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ANALYSIS OF ACADEMIC TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION

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Abstract:
This study focuses on the overarching principles of quality improvement in an educational institution. Total Quality Management (TQM) is applied in this context because it indicates how this system has been and can be used to improve academic quality. This work is designed for all Higher Education Institutions (HEIs) in Bangladesh, with the exception of individual programs, departments, or services. It is used to assess and evaluate faculty members' interactions with students. Additionally, this research generates data on students' satisfaction with the institutions' varied offerings. Indeed, the research focuses on a variety of student concerns in order to compare how these institutions are now tackling quality issues to the TQM perspective and to identify both the strengths and weaknesses of these institutions' quality work. Structured questionnaires were launched and peer-to-peer interviews were performed for the analysis with moderately a large pool of students at multiple academic institutions. The findings of the result disseminated how a number of quality issues with pupils are

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resolved so as to develop an academic decision-making process. Finally, this study offers sound guidelines and suggestions for guaranteeing effective learning processes in higher education systems.

Keywords: total quality management, education sector, quality assessment, higher education institute

1. Introduction

Undoubtedly, education is a vital human right, and every human being requires access to the power of information (Chowdhury, 2004). As the population grows, the need for higher education increases for certain implications. In Bangladesh, we have two distinct streams of higher education provision: private and public. This pattern has a downside, as rapid expansion carries the danger of sacrificing quality. However, the collective impact is a thriving education industry due to strong rivalry among competing groups. The primary beneficiary is the student, who gains access to a greater platform of choice at a lower expense than studying abroad. As a result, the ultimate beneficiaries are society and the nation (Anne et al., 2000). In order to benefit those in a greater quantity, Total Quality Management (TQM) has been developed as a method for quantifying multiple indices so that an organization's performance can be evaluated in terms of how well it maintains its quality (Berzinskas and Ruzevicius, 1996). TQM's initial source for statistics and measures is the literature of quality professionals in the United States of America, such as Juran, Deming, and Ishikawa. The Japanese manufacturing industry-accepted and incorporated it into their production processes, contributing to its development. (1995, Hackman and Wageman). TQM is a customer-centric approach. Customers in an educational institution are primarily students. Roffe (1998) argues that when competition is open, students' behaviors become more customer-oriented. They are the key users of the service and are expected to bear an increasing share of the expense of education. There are further customers. However, the students' objective is to evaluate a variety of high-quality works within an institution. According to their assessment, it is actually conceivable to quantify how an institution operates. There is no motivation for students to choose an institution unless that institution has a past reputation for excellence. It is the value that draws students to this institution. Thus, it is critical to acknowledge the students' perceived quality and happiness.

Additionally, it is critical to cultivate a culture of continual improvement based on the perceived quality and satisfaction of study programs, the quality of teachers, instructional methods, a sustainable curriculum, and a variety of other criteria. TQM is an endeavor to maintain competitiveness while achieving customer satisfaction in the face of increased global competition, particularly in this era of globalization. TQM is a philosophy of continuous improvement in the quality of services, goods, and processes. In the case of a university, where students are the primary customers, the TQM concept can be used to establish the environment that the university provides in order to please

its customers (Rowley, 1996). TQM is a process that capitalizes on direct customer interaction in order to meet or exceed their objectives and expectations. Students have a plethora of requests from the institutes where they study. Additionally, it is the producers' perspective on how they embellish and handle various possibilities to enable pupils to do so (Aminuzzaman, 2007).

2. Concept of Total Quality Management (TQM)

A lion's portion of work in the sector of quality and TQM can be linked back to the literatures of experts like Juran and Deming. The general thematic image in quality management includes waste elimination, consistency, speed of delivery and customer service. The TQM objective is to shape an organization in a way that produces goods or delivers services that are perceived to be top quality by the consumers of those products or services. The quality of service and product can be determined by the customer's expectation of the level to which the customer is satisfied (Juran and Gryna 1988, Deming 1982). Feigenbaum, a quality specialist from USA coined the term in 1956, total quality control (TQC) (Feigenbaum, 1956). In that light, the definition of TQM can be given as "*the process of integration of all activities, functions and processes within an organization in order to achieve continuous improvement in cost, quality, function and delivery of goods and services for customer satisfaction*". Gaither defines TQM as the course of shifting the base culture of an organization and readjusting it towards better product or service quality (Gaither, 1996). According to Michael et al, TQM can be described as a philosophy of general management and a set of tools which enables an organization to pursue a means of attaining quality. The definition of quality shall be in accordance with keeping in mind that quality itself is a matter of continuous improvement. The value is ascertained by customers according to the level of satisfaction with the services they have received (Michael et al., 1997). As Witcher (1990) states, TQM consists of three terms: Total: implying that every individual is involved together with customers, consumers and suppliers, Quality: suggesting that the requirements of customers are met accurately, and Management: signifying that senior administrators are committed.

TQM also includes executing tasks the right way for the first time, pushing for nonstop improvement, being attentive to customers' needs, integrating quality into responsibility etc. The range of its discussion involves the application of quality principles and implementation of successful strategies to the overall process as well as all functions of the management in order to make sure of total satisfaction of the customer. In short, TQM point toward the practical implementation of quality principles in a range starting from recognizing the needs of the customer to service after the purchase. Many organizations in the world have adopted TQM as a paradigm for management and many others continue to adopt it. Projects for improvement of quality at manufacturing companies all around the world have initiated a Quality movement. It did not take long to spread to other types of institutions service including educational institutions. Even the government and non-profit organizations started adopting it. Other areas such as

healthcare, insurance and banking were not behind either. On the basis of the teachings of quality experts, TQM models usually involved a set of "essential elements" or "principles" such as employee involvement, teamwork, focusing on customers, leadership at the top level of management, continuous improvement tools and training, etc. European Quality awards, Deming award in Japan and Malcolm Balridge in USA are proof that concern in this area is indeed growing.

2.1 Meaning of Quality Education

The origin of the word quality comes from the Latin word *qualis*, which means "what kind of". In the present scenario, the word implies a range of meanings and represents a diverse number of things to different sets of people. Quality can be described as a characteristic property that defines the apparent individual nature of something. It is an essential and distinguishing attribute of something or someone. In a broader sense, quality is often known as the suitability of actions, processes and systems in relation to the strategical objectives which are aimed to be fulfilled. The accomplishment of the objectives is evaluated through the evaluation areas articulated in the Strategy Implementation Plan. Quality is that entity, from which we can be able to measure the degree or grade of excellence or worth. Juran argued, "*Quality is fitness for use or purpose*" (Juran, 1988) while Crosby contemplated it with a slight difference as "*conformance to standards*" (Crosby, 1992). In measuring the quality of education in an institution, there are numerous variables to be found that are needed to consider. According to Harris (1994), TQM in higher education has three general approaches First of all there is an emphasis on customers where the concept of service to students (students are customers here) is nurtured through training of staff and development, which encourages student's autonomy and choices. Secondly, the focus on staff is concerned with value and enhancing the contribution of all employees. It also includes the operational effectiveness of an institution, in the setting of policies. This necessitates a flatter structure of management and the acceptance of responsibility by working groups within the structure. Then thirdly, another approach focuses on the stance on service agreements and searches to ensure conformity to specification at certain majorly distinguished computable points of the processes in education (Harris, 1994). For example, assessment of assignments by faculty within the due timeframe.

Lawrence and Mc. Collough (2001) recommend a system of assurances designed to accommodate multiple stakeholders and students whose roles are diverse and ever-changing in the process of education. Their structure of guarantees concentrates on three groups of customers, they are students, instructors of courses and administrations that hire graduates of the college into employment. This system of guarantees offers an institution the advantage which being competitive in nature by transforming an intangible quality of education into a tangible form. Durlabhji and Fusilier (1999) argue that the empowerment of customers in education demands better contribution from both students and the business community. In turn, they will employ them and, in the term, this will modernize education and eradicate any reminders of the academic "ivory tower"

that is prevalent in business school course works. The privileges of student empowerment in the classroom should be measured against the necessity for control to attain minimum educational goals and adequately impartial evaluation.

In recent years, quality is of great concern in the context of education in Bangladesh. Nonetheless, the achievement with which an institute offers educational settings which empower students efficiently to accomplish valuable education goals together with suitable academic standards (Aminuzzaman, 2007). In current years international competition is getting faster and utmost organizations including educational institutions have been executing advanced policies which can lead them to improved quality, abridged cost and abridged delivery time also improved strategy of facilities and products. In educational institutions of tertiary levels, Osseo-Asare and Longbottom (2002) suggested criteria which are an enabler, which affects performance and assist an organization to attain organizational excellence. The "enabler" criteria include policy and strategy, resources and partnerships, people management, leadership and processes (Osseo-Asare and Longbottom, 2002). University education is that education whose basis is formed from the multifaceted societal humanitarian topics, focused on mental and spiritual training of the individual and his socialization, and on this ground bears knowledge of at least one distinct form of community (public) awareness as the foundation for the upcoming inventive activity and practical work for the occupations of that domain. Quality in education is tough to define and measure. An adequate definition is essential to consist of student consequences. Furthermost educationalists would also take in the meaning of the nature of the educational knowledge that aid to produce therefore consequences-the learning setting (Haque, 2004).

Quality education is as UNICEF includes:

1) *"Learners who prepared to take part and learn, and supported in education by their families and societies.*
2) *Environments that are safe, healthy, protecting and gender-sensitive, and make available adequate funds and services.*
3) *Content that is reflected in appropriate prospectuses and resources for the achievement of basic skills, particularly in the areas of reading ability, skills for life, and knowledge.*
4) *Processes through which proficient educators use student-oriented education methods in well-managed classrooms and schools and skilful assessment to enable learning and decrease disparities.*
5) *Outcomes that include knowledge, skills and attitudes, and are connected to national aims for education and positive partake in society."* (UNICEF, 2000)

"Quality of education" has been described by Rowley (1996), from the original source by Gordon and Partington (1993) as attainment with which an institution provides educational environments which enable students effectively to achieve worthwhile learning goals including appropriate academic standards. Quality itself is a vague item

to define, so that, in all sets of facts it could suit having a generic concept. The definitions we got here create room for comprehending education as a multifaceted system embedded in a political-cultural-economic context. It is important not to forget that education is and should be systemic in nature, however; the dimensions are interdependent, affecting each other in ways that are every so often unpredictable. However, quality of education should be a vital component of overall quality management in any institution or organizations (World Bank, 1995).

The quality of buildings in a school may be connected to other issues of quality in the school, for example, the availability of sufficient books and materials needed for instructions, the working and learning environment for students and teachers, and the capability of teachers to take on certain instructional tactics. Such factors as on-site availability of lavatories and a clean water supply, classroom maintenance, space and furniture availability all have an impact on the critical learning factor of time on task (Gordon and Partington, 1993). When pupils have to leave school and walk significant distances for clean drinking water, for example, they may not always return to class. It is also needed to consider the location and condition of learning environments when assessing educational quality and this can influence the participation of all other variables measuring quality education. In universities, education quality can be attained through changing the teaching method and learning. Besides that, improving the methods for assessment, renewing and adapting the curriculum constantly, updating professional knowledge and skills to the current standard and researches and refining the broader environments in the area of education, administration and resources are also important for the achievement of quality education.

2.2 TQM in Higher Education

In the previous section, the discussion was about defining what TQM really is and its components, however, there were several applicable and useful points that can be used by every institution in this definition to improve their quality work. Now the second phase of a TQM approach i.e. implementation phase will be described. For the implementation of TQM, a model will be presented in order to make the TQM applicable to every organization.

As it is known, TQM has been used primarily in the industry but there are some reasons that TQM should be applied in educational institutions.

1) Firstly, the necessity for change may not be accepted by the institution most of the time.
2) Secondly, it's a hazard to the faculty for having individual autonomy, therefore in TQM, we need to have customer involvement and teamwork, Fisher (993, pp. 15-19).
3) Thirdly and finally, the existing process will be improved by TQM. It cannot promote radical change. Fisher (ibid); Marchese, (1993, pp. 10-13).

When the applicability of TQM in education is accepted, the procedure of its process should be addressed. In fact, many institutions have reviewed the applicability

of TQM in higher education and there are some proposed models to prove its applicability. J. Motwani and A. Kumar (1997, pp.131– 135) have suggested five steps model that they believe is applicable to every institution. This model has five phases: (i) Deciding, (ii) Preparing, (iii) Starting, (iv) Expanding and (v) Evaluating. The TQM model proposed by J. Motwani and A. Kumar is well defined and is clearly describing what should be taken into consideration for TQM implementation. However, by looking at these phases and going back to the Deming cycle we will find similarities between them. To us, the founded similarities mean that we can put the phases defined by The QM model into Deming cycle, and then the newly created model will have more efficiency.

3. Methodology

3.1 Data Source

The survey was conducted with a view to identifying three different measurements: 1) For the identification of the qualities of the teachers, 2) For the measurements of the satisfaction of the students and finally, 3) For the identification of the requirements of the teachers. The following three paragraphs depict the data for each of the above cases.

1) **Information Gathering:** In the step of data and information collection, there are two groups of data known as primary and secondary data. Primary data is related to data that is gained by different techniques such as interviews and questionnaire distribution. The sources of secondary data are literature studies, newspapers, magazines, related articles, and the internet.
2) **Primary Data:** They can be collected in three ways: observations, opinion investigation, and interviews Dahström (1996). Using interviews and observation is more common than opinion investigation. Depending on the data needed, the questions in the interviews are different. For instance, for a statistical study, the questions must be limited to a few alternatives for answering. Qualitative surveys are suitable with open questions and consequence questions. In this case, designing a question for writing the own interpretation about each question can lead to better results.
3) **Interview:** is the situation of asking a question similar to communication among three types of operators: interviewer, interviewee and possible spectators. In in-depth interviewing, qualitative researchers use and trust deep interviews more than the other methods of data collection. Kahlan and Cannell explain interviewing as "*a conversation with a purpose*". A qualitative interview is characterized by its width instead of its depth. As a matter of fact, Interviewing differs in terms of a former construction and in the scope the interviewee has in answering questions. Interviews are divided into three groups according to "Patton".
4) **Respondent Profiles:** There got an endeavor to judge the students in universities in Bangladesh on how they are thinking the environment the university provided, what the index of their satisfaction while studying there, how the teachers are with

them, along with numerous issues so that the students can be identified whether they are pleased with the structure. It is a fact that the absolute level of satisfaction must not be attained, though the student must wait for a curtained level so that they may admit the sincerity of the institution towards them.

The students who took part in the survey were selected voluntarily and were from various departments and faculties like Business Studies, Engineering, Arts etc. Most senior students were the participants. This doesn't mean avoiding the opinion of the fresh students. They were also considered to be the participants.

3.2 Statistical Analysis

The statistical tools that are used here were selected keeping in mind the objective and better representation of data but keeping it short and precise. Suitable statistical tools have been employed in the research for a better understanding of the behavior of data. The analysis also accompanies the comparative analysis for the statistical. The methodology that is implemented in this research is based on adhering to simple quantitative analysis so the contents are easily conveyed to learners and educators from all levels.

3.2.1 Analysis of the Variables

This study used 13 variables shown in Table 1 that will be useful the assessment of teachers' quality. These variables were again grouped into some factors:

1) Sincerity,
2) Quality,
3) Communication, and
4) Friendly attitude.

The table below identifies the mean for each question from the survey. It also reveals the standard deviations along with variances for each question. In order to get a suitable and agreeable result, the variables (here questions from Q1-Q13 are detailed in Appendix 1).

Table 1: Teacher Assessment Statistical Result

Questions Codes	Weighted Mean	St Dev (σ)	Variance (σ^2)
Q1	3.45	0.87	0.75
Q2	3.65	0.95	0.90
Q3	3.50	0.96	0.92
Q4	3.65	0.87	0.75
Q5	3.87	0.81	0.66
Q6	3.62	0.95	0.91
Q7	3.70	0.94	0.88
Q8	3.81	0.89	0.80
Q9	3.50	0.94	0.88
Q10	3.22	1.03	1.07
Q11	3.92	0.95	0.91
Q12	3.32	0.86	0.74

Q13	3.44	0.99	3.44
Aggregated Mean	3.59		
Standard Deviation of Mean	0.21		
Variance of Mean	0.04		0.86

In the above figure, we have shown that each of the variables has got a mean above 3 and no variable has touched the mean of 4. The standard deviations derived are in a moderately low range with a maximum of 1.03 and a minimum of 0.66. From Table 1, it is also conspicuous that, 9 of all the 13 variables, each of which has got above the mean of 3.50, and the rest, below it. We have also shown that the aggregated mean of all the variables is 3.59. From these data, we can conclude that the respondents moderately agree with the conduct and other qualities of the teachers. But it is also noted that they are not very much pleased with them will factors, because, as the survey reveals, the students' measurements are a little bit above the average. So, the uplifting of the quality of the faculties here is a great concern. Now we need to analyze the factors separately. The following subsections analyze the responses regarding each of the above-mentioned groups, which we call here factors.

A. Sincerity

Five different variables have been included in this group in order to identify whether the faculties are sincere in their classes, lectures, well preparedness etc. that have been depicted in the table as Q1) Syllabus adequately covered in the last semester, Q2) Punctuality, Q4) Taking the classes regularly, Q5) Well preparedness in the class and Q8) Assignments, class tests, questions or class discussions.

Table 2: Identifying the Sincerity of the Faculties

Variables	Factors	Variable Names	Mean	Standard Deviation
Q1	Sincerity	Syllabus adequately covered	3.45	0.87
Q2		Punctuality	3.65	0.95
Q3		Taking the classes regularly	3.65	0.87
Q4		Well preparedness in the class	3.87	0.81
Q8		Assignments, class tests, questions or class discussions	3.81	0.89

In Table 2 above, we find that the respondents moderately agreed with their teachers' sincerity. The mean indices of the responses are from 3.45 to 3.87 which are not very close to 5 (Strong agreement). We note that for variable Q1, the lowest mean has been derived in this category. As a result, we can say that the students have complained to their teachers that they are not well enough in covering a total of the course work in the semesters. For the variable Q2, we see that it has given the maximum standard deviation in this category that summarizes the variability of the punctualities of the teachers. Some of the students, get very punctual, and others are extreme latecomers.

B. Quality of the Teachers

In this factor, we get the teachers to be moderate in expression and explanation. They tend to express what they know, but the students' understandability gets far from the maximum of 5. In having knowledge, the students have complained that the teachers they got are not well in having sufficient knowledge of the topic they teach. The result regarding the quality and conduct of the teachers are shown in table 3 and table 4 respectively.

Table 3: Quality of the faculties

Variables	Factors	Variable Names	Mean	Standard Deviation
Q3	Quality	Express clearly	3.45	0.87
Q9		Clear explanation of the class assignment, homework, lab assignments	3.65	0.95
Q12		Sufficient knowledge	3.65	0.87

Table 4: Conduct of the faculties

Variables	Factors	Variable Names	Mean	Standard Deviation
Q7	Communication	Respond to questions	3.70	0.94
Q10		Using English as a medium of instruction in the class	3.92	1.03
Q11		Does the teacher explain in Bangla when does a student fail to understand?	3.65	0.95

Due to having limited experience, the respondents are not so satisfied with their teachers. The variable Q12 also identifies the fact that the knowledge that the teacher would attain, which in consequence will add to the knowledge level of the students too, would be more as they find. We note that, for the variable Q12 (knowledge level of the teachers), the mean here is 3.32 which really reflects the fact above stated.

C. Conduct method

This section has taken three variables to analyze. The responses here are a little bit dispersed. We can see from the following table that, the variables Q7, Q10 and Q11 give the means as 3.70, 3.22 and 3.92 respectively. The standard deviations though in these cases are more or less closed (0.94, 1.03 and 0.95).

The respondents gave more votes to their teachers in the sense that they are well at explaining the topic in Bangla Language when the students fail to understand it. But the respondents seemed to believe that their teachers are not very well at the English language as the medium of instruction. The variable Q10 is also having the highest standard deviation among all the variables throughout the survey.

D. Friendly Attitude

This is the latest factor to be analyzed where we got two variables Q6 and Q13 as shown in table 5. The respondents voted for their teachers to be more than average but not

satisfactorily friendly in behaviors and attitudes. For Q6, it was asked the students whether their teachers are easily approachable. The mean for this variable gets 3.62. So, it can be identified that the teachers are friendly but they are not like somewhat informal ones, rather they behave with the students in a way that, they don't attempt to break the ethical relationship between teachers and students.

Table 5: Well-disposed Attitude of the Faculties

Variables	Factors	Variable Names	Mean	Standard Deviation
Q6	Friendly	Approachable	3.62	0.95
Q13		Sharing the problems	3.44	0.99

Table 6: One-sample Statistics

Questions	Number of Respondents	Mean	Standard Deviation	Mean Std. Error
Q1	97	3.45	.866	0.088
Q2		3.65	.947	0.096
Q3		3.49	.959	0.097
Q4		3.65	.867	0.088
Q5		3.87	.812	0.082
Q6		3.62	.951	0.097
Q7		3.70	.937	0.095
Q8		3.81	.894	0.091
Q9		3.49	.937	0.095
Q10		3.22	1.033	0.105
Q11		3.92	.954	0.097
Q12		3.32	.861	0.087
Q13		3.44	.989	0.100

From a quick view of Table 6, it can be expected that there are no unusual points or outliers. The data looks roughly bell-shaped, so the supposition of a normal distribution seems rational. From a quick look at the statistics, we see that the averages are roughly grouped around 3.5. There are no extreme values in the data. To make an analytical decision, the test statistic (t) is compared to a value from the t-distribution as shown in table 7. For Q13, the student may want to share their different problems with their teachers, from which the students are not satisfactorily getting the feedback. The selected students were laid down individually with the questionnaires for explaining the purpose of the study along with their requirements as the questionnaire exposed, and were instructed how to respond to the scale of the survey instrument. Further clarifications were offered on the questions/doubts raised by them.

3.3 Statistical Analysis

The survey questionnaire was made on the Likert scale. The Likert scale was formulated as 1 = Strongly Disagree, 2 = Disagree, 3 = Average, 4 = Agree and 5 = Strongly Agree. Table 6 and Table 7 show the one sample statistics and the statistical test outcomes

respectively. The method was undertaken deeming that the test is appropriate considering the conditions below:

1) The data values are independent.
2) The measurement of the data is continuous.
3) The obtained data is from a simple random sampling.
4) The population is normally distributed from which the sample is collected.

Table 7: One-sample Test

Test Value = 3						
Questions	**t**	**df**	**Sig. (2 tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
					Lower	**Upper**
Q1	5.157	96	0.047	0.454	0.28	0.63
Q2	6.755	96	0.016	0.649	0.46	0.84
Q3	5.083	96	0.001	0.495	0.30	0.69
Q4	7.382	96	0.000	0.649	0.47	0.82
Q5	10.507	96	0.019	0.866	0.70	1.03
Q6	6.404	96	0.000	0.619	0.43	0.81
Q7	7.367	96	0.000	0.701	0.51	0.89
Q8	8.976	96	0.001	0.814	0.63	0.99
Q9	5.203	96	0.000	0.495	0.31	0.68
Q10	2.064	96	0.042	0.216	0.01	0.42
Q11	9.474	96	0.000	0.918	0.73	1.11
Q12	3.658	96	0.023	0.320	0.15	0.49
Q13	4.414	96	0.035	0.443	0.24	0.64

3.4 Research Findings

The following sections will discuss the findings of the statistical hypothesis test for the consideration of a 95% significant level in terms of the questions.

A. Sincerity

Syllabus adequately covered by the teachers (Q1)

H0: Syllabus not covered,

H1: Syllabus covered.

From the mean (3.45), we found that the syllabus was covered by the teachers.

Statistical statement: From Table 7, we see that the probability is 0.047 which is lower than the significance level (0.05), so we reject the null hypothesis (H0) and accept the alternative hypothesis (H1).

B. Punctuality

H0: Not Punctual (Q2),

H1: Punctual.

From the mean (3.65), we found that teachers are punctual.

Statistical statement: From Table 7, we see that the probability is 0.016 which is lower than the significance level (0.05), so we reject H0 and accept H1.

C. Taking the classes regularly (Q3)

H0: Not taking the classes regularly,

H1: Taking the classes regularly.

From the mean (3.49), we found that teachers are regular in their classes.

Statistical statement: From Table 7, we see that the probability is 0.001 which is lower than the significance level (0.05), so we reject H0 and accept H1.

D. Quality

Sufficient knowledge (Q12).

H0: Lack of sufficient knowledge,

H1: Having sufficient knowledge.

From the mean (3.32), we found that teachers are having knowledge of the topics they conduct at an average level.

Statistical statement: From Table 7, we see that the probability is 0.023 which is lower than the significance level (0.05), so we reject H0 and accept H1.

E. Communication

Using English as a medium of instruction (Q10)

H0: Inability in using English properly

H1: Having the ability in using English

From the mean (3.22), we found that teachers use English in the classes as a medium of instruction but at an average level.

Statistical statement: From Table 7, we see that the probability is 0.042 which is lower than the significance level (0.05), so we reject H0 and accept H1.

F. Friendly Attitude

Sharing the problems (Q13).

H0: Doesn't allow sharing problems

H1: Allow sharing problems

From the mean (3.44), we found that teachers allow sharing problems, but not at expected level.

Statistical statement: From Table 7, we see that the probability is 0.035 which is lower than the significance level (0.05), so we reject H0 and accept H1.

4. Recommendations

We have so far observed that the students are mixed in their opinions. On various issues, they voted for their teachers to be very well in some activities, whereas they became very negative towards some other activities. As the paper only identifies the assessment of the quality of the faculties, it focuses on the various issues related to them: their attitudes, functional activities, behavior, norms and so forth. We got that the teachers are graded as not too high in student satisfaction level. But they do not too much disagree. So, the

assessment lies at an average level. From our findings, we need to have some suggestions for the respective institutions along with the others also. Because uplifting the qualities of the teachers in return will affect deeply the whole nation in educating its children. Here go our suggestions and recommendations which we think would be a huge challenge for the teachers. The successful adaptability of these indices is supposed to be worth getting very efficient educators.

1) The teachers must have to know the object of the quality of education in the sense that they must complete the course work as they are assigned in a current semester. This must be done with a view to delivering the students a broad concept of the respective courses.
2) The teachers should be well prepared in the class as they currently are. They may involve technological aid in their lectures, i.e., in course work, laboratory work etc. And they must have obligations to it. They must have the knowledge of modern comprehension of education and quality.
3) The teachers should be well in dealings with the issues they discuss with the students. They should have clear concepts to analyze.
4) It is punctuality, which the teachers must adopt in performing their jobs as assigned, and they must encourage their students to do their responsibilities just in time.
5) The teachers must let their students be their surroundings. So, the students must have the opportunity to share their problems with their teachers. Development of communication skills is a must for the teachers. Building student-teacher relationships must enrich the total institutional environment.
6) The teachers should be well at speaking and explaining in English. If English is not their mother tongue, they must have such English language courses in order to build their linguistic capabilities. They must be ready to explain the hard and obscure issues in their mother tongue also if the students fail to understand.
7) The teachers should be laid to further training for the betterment of gaining knowledge level.
8) There are poor observation, care and control of the students' activities. The teachers along with the whole of the institution must have to be aware of these.
9) It needs to involve the other members and functioning bodies in the quality work, which is really complicated.
10) The institute must have to be smart enough to evaluate the teachers' performance at regular intervals. In this way, there would be the uplifting of the teachers' accountability, awareness and obligation.
11) The teachers should emphasize the real-world scenarios and should make the students capable of comprehension. They must attain managerial capabilities. They would make a strong team with the students which will build a very effective workforce.

12) The institute should initiate a combinational culture of senior and junior teachers. In that case, the norms and values they hold would generate multidimensional functional attitudes.

After all, it is highly recommended that the national education system will be well-equipped with a good curriculum on which the teachers should always be of adequate and precise knowledge. A good curriculum creates topics according to specific criteria, using illustrations that can be communicated well in the classroom. Under these conditions, the lesson has a chance to become a reality in the learner's eyes. Once the teachers can be able to get a series of storytelling criteria on any subject with well-defined questions and examples to help learners connect with their daily lives, they must keep it their minds that, it is knowledge, the proper implementation of which in the teaching-learning system is the basis of all sorts of socio-economic, cultural, and moral developments of a nation. When it comes to products, the teachers' ability upon a good curriculum/syllabus should provide students with the opportunity to see their knowledge come back to life and convey what they have learned, which also includes the elements of good evaluation. It gives both students and teachers an opportunity to understand the progress of a particular learner at a particular point in the flow of the session. This is the mystery of acquiring the basic skills that promote satisfaction to both the teachers and the students to express their integrated understanding for generating quality education.

5. Conclusion

To develop an educated nation, quality analysis has emerged as an undue and essential entity, by which the nation is having, a chance to be recognized in rendering opportunities for better education. However, this research was an effort to identify the quality requirements from the students' perspective. It was found in this study that,

1) The needs of the students are real, and they are attainable.
2) TQM functions are applicable to an academic institution.
3) Teachers in Bangladesh need to be more pragmatic and knowledgeable in terms of the resources they apply in the teaching-learning system.
4) Most of the alternative hypotheses as per the research questions were likely to be true as per the statistical findings, although there are significant disparities felt when the real-world scenario is taken into consideration. For example, the teachers are like to be communicating in English in the classroom. But this is not completely seen always.
5) The governing people (students in this case) in the education sector have to be embodied in feelings and capabilities of doing the best.
6) All the teachers within the sample have been exposed to quality education which in turn would influence the perception of teaching as per the statistical analysis.

As this research was meant for higher education institutions in Bangladesh, University Grant Commission (UGC) has the duty to maintain the standard of education

by monitoring and controlling. Government is the prime authority to take the suitable initiative to improve the total infrastructure of the entire education sector in Bangladesh to ensure quality education.

Abbreviations

Q1-Q13: Question 1 - Question 13,
TQM: Total Quality Management,
UGC: University Grant Commission,
UNICEF: United Nations International Children's Emergency Fund.

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Conflict of Interest
The authors declare no conflict of interest.

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Appendix 1

Question Codes	Questions
Q1	Was the syllabus adequately covered by the teacher in the last semester?
Q2	Does the teacher come well prepared in the class?
Q3	Can the teacher express himself/herself clearly?
Q4	Is the teacher punctual?
Q5	Does the teacher take the classes regularly?
Q6	Do you feel comfortable in discussing course problems with the teacher i.e. is the teacher approachable and friendly?
Q7	Does the teacher adequately respond to your questions?
Q8	Does the teacher determine your progress through assignments, class tests, questions or class discussions?
Q9	Does the teacher clearly explain the class assignment, homework, lab assignments?
Q10	Does the teacher use English as a medium of instruction in the class?
Q11	Does the teacher explain in Bangla when a student fails to understand?
Q12	Does the teacher emphasize on example other than precept?
Q13	Do you feel free to share your problems with the teacher?