



## Measuring students' satisfaction in the Universities of Bangladesh: An empirical analysis

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### Abstract

**Purpose:** The purpose of this paper is to measure the level of satisfaction and the influential factors affecting the students' satisfaction in the universities of Bangladesh.

**Design/methodology/approach:** The paper employed the concept of service marketing to design a survey questionnaire and then used different statistical analysis using MS Excel and SPSS to analyze the results to determine which aspects of the University services were the most influential to the students.

**Findings:** The most important aspects were those associated with teaching and learning, while the learning resources and extra-curricular activities have a great impact on students' satisfaction in Bangladesh. The analysis also reveals that there is a very poor relationship between overall students' satisfaction and satisfaction with curriculum. The paper suggests that if teaching quality, learning resources, extra-curricular activities, infrastructural upgradation and research activities are increased, the overall satisfaction of the students will be increased in the university level in Bangladesh.

**Practical implications:** Outcomes of the research will help the authorities for designing the university services to be offered in the target market; for allocating the resources according to the students' demand; and for targeting the resources in those areas that are perceived to be low satisfaction and higher importance. Furthermore, the result will be a supportive tool for the policymakers to develop a sustainable higher education strategy in Bangladesh.

**Keywords:** students' satisfaction, higher education, Bangladesh

### Introduction

Education plays a significant role in the progress, economic development, up-gradation of the standard of living, etc. in any country<sup>[24]</sup>. Countries like Bangladesh take education as one of the major tools for human capital improvement<sup>[15]</sup>. During the 1990s the government of Bangladesh emphasized more on primary education. Access to primary education was the prime concern in those days<sup>[5]</sup>. To align with the Millennium Development Goals (MDGs) Government had taken the policies to achieve universal primary education<sup>[16]</sup>. Again, in line with the United Nation's Sustainable Development Goal (SDGs), the National Sustainable Development Strategy (NSDS) of Bangladesh identifies human resource development as a priority sector and highlight more on quality education at all levels (Primary, Secondary and Higher education)<sup>[15, 32]</sup>. University Education acts as the engine of progression of economic and social development of a nation. Universities implant necessary skills and technical expertise that accelerate economic and social progress<sup>[15]</sup>. In this regard, the Government of Bangladesh developed a 20-year strategic plan (2006-2026) for the higher education, keeping the UN's Sustainable Development Goals (SDGs), the National Education Policy 2010 and the Vision 2021 in mind<sup>[15]</sup>.

In Bangladesh, there exists two types of universities; the public and the private. The tertiary education system has grown to meet the demand of society and the market. The Private Universities Act, 1992, paved the way for the opening

of private universities in Bangladesh. These private universities made the higher education system more competitive. To keep pace with the global education system, both the public and the private universities have to ensure quality. Without ensuring the quality, students' satisfaction is going to be a mere dream<sup>[34]</sup>. Student outcomes, student retention, attrition, and graduation rates are some of the key measures of the quality and overall effectiveness of the higher educational institution<sup>[19, 28]</sup>. Studies show that student satisfaction has a positive impression on student motivation, student retention, recruiting efforts and fundraising<sup>[7]</sup>. Student satisfaction does not only depend on the quality of teaching but also some other factors regarding the institutions as well as their programs<sup>[24]</sup>. This basically implies that the higher the level of satisfaction with the educational environment, the higher the possibility that the student will stay at the educational institution and recommend the institution to others<sup>[30]</sup>. Again, the interaction between the students and the faculty members also considered as one of the major factors determining the student satisfaction in higher education<sup>[6, 22]</sup>. Improving the quality of educational programs at all levels is worthwhile and the examination of student perceptions and satisfaction levels is a primary means to this important expiration. A high-quality program recognizes the academic and professional needs of its students. Further, a high-quality program has a method for gathering and disseminating this information, enabling it to make appropriate adjustments in courses or policies when the student data indicate that change

or improvement is needed <sup>[4]</sup>.

In the early 1990s, principles of Total Quality Management (TQM) were implemented from the business world and incorporated into the higher educational institution <sup>[25]</sup>. In the perspective of TQM, students are considered as a customer. However, many educators did not welcome the theme that, "the customer is always right". Right now, most of the higher education institutions are considering their students as customers and treating their organizations as a service organization. As the institutions are serving the students as their direct customer, they are trying to meet the increasing number of expectations and higher quality of the students demanded at this tertiary level of education <sup>[10]</sup>. Therefore, it needs to identify the level of satisfaction of the university students, which will ultimately help the university authority to formulate strategy and meet the demand of the market.

### Literature Review

The literature on student satisfaction and their representation of the educational have is very multiplex. Views of the authors on the conception of student satisfaction are quite different. Apiece author has their own views regarding the needs of students' satisfaction at the university level. Some authors argue the so-called "managerial dimension" of student satisfaction: the university is an enterprise and the students are the customers <sup>[29]</sup>. Thus, in order to satisfy students, the customer approach should be useful in the universities.

The most disputed point of view is that of students being a customer of the university, due to the fact that universities are seemingly more business-like <sup>[2]</sup>. For instance, Elliott and Shin <sup>[14]</sup> mean that globalized rivalry has emphasized the strategic importance of satisfaction and quality in the attempt for winning consumer preferences and sustaining sustainable competitive advantages. Hill <sup>[21]</sup> suggested that the primary customers of the universities are the students, and so Higher Education is progressively familiar with that it is a service industry and is engaging more importance on meeting the expectations and desires of students. Moreover, concentrating on student satisfaction not only allows universities to re-engineer their organizations to adapt to student needs but also permits them to improve the system for regular monitoring of how efficiently they meet or exceed student expectations <sup>[4]</sup>. Besides, academics argue that "relationships are important and that the overall market orientation of organizations needs to be translated to a relationship level in order to be effective" <sup>[20]</sup>.

Aldemir and Gülcan <sup>[1]</sup> conducted a study on "Student Satisfaction in Higher Education" and the aim of the study was to identify the level and the factors for university students' satisfaction with the institutions they are attending. The results of the study portrayed, for some Turkish university students at least the quality of education, instructors, textbooks and being female and informed before attending university can be considered important factors of satisfaction. Tsinidou, Gerogiannis, and Fitsilis <sup>[31]</sup> conducted a study on "Evaluation of the factors that determine quality in higher education: an empirical study" directing to ascertain the quality determinants for education services delivered by higher education bodies in Greece and to scale their relative position from the students' viewpoint. The findings of the study advocated that the relative weights of the factors that

promote the quality educational services as it is alleged by students have to be underlined.

Alves and Raposo <sup>[3]</sup> did a research on 'Conceptual Model of Student Satisfaction in Higher Education'. The work proved to affect and understand the factors which impact student satisfaction in higher education, as well as degrees of it, this study trials an expounding model of student satisfaction in tertiary education. The model was verified through the employment of structural equations and exposed that the variable which has the greatest impact on student satisfaction in higher education is the variable -image tailed by value and later quality perceived. From the learning, it was also visible that the main magnitude of satisfaction was student reliability caused by word of mouth communication from student to student.

Douglas, Douglas, and Barnes <sup>[11]</sup> led a study on 'Measuring student satisfaction at a UK university'. The aim of the study was to measure student satisfaction at Liverpool John Moores University's Faculty of Business and Law. The outcome of the study shows that student satisfaction generally determined by on the features allied with teaching and learning, while the least significant were those associated with the physical amenities.

A study conducted by Eagle and Brennan <sup>[12]</sup> on the title "Are students customers? TQM and marketing perspectives" aiming to seek and to assess the influences for and against the intention that students in higher education are "customers" and should be treated in that fashion. The study reveals that the discussion is split, with supporters regarding it as self-evident that students are customers and should be treated in that manner, though critics regard it as self-evident that the intrusion of the "customer" concept into higher education worsens educational standards and harms academics and student connections.

A study was done by Haque, Das, and Farjana <sup>[18]</sup> pointed out some sovereign factors that can mark student satisfaction based on services offered by the universities. These include quality of teaching, student research facilities, library book collections and services, campus infrastructure, canteen facilities, space for group discussions, sports programs, ICT facilities etc.

In an article titled, "Student satisfaction and quality of service in Italian universities", Petruzzellis, D'Uggento, and Romanazzi <sup>[27]</sup> observed that, students are the main stakeholder of the universities and thus they treat the students as customers of the universities moreover, the study concluded with the suggestions for the authority to adopt a customer-centric approach for the students. They analyzed common factors such as lecture halls, laboratories, equipment, library, dining hall, dormitories, leisure activities, language courses, scholarships, internet access, exam booking, contacts with teachers, administrative services, tutoring, counseling, internship, international relationship, and placement.

In a study, Guolla <sup>[17]</sup> stated that "a student's satisfaction may be influenced by poor classroom facilities of which an instructor may have limited resources to change". So, the campus surroundings can be seen as a web of adjacent happenings that affect student satisfaction <sup>[4]</sup>. As a result, it is essential to improve "the perceived value by providing services or service attributes not provided by the competition"

[9].  
After going through number of literatures Stoltenberg [29]

shortened some of the key factors influencing student satisfaction. Those factors listed in a table below:

**Table 1:** Demonstration of frequently mentioned perspectives by the researchers for students’ satisfaction

Perspectives	Academic	Social
Factors	Retention	Social Integration
	Academic Advising Services	Campus Services and Facilities
	Academic Experiences	Campus Infrastructure
	Quality of Instruction	Social Activities
	Intellectual Growth	Classroom Facilities
	Preparation for Lifelong Learning	Library Services and Collection
	Academic Performance	Campus Canteen Facilities

**Research Questions**

1. What are the perceptions of the students regarding their educational institutions?
2. Have the existing physical facilities of the universities impacts on the satisfaction of the students?
3. Do the interactions between the faculty members and the student's influence on the students’ satisfaction?

3. To recommend future policies and actions of quality education that might be the key factor in the students’ satisfaction in Bangladesh.

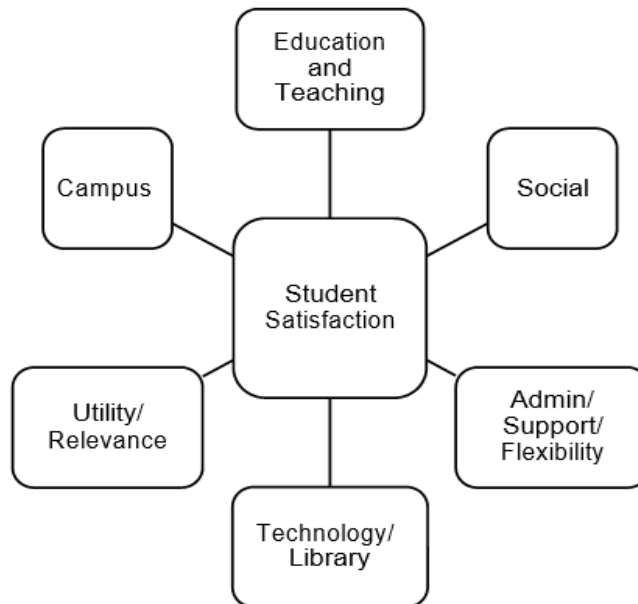
**Objectives of the Study**

The study comprises of the following objectives

1. To investigate the present scenario of students’ satisfaction in Bangladeshi universities;
2. To find out the major factors that influence the students’

**Conceptual Framework**

A significant number of study have been performed to examine the student satisfaction at the university level (i.e., Elliott and Healy [13]; Wiers-Jenssen, Stensaker, & GrØgaard [23]. A study was conducted by Neill [26] on the possible factors affecting student satisfaction. The most frequent factors shown in figure 1.



**Fig 1:** Some possible university student satisfaction factors

A research conducted by Aldemir and Gülcan [1], proposed a conceptual framework model containing factors related to university student satisfaction. The model was

developed based on the research work and knowledge of previous researchers’ result. The conceptual framework depicted in figure 2.

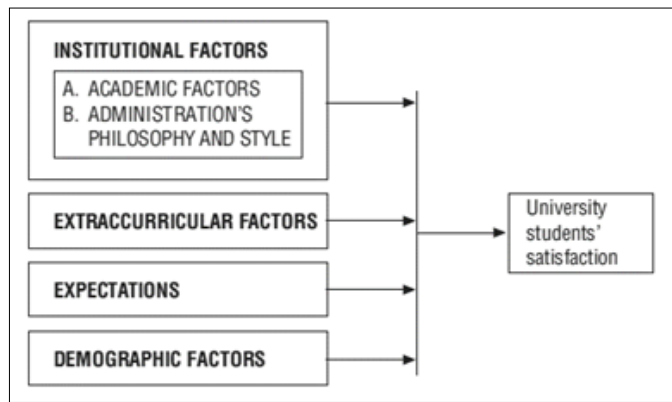


Fig 2: A conceptual framework of factors relating to university student satisfaction

For conducting this research, the researchers developed and proposed a model, based on the literature review and different models proposed by different researchers in this field. The proposed model depicted in figure 3.

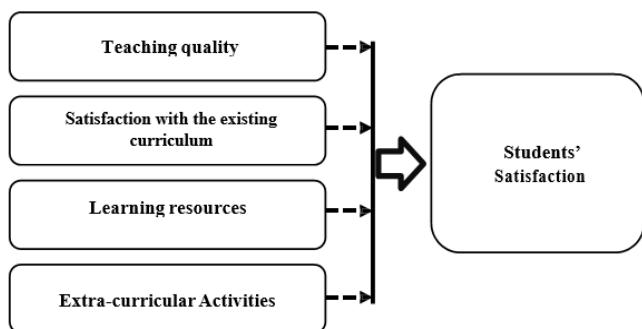


Fig 3: A proposed conceptual framework of factors relating to university student satisfaction

**Methodology**

**Population of the Study**

All the university students (both the public and the private) of Bangladesh are the study area of this study.

**Source of Data**

The study collected data from both the primary and the secondary sources. The existing students studying in sample universities are constituting the primary source. Printed and published materials in different sources are the secondary source of data.

The researchers applied multiple techniques to collect the primary data. The questionnaire, the informal discussion, the observation methods were being used to collect raw data from the field. Both the open-ended and the closed questions were included in the questionnaire.

**Sampling**

For conducting the study on student satisfaction, 05 public and 05 private universities were selected by using the convenient sampling technique. Dhaka University (DU), Jahangirnagar

University (JU), Mawlana Bhashani Science and Technology University (MBSTU), Pabna University of Science and Technology (PUST), and Begum Rokeya University (BRU) are the public universities; and Daffodil International University (DIU), Presidency University (PU), Gono University (GU), North Western University (NWU), and BGMEA University of Fashion and Technology (BUFT) are the private universities from where data were collected.

Number of the respondents of the study was 200 students. 20 respondents were selected from each sample university which totaling construct 200 sample size for the study. The purposive sampling technique was employed to select the respondents from the sample universities. The respondents were selected from the regular students of third year and/or above classes of each sample university. The rationality behind the selection is that these respondents already passed a certain period of time in university level which drive them commenting in the issue of students' satisfaction more accurately than their juniors.

**Statistical Analysis of the Sample**

All the collected data were analyzed by using the Statistical Package for Social Sciences (SPSS) version 23, software for Windows.

**Results and Discussion**

**Basic information of the respondents**

Table 2: Basic information about the respondents.

Variables	Categories	Frequency	Percent (%)
Gender	Male	137	68.5
	Female	63	31.5
Age	19-21	55	27.5
	22-24	130	65
	25-27	15	7.5
Accommodation	Hall	41	20.5
	Mess	81	40.5
	Others	78	39

**Educational information of the respondents**

Table 3: Educational information of the respondents.

Variables	Categories	Frequency	Percent (%)
University type	Public	100	50
	Private	100	50
Study year	Third	118	59
	Fourth	78	39
	MS	4	2
Choice of current university	First Choice	41	20.5
	Second Choice	86	43
	Third Choice	73	36.5
Results	<3	35	17.5
	3-3.25	46	23
	3.25-3.50	64	32
	3.50-3.75	43	21.5
	>3.75	12	6

**Correlation analysis**

**Table 4:** Correlation analysis

		Teaching Quality	Satisfaction with Curriculum	Learning Resources	Extra- curricular Activities
Overall Satisfaction	Pearson Correlation	0.595**	-.147*	0.323**	0.275**
	Sig. (2-tailed)	0.00	0.01	0.00	0.048

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis was performed to know if there have any significant linear relationship between different factors that influence the respondent’s overall satisfaction. Table 4 implies that Overall Satisfaction is moderate positively and linearly related to Teaching Quality (0.595), Learning Resources (0.323) and Extra-Curricular Activities (0.275). It suggests that if the Teaching Quality, Learning Resources, and Extra-Curricular Activities are increased, it will increase Overall Satisfaction of the respondents. The analysis also reveals that there is a very weakly negative relationship between Overall Satisfaction and satisfaction with the curriculum (-0.1417).

**Multiple Regression analysis**

The model of multiple regression analysis used in this research can be formulated as shown below,

$$y = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \epsilon$$

Dependent variable: y = Overall Satisfaction

Independent variables: x1 =Teaching Quality  
 x2 = Satisfaction with Curriculum  
 x3 = Learning Resources  
 x4 = Extra-curricular Activities  
 ε = Random Error term

The regression analysis is conducted to determine the effect of the independent variables on the dependent variables. Here, x1, x2, x3 and x4 represent the variables symbolizing the Teaching Quality, Satisfaction with Curriculum, Learning resources and Extra-curricular activities respectively.

**Validity and reliability testing**

**Validity testing**

The instrument is valid if the value of the variable is positive and more than 0.3 (r > 0.3). The result of Overall Satisfaction (X1) is 0.605, Teaching Quality (X2) is 0.334, Learning resources (X3) is 0.310 and Extra-Curricular Activities (X4) is 0.302. It means that all the indicators are valid.

**Reliability Testing**

The level of reliability of the measurement indicator from the output, Cronbach’s alpha coefficient was 0.612 as shown in the following Table 5. According to Brown [8] further contends that a reliability index of a minimum of 0.6 is satisfactory for any research analysis. Therefore, the measurement instruments used for this research are reliable.

**Table 5:** Reliability Statistics

Cronbach's Alpha	N of Items
.612	5

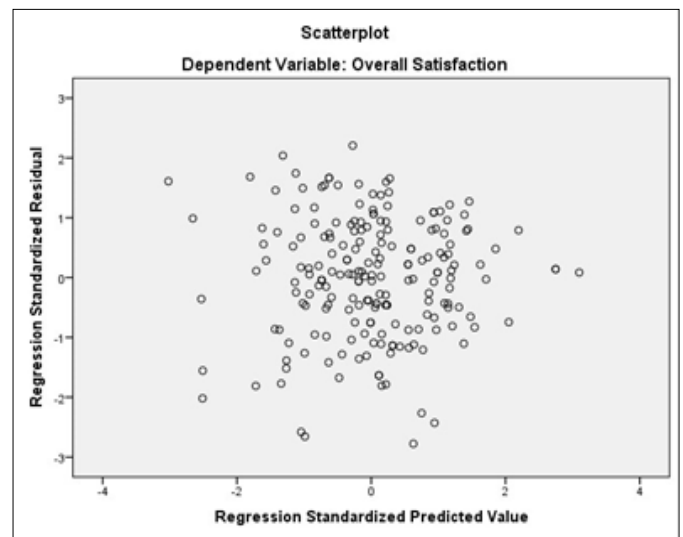
**Test of Multicollinearity**

**Table 6:** Multicollinearity testing

Model	Collinearity Statistics	
	Tolerance	VIF
Teaching Quality	0.622	1.608
Satisfaction with Curriculum	0.63	1.588
Learning Resources	0.822	1.216
Extra-curricular Activities	0.72	1.39

The above table (Table 6) shows that the Tolerance of Teaching Quality is 0.622, Satisfaction with Curriculum is 0.63, Learning Resources is 0.822 and Extra-Curricular Activities is 0.72 meaning the tolerance value of each variable is more than 0.2. The VIF value of Teaching Quality is 1.608, Satisfaction with Curriculum is 1.588, Learning Resources is 1.216 and Extra- Curricular Activities is 1.39. Which means the VIF value of each variable is less than 10. Since all the tolerance value is more than 0.2 and VIF value is less than 10 of each independent variable, so this indicates that the study is free from Multicollinearity.

**Heteroscedasticity testing**



**Fig 4:** Heteroscedasticity testing.

The above Figure 4 shows that the pattern of points is spreading. The points are spreading above and below of zero points inordinate. This is proved that there is no heteroscedasticity in this regression.

**Normality Test**

The Normal p-p plot, Figure 5 shows that the data are



spreading near the diagonal line and follow the direction of the diagonal line. Therefore, the normality test is completed.

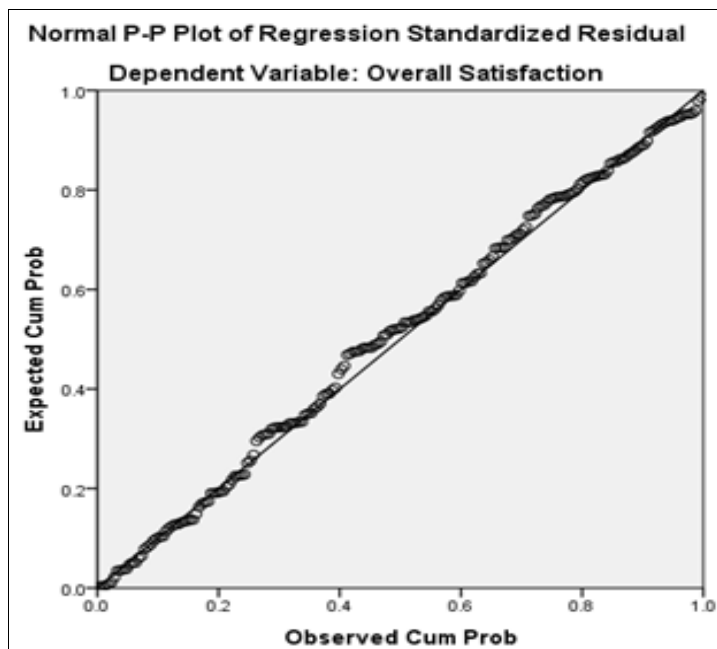


Fig 5: Normality testing.

**Results of the regression model**

**The coefficient of Determination (R<sup>2</sup>)**

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.538 <sup>a</sup>	.289	.271	.45754
a. Predictors: (Constant), Extra-curricular Activities, Learning Resources, Satisfaction with faculty, Teaching Quality				
b. Dependent Variable: Overall Satisfaction.				

The coefficient of correlation (R) measures if there is a significant relationship between the four independent variables with the dependent variable, the value of R is 0.538 which proved that the relationship among variable independents and dependent is strong. The (R<sup>2</sup>) measures how far the ability of a model in explaining the variation of the dependent variable. The value coefficient of determination (R<sup>2</sup>) implies that 28.9% of the variation in academic results are explained by the variations in the Teaching Quality, Satisfaction with Curriculum, Learning Resources, and Extra-Curricular Activities. The observed R<sup>2</sup> suggests that the

multiple regression line fit the data reasonably. The other 71.1% variations not explained by the repressors are considered as for other explanatory variables that are not considered in this study.

**Regression coefficients**

The Regression Coefficients are the constants in the regression equation that tells about the change in the value of dependent variable corresponding to the unit change in the independent variable.

Table 8: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.448	.200		12.271	.000
Teaching quality	.647	.059	-.068	-2.803	.023
Satisfaction with Curriculum	.023	.061	.032	4.381	.004
Learning Resources	-.140	.041	-.248	-3.374	.001
Extra-curricular Activities	-.101	.048	-.164	-2.091	.038

a. Dependent Variable: Overall Satisfaction.

The calculation is conducted by using SPSS (Statistical Package for Social Science) software. The result in the above table, the multiple regressions equation can be defined as,

$$\hat{y} = 2.448 + 647x_1 + 0.023x_2 - 0.1403x_3 - 0.101x_4$$

According to the fitted model, if the influences of the

independent variables are not considered then the average satisfaction is 2.448. The equation also shows that there is a positive influence of Teaching quality ( $X_1$ ) and Satisfaction with Curriculum ( $X_2$ ); and negative influence Learning Resources ( $X_3$ ) and Extra-curricular activities ( $X_4$ ). That indicates that the Overall Satisfaction increases with good teaching quality.

**F-test**

**Table 9:** ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.298	4	1.575	7.522	.000b
	Residual	40.822	195	.209		
	Total	47.120	199			

- a. Dependent Variable: Overall Satisfaction.
- b. Predictors: (Constant), Extra-curricular activities, Learning Resources, Satisfaction with faculty, Teaching quality

The *Table 9* shows that the p-value is 0.00(<0.05). Therefore, there is sufficient evidence to reject the null hypothesis at 05% level of significance. It means that the Teaching Quality, Satisfaction with Curriculum, Learning Resources and Extra-Curricular Activities significantly affect the respondent’s Overall Satisfaction.

**t-test**

The t-test is used to determine wheatear there is the partial effect of each independent variable to the dependent variable.

**Table 10:** t-test.

Model	t	Sig.
(Constant)	12.271	0.000
Teaching quality	-2.803	0.023
Satisfaction with Curriculum	4.381	0.004
Learning Resources	-3.374	0.001
Extra-curricular Activities	-2.091	0.038

- a. Dependent Variable: Overall Satisfaction.

The above table (*Table 10*) shows that the Teaching Quality, Satisfaction with Curriculum, Learning Resources and Extra-Curricular Activities have partially significant effects on student’s Overall Satisfaction.

**Limitation and Future Directions**

This study was conducted only small sample from different private and public universities of Bangladesh because of time and budget constraints. So the findings may not be represented in favor of entire population. The future researchers should focus on generalization of service quality and student satisfaction. The potential future research may focus on the student satisfaction considering the effect of socioeconomic condition on the relationship between service quality and student satisfaction.

**Findings**

This research is focusing on students’ satisfaction in the university level of Bangladesh. For this reason, ten

universities had been selected in different parts of Bangladesh. It is possible to notice some slight differences in how students with different location and background accept the service provide by the universities and level of their satisfaction. The teaching quality, curriculum, supportive staff and extra-curricular activities are primarily taken into consideration for measuring the student satisfaction as Aldemir and Gülcan <sup>[1]</sup> and Stoltenberg <sup>[29]</sup> listed out some of the major factors affecting students’ satisfaction worldwide. As all the people are different in terms of thinking and perception, that’s why it is quite impossible to come across each and every person’s expectations. So it is very normal that some students would be unhappy with one or more aspects of their educational involvement. Moreover, all the students have their personal choice, interest, and motto in their studies. For that reason, it is observed from this study that the respondents emphasized to the aspects they were interested in and prescribe their ideas for developments.

From the analysis of the data presented, it has been observed that, though both the public and private universities have the limitation regarding resources, the public university students are more satisfied in comparison with the private university students in Bangladesh. From the different analysis, it can be stressed that the variables taken for this study (i.e. Teaching quality, Satisfaction with the existing curriculum, learning resources or the quality of the supportive services, and Extra-Curricular Activities), directly impact on the overall student satisfaction at the university level. Among the four mentioned variable, teaching quality and the extra- curricular activities have a profound impact on developing student satisfaction though satisfaction with the existing curriculum and learning resources or the quality of the supportive services have also a positive relationship with the student satisfaction.

In the open-ended section of the questionnaire, the respondents mentioned some of the good feelings in their respective institutions and also identified some of the issues that, need to be improved in their respective universities. A good relationship with the teacher-student and performing some extra-curricular activities organized by the universities are some of the most frequent aspects, that the respondents happy to share. For public and private, both the categories of respondents remark these two aspects while responding to the questionnaire.

For the aspect of improvement, the public university respondents marked, nurturing healthy political culture, reducing administrative legislation, solving the problem of utility services, resolving the problem of infrastructure, enhancing the number of teachers according to the teacher-student ratio, arranging training for the teachers for ensuring quality teaching, implementing the teaching technique for flourish the talent of the students, developing professionalism and widening research infrastructure, are some of the issues that, the concerned authority should be concentrated on. Meanwhile, the respondents from the private university pointed out, moving on to the permanent campus, increasing the number of qualified full-time teachers, developing and

spreading research infrastructure, reducing the high tuition fees to a sensible level and broadening the service of library and other academic and non-academic facilities, are some of the matters that, the concerned authority should be focused on and develop a workable roadmap accordingly.

### Conclusion and Recommendations

This study on student satisfaction, particularly in the higher education, revealed an empirical finding in the context of Bangladesh. Evidence from previous literature on quality education, service marketing and the findings of this study clearly indicates that, it is the high time for the concerned authority related to higher education of Bangladesh to focus on the customer- centered principles in order to achieve a higher level of satisfaction as the changing nature of the higher education marketplace impacted profoundly on the overall student satisfaction. Keeping the value based student satisfaction on the long-term interests of the society and educational institutions aims the impacting factors should be evidently defined and strategy should be formulated and implemented accordingly. Through ensuring quality teaching-learning and non-teaching atmosphere the overall student satisfaction can be achieved which will ultimately beneficial for the entire nation. In addition, the apex body of higher education should patronize research work in this arena of educational service marketing which will also play a catalyst role to ensure quality education in Bangladesh. By focusing on experiences to student satisfaction, universities of Bangladesh can align their organizational vision, mission, structure, and processes to become more student (customer) orientated <sup>[23]</sup>.

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