the respondents have an equal chance to participate in this study. The research strategy for this investigation was a quantitative method and data was accumulated through a self-regulated questionnaire. The study adopted a cross-sectional research design where the data were accumulated at single point in time (Sekaran & Bougie, 2013).

Research Instrument

Service quality was operationalized based on the SERVPERF model proposed by Cronin and Taylor (1992). The construct was measured through five basic dimensions of service quality (i.e. tangibility, reliability, responsiveness, assurance, and empathy). A five-point Likert-type scale was deployed to measure students' perception towards the quality of service within their institutions (ranging from 1-5, indicating strongly disagree to 1, indicating strongly agree to 5).

Program quality was operationalized based on three dimensions such as academic factors, curriculum, and teaching methods adapted from Angell et al., (2008); Kwan and Ng (1999); and Navarro et al., (2005) consisting of 18 items. Respondents had been asked to indicate their reactions regarding their perceptions on the level of program quality within their institutions on a five point scale (ranging from 1-5, indicating strongly disagree to 1, indicating strongly agree to 5).

Student satisfaction was measured through eight items proposed by Sultan and Wong (2012) and Wilkins and Balakrishnan (2013). Respondents had been asked to indicate their responses regarding their perceptions on the level of satisfaction within their institutions on a five point scale (ranging from 1-5, indicating strongly disagree to 1, indicating strongly agree to 5). A pilot test was conducted for the refinement of questionnaire and instrument's reliability was confirmed through the Cronbach's alpha. The results of Cronbach's alpha for each construct was 0.938 (student satisfaction), 0.765 (service quality), and 0.826 (program quality). The result of the pilot test ensured that the respondents understood the instruments well.

RESULTS AND DISCUSSION

A total of 331 usable questionnaires were analyzed in this study. The samples consisted of 200 males (60.42%) and 131 females (39.58%). In terms of GPA, 29% students earned 3.5 and above, and 27.4% students achieved less than 3.0. In terms of educational background, 84% students originated from 'Bangla Medium', 11.3% from 'A Level' and only 0.6% from 'Madrasa Medium'. In respect of financial aid, 35.8% students are enjoying financial benefits/aids. With regard to monthly family income, 79% families are less than Taka 100,000 ($1250) and 10.3% families are more than Taka 150,000 ($1900). SEM (structural equation modeling) was used to assess the proposed research model and hypotheses. In reality, SEM integrates the power of multiple regression, factor analysis, and multivariate ANOVA/MANOVA in a single structural model that can be assessed statistically simultaneously. The study delivered a good fit of the research model to the data. The ratio χ2/df was 1.691, lower than the value of 5.0 as recommended by Hair et al. (1995, 2010) and Holmes-

Smith (20060. Incremental fit indexes were higher than 0.90, with CFI of 0.925, and TLI of 0.926. In terms of absolute fit index, the RMSEA was 0.040 which is lower than recommended value of 0.08. Together with these indexes, it is confirmed that the research model was a proper fit. Later, emphasizing on the fit of the research model, estimated path coefficients were derived for the examined relationships. On the above of that, the research hypotheses were discussed as well. The Table 2 represents the findings of the goodness of fit indexes. According to the recommendation of Hair et al. (1995, 2010) and Holmes-Smith et al. (2006), at least one index from each category must be satisfied the minimum acceptable limit for ensuring goodness model fit. Furthermore, there were a few valid conditions to be satisfied to analyze the SEM path structure, which are uni-dimensionality, validity, and reliability. Reliability, factor loadings, composite reliability, and average variance extracted are depicted in Table 1. In Figure 2, the correlation value (0.85) between service quality (SQ) and program quality (PQ) is shown and met the threshold level to justify the discriminant validity. A number of authors suggest a threshold value of correlation between two constructs 0.85 (Clark & Watson, 1995; and Kline, 2011). Figure 2 presents the final fit structural model, after deleting 12 items due to factor loading less than 0.60 (Awang, 2012). In next phase, two items (e36 and e52) were deleted due to high modification index (MI) according to the suggestion of Awang (2012). The Table 2 shows the proven fitness index measurements, and the Table 3 shows the results of hypotheses concerning the independent variables (service quality and program quality) and the dependent variable (student satisfaction).

Table 1: Reliability, Validity, and Uni-dimensionality Assessment

Construct	Factor Loadings	Cronbach's Alpha	CR	AVE
Service Quality (SQ)		0.911	0.89	0.69
• Tangibility	0.72			
• Reliability	0.80			
• Responsibility	0.88			
• Assurance	0.85			
• Empathy	0.91			
Program Quality		0.911	0.95	0.87
• Academic factor	0.92			
• Curriculum	0.94			
• Teaching Method	0.94			
Student Satisfaction		0.897	0.83	0.59
• Satis1	0.83			
• Satis2	0.79			
• Satis3	0.80			
• Satis4	0.77			
• Satis5	0.67			
• Satis8	0.72			

CR = Composite Reliability, AVE = Average Variance Extracted

In general, the main purpose of the study was to verify the influence of service quality and program quality towards student satisfaction. Before evaluating the hypotheses of the study,

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goodness of the structural model was verified. Assessment of goodness test ensured that RMSEA = 0.040, CFI =0.925, TLI =0.926, and χ2/df =1.691 indexes are met the acceptable level (see Table 2).

The current study found that service quality was significantly influenced the student satisfaction in respect of private higher education of Bangladesh as shown in the Table 3. In other way, the higher the perception of service quality, then the higher of student satisfaction is established in this study. Thus, hypothesis **H1** is supported in this study. This finding is parallel with past studies initiated by Hisharmuddin and Azleen (2008), Yunus et al. (2010), Asaduzzaman et al. (2013) and Ambrose et al. (2014). Parasuraman et al. (1988) showed that satisfaction is the emotional position derived from the emotion which is combined with the consumer's previous feelings regarding consumption experience. Gilbert (1992) redefined customer satisfaction as an existing position of thoughts in which the client's requirements, and hopes throughout the product or service lifecycle had been satisfied or surpassed. Therefore, overall service quality has an enviable merit to satisfy customers. In this connection, students' perception is endorsing rightly that service quality is the predecessor of student satisfaction. Virtually, overall service quality instigates image of the institution, which eventually leads to student satisfaction.

This study revealed that program quality was significantly influenced the student satisfaction in respect of private higher education of Bangladesh as shown in Table 3. In other words, the higher perception of program quality has established the higher satisfaction of students. Thus, hypothesis **H2** is confirmed in this study. The finding of this study is also consistent with several past studies conducted by Kuh and Hu (2001), Firdaus (2005), Navarro et al. (2005), Huang (2010) and Ali, Zhou, Hussain, Nair, & Ragavan (2016). Reasonably, students are more concern about program quality because it builds strong reputation and creates more opportunities for job placement. When their ultimate goals towards jobs are ensured then they start appraising that their educational program is meaningful and invaluable, which brings ultimate satisfaction. Furthermore, in recent times, program quality is assessed through international accreditation such as AACSB, AMBA, EQUIS etc. These accreditations are carrying high value of program quality and open doors for internationally acceptable degree everywhere in the world. As a result, focusing on program quality is sufficient enough to satisfy students in another way. Leaders of higher education institutions need to think progressively and proactively to achieve internationally recognized seal of quality.
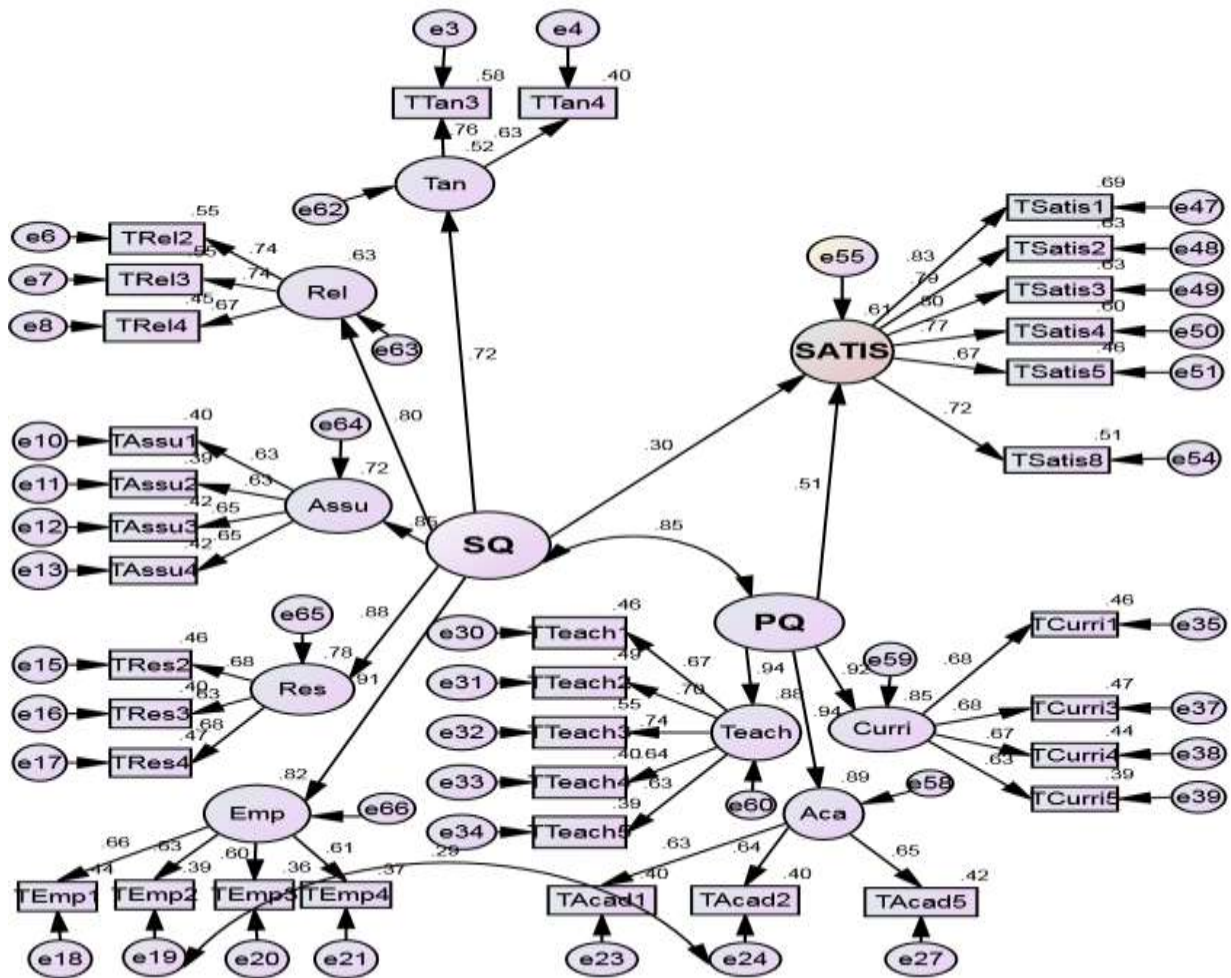
Figure 2: Final Fit Standardized Structural Model of Student Satisfaction

Table 2: The Assessment of Fitness of Structural Fit Model (Figure 2)

Name of Category	Index	Acceptable Level	Comments
1. Absolute fit	RMSEA = 0.040	RMSEA < 0.08	Required level achieved
2. Incremental fit	CFI=0.925	CFI > 0.90	Required level achieved
	TLI=0.926	TLI > 0.90	Required level achieved
3. Parsimonious fit	Chisq/df= 1.691	< 5.0	Required level achieved

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Table 3: Results of Hypothesis

Hypothesis	Standardized Beta Estimate	S.E	CR	P	Status
H1: Service quality has significant influence towards student satisfaction.	0.30	0.160	4.080	***	Significant
H2: Program quality has significant influence towards student satisfaction.	0.51	0.177	2.476	***	Significant

Note: Significant at, $p < 0.001$***

IMPLICATIONS

Virtually, this study provides some insights into the influence of service quality and program quality towards student satisfaction and encourages education leaders to use the essence of this study practically for continuous improvement of student satisfaction. The findings of the study also assist as a guideline for top management of higher education institutions to appraise their program quality and service quality on a periodic basis in order to facilitate student satisfaction. Management should give emphasis to student's opinion and grievances into quality enhancement program where service quality and program quality can be enhanced for building image of the institution and forming a competitive advantage.

LIMITATIONS AND FUTURE RESEARCH

There are few inherent limitations within the study that needed to be addressed: Firstly, the research has conducted only in private-university perspective of Bangladesh. Thus, generalization of the results in higher education perspective is questionable. Secondly, the study included only 'grade one' nine private universities of Bangladesh. Again, it is not wise to generalize the results to other higher education institutions in different areas or to separate industries. Thirdly, the study targeted final-year business students only; thus the findings of the study were still disputed to generalize. Fourthly, there are obviously more variables apart from service quality, and program quality that had been investigated through this study and was expected to affect student satisfaction. This study is solely confined to 'grade one' private institutions in Bangladesh therefore scopes are open for mid-grade and poor institutions to conduct further study. In future, the research could be evaluated including other stakeholders' reactions based on the conceptual model of this study.

CONCLUSION

In conclusion, the purpose of this study is to explore the relationship between service quality, program quality and student satisfaction. Results have illustrated that service quality and program quality both have statistically significant relationships on student satisfaction. However, program quality has explained much variance in student satisfaction due to its high

beta value (β) compare to service quality. Thus, program quality is more influential factor than service quality towards confirming student satisfaction. The concluding remark is that hypothesis H1 and H2 both are supported statistically but higher education leaders should pay more rigorous consideration on program quality to preserve student satisfaction without ignoring service quality.

REFERENCES

Abdullah, F. (2006). Measuring quality in higher education: three instruments compared. *International Journal of Research Method in Education*, 29(1), 71-89.

Abili, K.,Thani, F. N., Mokhtarian, F., & Rashidi, M. M. (2011). Assessing quality gap of university services. *Asian Journal of Quality, 12*(2), 167-175.

Albrecht, K. (1991). Total Quality Service. *Executive Excellence*, July, 18-19.

Aldemir, C., & Gulcan, Y. (2004). Students satisfaction in higher education: A Turkish Case. *Higher Education Management and Policy*, 16(2), 109-122.

Ali, F., Zhou, Y., Hussain, K., Nair, K. P., & Ragavan, A. N. (2016). Does higher education service quality effect student satisfaction, image and loyalty? A study of international students in Malaysian public universities. *Quality Assurance in Education*, 24(1), 70-94.

Airey, D., & Bennett, M. (2009). Service quality in higher education: The experience of overseas students. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 6 (2), 1473-1476.

Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management & Business Excellence*, 18 (5), 571-588.

Aminuzzaman, M. S. (2008). *Quality Issues of Higher Education in Bangladesh*, available at www.international.ac.uk

Andaleeb, S. S. (2003). Rejuvenasting the nation's higher education system. Proceeding *of the workshop organized by International University of Business Agriculture and Technology, Dhaka, Bangladesh*.

Angell, R. J., Heffernan, T. W., & Megicks, P. (2008). Service quality in postgraduate education. *Quality Assurance in Education*, 16(3), 236-254.

Arambewela, R., & Hall, J. (2009). An empirical model of international student satisfaction. *Asia Pacific Journal of Marketing and Logistic*, 21(4), 555-569.

Arambewela, R., & Hall, J. (2013).The international effects of the internal and external university environment, and the influence of personal values, on satisfaction among international postgraduate students. *Studies in Higher Education, 38*(7), 972-988.

Annamdevula, S., & Bellamkonda, R. S. (2012). Development of HiEdQUAL for measuring service quality in Indian higher education sector. *International Journal of Innovation, Management and Technology*, 3(4), 412-416.

Asaduzzaman, Moyazzem, H., & Mahabubur, R. (2013). Service quality and student satisfaction: a case study on private universities in Bangladesh. *International Journal of Economics, Finance, and Management*, 1(3), 128-135.

Ashraf, A. M., Osman, R. Z. A., & Ratan, A. R. S. (2016). Determinats of quality education in private universities from student perspective. *Quality Assurance in Education*, 24(1), 123-138.

Awang, Z. (2012). *Structural Equation Modeling Using Amos Graphic*. PENERBIT PRESS, Universiti   Technology Mara.

Babar, Z. B., & Kashif, U. R. (2010). A study examining the student satisfaction in higher education. *Procedia   Social and Behavioral Sciences*, 2, 5446-5450.

Brown, R., & Mazzarol, T. (2009).The importance of institutional image to student satisfaction and loyalty within higher education. *Higher Education*, 58(1), 81-95.

Clark, L. A., & Watson, D. (1995). Constructing validity: basic issues on objective scale development.   *Psychological Assessment*, 7(3), 309-319.

Cronin, J. J., & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *The Journal of   Marketing*, 56(3), 55-68.

Cronin, J. J., & Taylor, S. A. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and performance-minus-expectation measurement of service quality. *The Journal of Marketing*, 58(1), 125-131.

DeShields, Jr., O. W., Kara, A., & Kaynak, E. (2005). Determinants of business student satisfaction and retention   in higher education: applying Herzberg's two factor theory. *International Journal of Educational   Management*, 19(2), 28-139.

Fernandes, C., Ross, K., & Meraj, M. (2013). Understanding student satisfaction and loyalty   in the UAE HE   sector. *International Journal of Educational Management*, 27(6), 613-   630.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and   measurement error. *Journal of Marketing Research*, 39-50.

Firdaus, A. (2005). HEdPERF versus SERVPERF: The quest for ideal measuring instrument of service quality   in higher education sector. *Quality Assurance in Education,* 13(4), 305-328.

Ford, J. B., Joseph, M. and Joseph, B. (1999). Importance-performance analysis as a strategic tool for service   marketers: the case of service quality perceptions of business students in New Zealand and the USA. *The   Journal of Services Marketing*, 13, 171-186.

Gay, L. R., & Airasian, P. (2003). *Educational research: Competencies for analysis and application (7th ed.).*   New Jersey: Pearson Education.
Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis: A global   perspective (7thed.).* Upper Saddle River: Pearson Education.

Hishamuddin, F. A. H., & Azleen, I. (2008). Service quality and student satisfaction: A case study at private higher education institutions. *International Business Research*, 1(3), 163-175.

Holmes-Smith, P., Coote, L., & Cunningham, E. (2006). *Structural equation modeling: From the fundamental to   advanced topics*. Melbourne: Streams.

Grigoroudis, E., & Siskos, Y. (2010).*Customer satisfaction evaluation: Methods for measuring and   implementing service quality*. Springer, New York.

Hernon, P., & Nitecki, D. (2001). Service quality: A concept not fully explored. *Library Trends*, 49, 687-708.

Huang, Q. (2010). The relationship between service quality and student satisfaction in higher education sector: A case study on the undergraduate sector of Xiamen University of China. *AU Journal of Management*, 38-44.

Jamali, D. (2007). A study of customer satisfaction in the context of a public private partnership. *International   Journal of Quality & Reliability Management*, *24*(4): 370-385.

Kuh, G. D., & Hu, S. (2001).The effects of student-faculty interaction in the 1990s. *Review of Higher   Education*, 24(3), 309-321.

Kline, R. B. (2011). *Principles and practice of structural equation modeling (3 rd ed.)*.The Guilford Press. New York.

Kwan, P. Y. K., & Ng, P. W. K. (1999).Quality indicators in higher education comparing Hong Kong and China's students. *Managerial Auditing Journal*, 14(1/2), 20-27.

Lamagna, C. Z. (2002). *Strategic view of the development of higher education: Bangladesh AIUB Perspective*, Bangladesh Business Year Book, A1 Publication, Dhaka.

Lee, M., & Hwan, I. (2005). Relationships among Service Quality, Customer Satisfaction and Profitability in the Taiwanese Banking Industry. *International Journal of Management*, 22(4), 635-648.

Letcher, D. W., & Neves, J. S. (2010). Determinant of undergraduate business student satisfaction. *Research in Higher Education Journal*, 1-26.

Li, Y. N., Tan, K. C., & Xie, M. (2003). Managing service quality: applying utility theory in the prioritization of service attributes. *International Journal of Quality and Reliability Management*, 20(4), 417-435.

Lin, S. P., Chan, Y. H., & Tsai, M. C. (2009). A transformation function corresponding to IPA and gap analysis. *Total Quality Management & Business Excellence*, 20(8), 829-846.

Lo, C. C. (2010). How student satisfaction factors effect perceived learning. *Journal of the Scholarship of Teaching and Learning*, 10(1), 47-54.

Mai, L. (2005). A comparative study between UK and US: The student satisfaction in higher education and its influential factors. *Journal of Marketing Management*, 21, 859-878.

Mohsin, M., & Kamal, A. (2012). Managing quality higher education in Bangladesh: Lessons from the Singaporean and Malaysian strategies and reforms. *International Journal of Business and Management*, 7(20), 59-70.

Monem, M., & Baniamin, M. H. (2010). Higher Education in Bangladesh: Status, Issues and Prospects. *Pakistan Journal of Social Sciences,* 30(2), 293-305.

Naumann, E. (1995). *Customer Satisfaction Measurement and Management: Using the Voice of the Customer*. Thomson Executive Press, Cincinnati, OH.

Navarro, M. M., Iglesias, M. P., & Torres, P. R. (2005). A new management element for universities: Satisfaction with the offered courses. *International Journal of Educational Management, 19*(6), 505- 526.

Omar, N., Nazri, M., Abu, N., & Omar, Z. (2009). Parents' perceived service quality, satisfaction and trust of a childcare centre: implication on loyalty. *International Review of Business Research Papers*, 5(5), 299-314.

Parahoo, S. K., Harvey, H. L., & Tamim, R. M. (2013). Factors influencing student satisfaction in universities in the Gulf region: Does gender of student matter? *Journal of Marketing for Higher Education*, 22(2), 1-20

Park, J. W., Robertson, R., & Wu, C. L. (2006). Modeling the impact of airline service quality and marketing variables on passengers' future behavioral intentions. *Transportation Planning and Technology*, 29 (5), 359-381.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1985). A conceptual model of service quality and its implication for future research. *Journal of Marketing*, 49(April), 41-50.

Peng, P. J., & Samah, A. J. A. (2006). Measuring students' satisfaction for quality education in a e-learning university. *Unitar E-Journal*, 2(1), 11-21.

Prabhakar, G. V., & Ram, P. (2013). SERVQUAL and customer satisfaction: the mediating influence of communication in the privatized telecom sector. *International Journal of Academic Research in Business and Social Sciences*, *3*(3), 135-148.

Rasli, A., Shekarchizadeh, A., & Iqbal, M. J. (2012). Perception of service quality in higher education:Perspective of Iranian students of Malaysian universities. *International Journal of Economics and Management*, 6(2), 201-220.

Ravindran, D. S. & Kalpana, M. (2012). Students' expectation, perception and satisfaction towards the management educational institutions. *Procedia Economics and Finance*, 2, 401-410.

Rouf, A. M., Habibullah, M., & Islam, A. M. (2015). Opinion on the higher education of private universities in Bangladesh. International *Journal of Education and Information Technology*, 1(3), 80-86.

Rowley, J. (1997). Beyond service quality dimensions in higher education and towards a service contract. *Quality Assurance in Education, 5*(1), 7-14.

Rowley, J. (2003). Designing student feedback questionnaires. *Quality Assurance in Education,*11(3), 142-149.

Sakthival, P. B., Rajendran, G. & Raju, R. (2005). TQM implementation: TQ implementation and students' satisfaction of academic performance. *The TQM Magazine*, 17(6), 573-589.

Sapri, M., Kaka, A., & Finch, E. (2009). Factors that Influence Student's Level of Satisfaction with Regards to Higher Educational Facilities Services. *Malaysian Journal of Real Estate*, 4(1), 34-51.

Sekaran, U. & Bougie, R. (2010). *Research methods for business: A skill building approach(5th ed.).* New York: John Wiley & Sons.

Shekarchizedeh, A., Rasli, A., & Hon-Tat, H. (2011). SERVQUAL in Malaysian universities: Perceptions of International students. *Business Process Management Journal*, 17(1), 67-81.

Sultan, P., & Wong, Y. H. (2012). Service quality in a higher education context: an integrated model. *Asia Pacific Journal of Marketing and Logistics*, 24(5), 755-784.

The Daily ProthomAlo (2010). *Shikha Montrolay Breif: Bishwabidyalayke LalShanket*, 13th December.

Temizer, L., & Turkyilmaz, A. (2012). Implementation of Student Satisfaction Index Model in Higher Education Institutions. *Procedia-Social and Behavioral Sciences, 46*, 3802- 3806.http://dx.doi.org/10.1016/j.sbspro.2012.06.150

UGC (2015). Annual Report 2015. University Grants Commission, Bangladesh

U.S. News & World Report (2011). Retrieved August 25, 2012, from

http://www.usnews.com/education/worlds-best-universitiesranking/top-400-universities-in-the-world.

Wilkins, S. & Balakrishnan, S. M. (2013). Assessing student satisfaction in transnational higher education. *International Journal of Educational Management*, 27(2), 143-156.

Yunus, N.K.Y, Ishak, S., & Razak, A. Z. A. A. (2010). Motivation, empowerment, service quality and polytechnic students' level of satisfaction in Malaysia. *International Journal of Business and Social Science*, 1(1), 120-128.

Zeithaml, V. A., & Bitner, M. J. (2003). *Services marketing: Integrating Customer Focus across the Firm,* McGraw-Hill, New York.

Zikmund, G. W., Babin, J. B., Carr, C. J., & Griffin, M. (2010). *Business Research Methods (8th edition).* SOUTH-WESTERN, CENGAGE Learning.

Zeithmal, V. A., Berry, L. L., & Parasuraman, A. (1993).The nature and determinants of customer expectations of service. *Journal of the Academy of Marketing Science*, 21(1), 1-12.