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Determination of satisfaction level of Electrical and Electronic Engineering students of Southeast University

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Abstract

Electrical and Electronic Engineering (EEE) Department of Southeast University considers student opinion as an essential component for the continuous quality improvement process of the programme offered by the department. In this view, a survey form was designed identifying six broad categories of the factors that determine the student satisfaction level. In each category, several questions were included to rate their level of satisfaction on each factor. The main focusing areas were quality of learning environment, academic strengths, campus life, physical facilities, management and leadership, as well as extra- and co-curricular activities of the department. Responses were taken on a five-point Likert scale for each question. Sample size were chosen based on Krejcie and Morgan formula from the group of 580 registered existing stduents of the EEE department of Southeast University. Finally, the collected data were analysed to determine the satisfaction level of EEE students studying at Southeast University.

Keywords: Student satisfaction, EEE Department, quality assurance, cognitive domain, teaching methods.

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1. Introduction

Southeast University (SEU) was established in June 2002 as a private university under the Private University Act 1992, later amended as Private University Act 2010. The university is approved by the Ministry of education, People's Republic of Bangladesh and the University Grants Commission (UGC) Bangladesh, a government regulatory body for both the public and private universities in Bangladesh. SEU, started with a mere 27 students, has now become one of the most successful universities in Bangladesh having a good number of student enrolment, permanent campus coupled with state-of-the-art facilities and above all, a centre of transcendence. In many ways, SEU has been distinct from day 1, facilitating the scope of higher education for emerging middle class, while continually thrusting for improvement and focusing on the future with a philanthropic fortitude. For more than a decade, SEU has been the destination of talented academicians, scholars and students, having the impetus to teach, perform, create, learn and study. Amidst an astonishing diversity of programmes, exploration of innovative ideas, pursuance of new knowledge and skills, classrooms are filled with vibrancy that comes from being an academy committed to research, discovery, creativity and dynamic intellectual exchange. SEU takes pride to be an educational institution which nurtures individual excellence and community well-being (SEU Catalogue, 2017).

SEU is actively participating in the implementation of the development policies of the government. In this regard, therefore, SEU has opened up various engineering departments that will help to develop Bangladesh as well as its neighbouring areas. With this vision in mind, SEU opened a new department called Electrical and Electronic Engineering (EEE) Department that started in 2009 at its rented building at Banani. Later this department was shifted to its permanent campus located in 251/A and 252 Tejgaon Industrial Area, Dhaka 1208, Bangladesh in the year 2019 (SEU EEE Prospectus, 2018). The university has also set up an Internal Quality Assurance Cell (IQAC) later transformed as Internal Quality Assurance Center (IQAC) to supervise, monitor and control the reform initiatives and activities conducted to improve efficiency and effectiveness in academic and administrative management, teaching and learning activities, curriculum development, student learning assessment, research activities, physical facilities, human capital development and other activities of the university. SEU has developed specific management tools, such as the strategic plan for each academic and administrative department as well as service manuals for both teaching and administrative staff of the university. These tools certainly enable it to specify the results it seeks from the faculty member and staff to realise the vision and mission set by the management within a given time frame and relevant strategies to achieve these results (IQAC Manual, 2016).

In its endeavour to be an effective and efficient academic institution of teaching, learning and research, SEU desires to know the current levels of students' satisfaction at various departments. As such, EEE Department has conducted a survey to determine the student satisfaction level using a survey tool among its current registered students in the year 2016.

2. Literature review

Higher education is expanding very rapidly all over the world due to globalisation and digital revolution, increased demand for graduates with business, engineering and technical education, creation of new and fascinating disciplines at university levels, etc. This is a must demand in every country in the world to progress and prosper. There is a strong correlation between the economic growth and the higher education (Chaudhary, Iqbal & Gillani, 2009). But the world demand can't be met only by the public universities. Therefore, private universities have also been set-up in various parts of the world. Bangladesh is also not far behind of this expansion of higher education institutions like the other parts of the world. After the independence of Bangladesh in 1971, there were only six public universities in the country. The National Education Policy 2010 of Bangladesh has emphasised on learning of knowledge, skills, customs and values (NEP, 2010). Education contributes to the economic development of any country. So, to develop this country, it was felt that more universities

are required to be established in the country (UKessays, 2013). In 1980, Bangladesh government felt the need of establishing private universities in the country due to funding crisis provided to the public universities. After many obstacles, Bangladesh enacted a law in the parliament in 1992 to establish the private universities in the country. Then, few private universities came into operation under that act (Monem & Baniamin, 2010). Thus, the cost of providing higher education has gone up manifold in the country. Now, the total number of private universities has increased over 100 by the year 2018 (UGC, 2018). This brisk rise in the number of tertiary level educational institutions has contributed to an intense competition among all the public and private universities in Bangladesh.

At present, students can get information easily and instantly due to advancement in technology. In this competitive scenario, only those universities that provide quality education and other support facilities to their students can rise. There are several factors that influence the choice of admission, as well as retention of students in a particular university. Such factors satisfy the students to take admission and to study in a particular university and also to promote that university outside to influence further the decisions of the prospective students to attend in the same university (Butt & Rehman, 2010). In Bangladesh, only source of income of the university is the tuition fee of the students. Thus, all the private universities give emphasis on determining the students' satisfaction level in their universities.

Satisfaction refers to the attitudes and feelings that the students have towards their institution they study or serve. Student satisfaction may be derived from the psychological contract, and it encompasses the actions between students' expectations and corresponding responses they get from their mutual engagement and relationships with the university. Actually, student satisfaction is concerned with the assumptions, expectations, promises and mutual obligations. It creates attitudes and emotions that govern behaviour. It is also implicit and dynamic as it develops over time with accumulation of experiences, changing engagement conditions and re-evaluation of expectations. Thus, satisfaction may provide the answers of the two engagement relationship questions, such as 'What can I reasonably expect from the organisation'? and 'What should I reasonably be expected to contribute in return?'

Kotler, Lane, Koshy and Jha (2009) define satisfaction as 'a person's feeling of pleasure that result from comparing a product's perceived performance (or outcome) to their expectation'. It means if the evaluation of performance by any means matches to that of the desired expectation, then a person may be satisfied. If we consider university students in this place, the performance is the various services the university offers and the evaluated satisfaction is the expectation that are met from their university, i.e., all the things that make them productive and successful in their professional and personal lives. A research has identified few basic characteristics that employers normally seek from the university graduates, such as knowledge, intellectual abilities, ability to work in modern organisations, interpersonal and communication skills (Reid, 2008). In addition, there are other required invisible characteristics that include willingness to learn, being participative and positive to work in teams, problem solving skills, analytical abilities, leadership qualities, adaptability, flexibility, ability to summarise key issues and ability to be productive and loyal to the team/organisation. The attainment of these skills and abilities is what parents expect when they decide to send their children for higher education in universities.

Much of the current knowledge on finding the students' level of satisfaction can be traced back from the late 1960s and early 1970s (Betz, Klingensmith & Menne, 1970; Pervin, 1967). From the literature, it has been observed that students' expectations build prior to the enrolment in the university, while satisfaction exists during his/her stay in the university (Abbasi, Malik, Chaudhry & Imdadullah, 2011). However, it is also thought that the satisfaction covers issues of students' perception, concerns, responsiveness, centredness and experiences during their academic years (Carey, Cambiano & De Vore, 2002; Kara & DeShields, 2004).

Several types of research works have been conducted to know the factors that determine the satisfaction level and retention of students in a university. In a research works, it was pointed out that

quality education provides better learning opportunities and suggested that the levels of satisfaction strongly affect the students' success of learning outcomes (Aldridge & Rowley, 1998). Another research works state that the higher educational institutions are focusing on identifying and satisfying the needs and expectations of their students. Such factors include student academic achievement, faculty performance, classroom environment, learning facilities and institution reputation (Deshields, Kara & Kaynak, 2005).

Students' opinions about all aspects of academic life are now sought by educational institutions worldwide, generally, in the form of a feedback questionnaire. In a survey in UK, it was found that student satisfaction, retention and recruitment are closely linked. Thus, student satisfaction has become an extremely important issue for the universities and its management (Douglas, Douglas & Barnes, 2006).

Using a relationship quality based student loyalty model, a survey was conducted in German universities where it was revealed that quality of teaching and students' emotional commitment to their institutions are crucial for students loyalty and hence their satisfaction level (Hennig-Thurau, Langer & Hansen, 2001).

In a study conducted on Spanish university students, the results revealed that university image influenced the student satisfaction with the university (Palacio, Menesses & Perez Perez, 2002). In another study on the Spanish university students, it was expressed that the teaching staff, the teaching methods and course administration are the key elements to achieving the student satisfaction and their subsequent loyalty (Navarro, Iglesias & Torres, 2005). Another study examined the Turkish students' satisfaction in higher educational institutions showed that the quality of instructors, education, textbooks, etc., is considered to be the important factors of satisfaction for attending a particular university (Aldemir & Gulcan, 2004).

In a comparative study on the student satisfaction in higher education between UK and US, several influential factors have been identified, such as the overall impression of the school and that of the quality of education, teachers expertise and their interests in subjects, the quality and accessibility of IT facilities and the prospects of the degree for the students' career paths (Mai, 2005).

It may be mentioned that for self-assessment of an academic programme, student should ideally be involved in both the knowledge development and capacity building process for setting the goals and criteria to accomplish the desired level of standards. Thus, active participation by the students in assessment design, choices, criteria and making judgements is sustainable for the subsequent working life (Boud & Falchikov, 2006).

From the reviews of the existing literatures, it is evident that there is an extensive and strong requirement for systematic approach to measure the importance of student satisfaction in private universities from the department level in terms of teaching, research and services provided by the administration, as well as the other support services and facilities that constitute as the major variables to determine the student satisfaction level that ultimately affects the student admission and retention in a particular university, as well as further student inflow. Therefore, the objective of this study is to analyse the student satisfaction in higher education in the Department of EEE of Southeast University, Dhaka, Bangladesh, which is a growing department in the university during the last few years.

3. Objectives of the study

The objective of this study is to assess the services offered by the Department of EEE of SEU to its students and in terms of levels of satisfaction as perceived and by getting their views on the challenges they encounter in pursuits of desired services. Based on their responses in the feedback form, few suggestions and recommendations will be made for the improvement.

The specific objectives of the survey are to-

i. Identify the services offered to the students by the department and university

- ii. Determine the level of satisfaction for the services and processes offered by EEE Department
- iii. Provide recommendations for the improvement of student satisfaction level

4. Research methodology

The degree to which students are satisfied on EEE Department can be measured by attitude surveys by obtaining opinions on key matters about the department and the university. Such attitudes survey may be conducted using any or all of the following methods:

- i. Structured questionnaires
- ii. Open ended interpersonal interviews
- iii. Combinations of questionnaires and interviews and
- iv. Use of Focus Group Discussions

In this research work, the 'Feedback Survey Form' with structured questionnaires was prepared to collect the primary data.

4.1. Sampling

A sampling frame refers to, for instance, department from which student respondents were drawn. It also refers to targeted respondent list obtained from the department for the survey. In this study, probability sampling techniques were considered to select sample size of the students. The representative sample size of the existing students is determined by the following formula (Krejcie & Morgan, 1970):

$$S = \chi^2 NP(1-P) \div d^2 (N-1) + \chi^2 P(1-P)$$

where

S = required sample size.

 χ^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.84).

N = the population size = 580.

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05).

Sample size calculation is shown as follows:

$$S = \left[\chi^2 NP(1-P) \right] \div \left[d^2 \left(N-1 \right) + \chi^2 P(1-P) \right]$$

= $\left[3.84 \times 580 \times 0.5 \times (1-0.5) \right] \div \left[0.05^2 \times (580-1) + 3.84 \times 0.5 \times (1-0.5) \right] = 231.3$

Thus, we selected a sample size of 235 among the existing 580 registered students. All the respondents were given equal opportunity to participate in the survey within the survey data collection timeframe. A brief sensitisation of the students was held before the start of the survey.

4.2. Activity schedule and timelines

All the activities were prepared in a logical sequence as shown below:

- i. Planning for the survey and understanding the objectives of the assignment
- ii. Familiarisation with EEE Department and SEU
- iii. Finding research methodology
- iv. Designing the survey questions
- v. Determination of the samples
- vi. Preparation of the work schedule
- vii. Data Collection
- viii. Database preparation and analysis
- ix. Discussion of findings based on data analysis
- x. Report preparation and presentation of the findings

4.3. Data collection

In most of the studies, students' feedback was obtained via three or five-point Likert type scale questionnaire consisted of some statements (Boyes & Stannisstreet, 1993). In this study, six category based questionnaire sets were developed by the authors. In the questionnaire, the major questions asked to the participants are related to learning environment, academic strengths, campus life, physical facilities, management and leadership, as well as extra- and co-curricular activities of the EEE department of Southeast University. In these categories, there were several questions or comments through which the participants were required to give their opinions via a five-point Likert scale. In the scale, 1, 2, 3, 4 and 5 mean that the students are very dissatisfied, dissatisfied, neutral, satisfied and very satisfied about the issues raised to them. Therefore, from this survey it is possible to get participants' individual ideas and reasoning rather than understanding his/her tendency to agree or disagree with the statements provided or questions posed to them. For this purpose, similar level questions are randomly placed. Hence, it is expected that the authors will be able to assess students' satisfaction/dissatisfaction with various phases of their academic progress at the university from the date of their first registration in the EEE Department. After piloting the questions, the survey forms were photocopied and distributed among the existing registered students of the EEE Department of SEU by the research students studying at the final year.

4.4. Data analysis

The data collected from the questionnaire were entered into an EXCEL sheet for each individual student by the authors to prepare a database. Participants' answers were coded separately by the authors. In order to determine the agreement and disagreement level, data of 4–5 and 1–2 are taken in group, respectively. The student satisfaction index was obtained by EXCEL using the principle of weighted average method, i.e., the frequencies for different agreement levels were obtained and then multiplied by the respective weights for each factor under investigation. Percentage of satisfaction or dissatisfaction levels was found out from the data entered into EXCEL. Then, this data were analysed by calculating the percentage of satisfaction or dissatisfaction levels of the students. Further analyses were done on EXCEL by plotting bar graphs.

5. Findings, discussions and recommendations

5.1. Student feedback on learning environment

A learning environment refers to the components and activities within which the learning process happens. Technically speaking, a learning environment relies on computer-supported systems, such as an online learning management system, multimedia and sound system, furniture in the lecture theatres/classes, lighting and cooling system in the lecture rooms, laboratory equipment, library system, course materials, laboratory experiments, examination systems and conducive surroundings,

etc., for the students for which they should feel proud of their department. These are the key factors that Department of EEE at SEU has prioritised.

Table 1. Student feedback on learning environment of EEE Department			
Question	Satisfied (%)	Neutral (%)	Dissatisfied (%)
Quality of laboratory equipment	65	15	20
Course outline	65	15	20
Lab experiment sheet	55	20	25
Class room possess multimedia	65	5	30
Academic reputation of department	40	15	45
Value of the education for the price	65	12	23
Access to library use	74	11	15
Computer and Internet browsing	60	10	30
Training facilities of the department	80	15	5
Assignment are appropriate	55	20	25
Course pace and difficulty level are appropriate	65	20	15
Exam and quizzes reflects	60	20	20
Fellow student are academically prepared for the course	53	27	20
Class size is not too large for the subject and format	70	5	25
Laboratory equipment are modern and state of the art	60	14	26
All laboratory experiment are computer based	70	15	15
Number and quality of experiment are sufficient	55	23	22
Average	62	15	22

Table 1 Student feedback on learning .

From the data in Table 1, it is evident that students are mostly satisfied with the class room facilities, library, laboratory and training facilities of the department. But they feel that the quantity and quality of laboratory experiments should be upgraded, assignments given to them need to be improved, fellow students have to be more involved academically. They also feel that the academic image of the department needs to be enhanced. Average satisfaction level is good.

5.2. Student feedback on academic strengths

Academic strengths mean overall teaching and learning strategies of the department, examination and assessment procedures, faculty strength, faculty counselling, overall curriculum, availability of books, journals and periodicals in the library, merit and need based scholarships, etc.

Table 2. Student feedback on academic strengths of EEE Department				
Question	Satisfied (%)	Neutral (%)	Dissatisfied (%)	
Examination and assessment system is fair	70	5	25	
I would recommend this programme to my and other	65	15	20	
college students				
The required textbooks are adequately covered for the	70	20	10	
subjects				
The recommended text and reference books are standard	70	10	20	
I would recommend the textbooks to continue in this	88	2	10	
department as well as to my other friends				
The courses increased my interest in the EEE programme	65	10	25	
After completing my degree, I will feel knowledgeable	65	5	30	
about this programme				
The programme will contribute to the completeness of my	87	3	10	
education				
Overall, the course curriculum, lab facilities, Faculty	70	10	20	
Members and other facilities met my expectations				

Financial aid and scholarships	66	4	30
Access to journals, proceeding, etc.	65	25	10
Average	71	10	19

From the data in Table 2, it is observed that students are mostly satisfied with the curriculum, textbooks followed, examination procedures, etc. But they feel that in some areas more improvements are required, for example, in the faculty development, improvement of scholarship quota, access to journals and proceedings, etc. They also expected training of the existing students based on various professional needs before their graduation from the EEE Department. Average satisfaction level is very good.

5.3. Student feedback on campus life

Campus life means various sports facilities, security system, cleanliness, canteen facilities, interpersonal relationship among the students of the EEE department of Southeast University.

Table 3. Student feedback on campus life of EEE Department				
Question	Satisfied (%)	Neutral (%)	Dissatisfied (%)	
Sports facilities	90	5	5	
Recreation programmes	80	7	13	
Student government	77	8	15	
Diversity of the student body	80	2	18	
Safety and security of the campus	70	15	15	
Cleanliness of the campus	75	15	10	
I am satisfied with the quality and variety of foods served at the cafeteria/dining hall (if applicable`)	50	30	20	
The cost of food at the cafeteria/dining hall is reasonable	56	14	30	
Sense of acceptance and belonging	60	15	25	
Campus social life	60	10	30	
Average	70	12	18	

From the data in Table 3, it is seen that students are mostly satisfied with the sports and recreation facilities of the department. Besides, they are satisfied with the diverse backgrounds of the students and safety measures prevailing in the campus. But they feel that canteen facilities need to be improved in the campus and bonding among the students' needs to be strengthened. Average satisfaction level is very good.

5.4. Student feedback on physical facilities

Physical facilities are classified as various class and laboratory room spaces, number of equipment at the laboratory, transport facilities, wash rooms, etc., the EEE department of Southeast University.

Table 4. Student feedback on physical facilities of EEE Department				
Question	Satisfied (%)	Neutral (%)	Dissatisfied (%)	
Class rooms have enough spaces	80	5	15	
Laboratory rooms have enough spaces	50	20	30	
The student wash rooms are sufficient	80	10	10	
Laboratory has adequate number of equipment	40	25	35	
The cafeteria/dining hall is clean	50	20	30	
The hostels facilities at SEU are of high standard	50	20	30	
(if applicable)				

Table 4. Student feedback on physical facilities of EEE Department

The student wash rooms are clean	80	15	5
Canteen facilities of the campus	50	20	30
I am satisfied with SEU medical services	74	20	30
The student hostels are sufficient	50	10	30
Transportation services are sufficient	30	20	50
Average	58	17	27

From the data in Table 4, it is seen that the students are mostly satisfied with class room space, wash room facilities and its cleanliness of the department. Besides, they are mostly dissatisfied with the laboratory spaces, number of equipment, canteen and hostel facilities of the students. Average satisfaction level is average.

5.5. Student feedback on management and leadership

Management and leadership are defined as various aspects of academic management and governance at the department as well as in the university level. There are various types of comments posed to the students to get their feedback on management and leaderships of the EEE department of Southeast University.

Table 5. Student feedback on management and leadership of EEE Department			
Question	Satisfied (%)	Neutral (%)	Dissatisfied (%)
I am satisfied with academic management of the	85	5	10
department			
SEU management supports student club and various	70	10	20
professional society activities			
I am satisfied with the course assignment	75	10	15
I am satisfied with the thesis and internship supervision	73	7	20
There is no administrative delays in the EEE Department	92	5	3
that may cause dissatisfaction among the students			
I am satisfied with the departmental course offering	77	10	13
SEU Management responds promptly to important issues	67	13	20
affecting the students			
I am satisfied with the students' disciplinary process dealt	66	10	24
at SEU			
The student leadership at EEE Department is effective	72	15	13
I am satisfied with the class monitoring process of the	77	13	10
department			
I am satisfied with the conduction of make-up	87	10	3
examination processes			
I am satisfied with the EEE departmental leadership skills	85	8	7
Average	77	10	13

Table 5. Student feedback on management and leadership of EEE Department

From the data in Table 5, it is seen that the students are mostly satisfied with the academic management and leadership skills, speed of administrative works, monitoring and supervision process, course offering at various semesters, course assignment to the faculty by the EEE department of Southeast University, as well as SEU management supports to the student club and various professional society activities to the students of EEE department. Besides, they have little bit grievances about the SEU management responses and some disciplinary issues. But this may happen due to the communication gap between the EEE Department located at permanent campus and the main administrative building far away from the permanent campus. Long traffic jam sometimes causes a logical delay for the decisions to be communicated to the students. Average satisfaction level is very good.

5.6. Student feedback on extracurricular activities

Extracurricular activities are those that are not related to the academic affairs directly but important for the development of students' potentials and inner thoughts at various levels. EEE department as well as Southeast University undertakes various extra- and co-curricular activities regularly for the students. There are various types of comments posed to the students to get their feedback on the extra- and co-curricular activities.

Table 6. Student feedback on extra- and co-curricular activities of EEE Department			
Question	Satisfied (%)	Neutral (%)	Dissatisfied (%)
I am satisfied with extra- and co-curricular activities offered	80	5	15
by the EEE Department			
SEU has a satisfactory range of social amenities	80	10	10
EEE Department arranges regular study tours and excursions	75	10	15
Seminars and lecture series are arranged regularly and there	78	12	10
are incentives for attending the seminar			
I am satisfied with the Alumni Association Activities	90	5	5
EEE Clubs are very vibrant in the department	87	3	10
I am satisfied with the on-going process of opening IEEE	60	10	30
Student Branch at the EEE Department			
Annual picnics are held every year in the EEE Department	90	3	7
Students are encouraged to participate in various types of	80	15	5
competitions held at other universities			
Average	80	8	12

Table 6. Student feedback on extra- and co-curricular activities of EEE Department

From the percentage of data shown in Table 6, it is seen that the students are mostly satisfied with extra- and co-curricular activities offered by the EEE department as well as Southeast University. Perhaps they are worried about opening an IEEE student branch at SEU. This is going to be opened very soon by the EEE Department. Average satisfaction level is excellent.

From the overall survey data obtained from this study, it is found that the overall satisfaction index of the EEE Department is very good as shown in Table 7.

Question Category	Satisfied (%)	Neutral (%)	Dissatisfied (%)
Student feedback on learning environment	62	15	22
Student feedback on academic strengths	71	10	19
Student feedback on campus life	70	12	18
Student feedback on physical facilities	58	17	27
Student feedback on management and leadership	77	10	13
Student feedback on extracurricular activities	80	8	12
Average	70	12.0	18

Table 7. Student satisfaction level on various aspects of EEE Department based on student feedback

5.7. Recommendations based on findings and discussions

From this study, few recommendations based on findings and discussions in the previous subsections are made to increase the satisfaction level of the students further as follows:

- Transport services need to be introduced for the students of SEU in the Dhaka city.
- Vice-Chancellor or Dean Awards may be introduced for the meritorious students.
- Residential hostel facilities for male and female students are needed in nearby areas of the permanent campus of SEU.
- More PhD Faculty is required for the EEE department
- One student recreation lounge need to be created in the department.
- All class and laboratory rooms must have high speed Internet connectivity.
- Department need to enhance extra-curricular activities.
- Branch of professional societies like IEEE student branch need to be opened very soon.
- All the students must be given some practical training before their graduation, such as on AutoCAD, MATLAB, PLC, PSCAD, microcontroller, automation system, power system, etc.
- All the students must be trained to develop some soft skills, such as public speaking, communication, inter-personal, leadership skills, etc.
- Few industry grade laboratories need to be established so that graduates can start their work right after joining the job.
- More equipment should be purchased for the laboratories of the EEE Department.

It may be mentioned that the EEE Department of SEU has taken initiatives to implement outcome based education in the department. Bloom's taxonomy will be followed for teaching, learning and assessment of the students. These were found very effective in various universities in Bangladesh (Bhuyan, 2014; Bhuyan & Khan, 2014; Bhuyan, Khan & Rahman, 2014; 2018). Besides, students are being motivated in the classes to study their respective courses (Bhuyan & Khan, 2018). In various courses, MATLAB and other software are incorporated to give them more practical tasks (Bhuyan & Khan, 2016). These steps will surely help to develop the graduate attributes and skills and hence to improve the student satisfaction level at the EEE Department.

6. Conclusions

In general, the satisfaction level of a student is affected by both his/her intrinsic and extrinsic motivation factors, the quality of supervision he/she gets and social relationships with the people he/she mix with and the degree of his/her success or failure in work or in life. The discretionary power of the university will help for the successful decision making and implementation based on the outcome of the survey data. The services given to the students will produce high level of satisfaction if appropriate decisions can be made and implemented accordingly.

SEU has increasingly become aware that the reflections of their existing students make them to attain their vision, mission and goals. Therefore, the management has declared this university as a pro-student university. This survey included the major components for measuring students' overall satisfaction like learning environment, academic strengths, opinions about campus life, facilities, cafeteria/hostels and security facilities, management and leadership and extra- and co-curricular activities of the EEE Department. In each component, there were several relevant questions to get actual feedback of the students about a particular component. From the feedback, it is found that the students are very satisfied over the EEE Department. If the recommendations can be implemented properly and promptly, then it is expected to improve the current satisfaction level.

References

Abbasi, M. N., Malik, A., Chaudhry, I. S. & Imdadullah, M. (2011, July). A study on student satisfaction in Pakistani Universities: the case of Bahauddin Zakariya University. *Pakistan Journal of Asian Social Science, Canadian Center of Science and Education, 7*(7), 209–219.

- Aldemir, C. & Gulcan, Y. (2004). Students satisfaction in higher education: a Turkish case. *Higher Education* Management and Policy, 16(2), 109–122.
- Aldridge, S. & Rowely, J. (1998). Measuring customer satisfaction in higher education. *Quality Assurance in Education*, 6(4), 197–204.
- Betz, B. L., Klingensmith, J. B. & Menne, J. W. (1970). The measurement and analysis of college student satisfaction. *Measurement and Evaluation in Guidance*, 03, 110–118.
- Bhuyan, M. H. (2014). Teaching electrical circuits course for electrical engineering students in cognitive domain. *Journal of Bangladesh Electronics Society*, 14(1–2), 83–91.
- Bhuyan, M. H. & Khan, S. S. A. (2014, January). Teaching numerical analysis course for electrical engineering students in the cognitive domain. *International Journal of Electrical Engineering Education*, 51(1), 82–92.
- Bhuyan, M. H. & Khan, S. S. A. (2018, April). Motivating students in electrical circuit course. *International Journal* of Learning and Teaching, 10(2), 137–147.
- Bhuyan, M. H. & Khan, S. S. A. (2016, December). Teaching numerical analysis course for electrical engineering students using MATLAB. Southeast University Journal of Science and Engineering, 10(2), 38–46.
- Bhuyan, M. H., Khan, S. S. A. & Rahman, M. Z. (2014). Teaching analog electronics course for electrical engineering students in cognitive domain. *Journal of Electrical Engineering, the Institute of Engineers Bangladesh (IEB-EE), 40*(I–II), 52–58.
- Bhuyan, M. H., Khan, S. S. A. & Rahman, M. Z. (2018, January). Teaching digital electronics course for electrical engineering students in cognitive domain. *International Journal of Learning and Teaching*, 10(1), 1–12.
- Boud, D. & Falchikov, N. (2006). Aligning assessment with long-term learning. Assessment and Evaluation in Higher Education, 31(4), 399–413.
- Boyes, E. & Stanisstreet, M. (1993). The greenhouse effect: Children's perception of causes, consequences and cures. *International Journal of Science Education*, *15*(5), 531–552.
- Butt, B. Z. & Rehman, K. (2010). A study examining the students satisfaction in higher education. *Procedia Social* and Behavioral Sciences, 2, 5446–5450.
- Carey, K., Cambiano, R. L. & De Vore, J. B. (2002). *Student to faculty satisfaction at a Midwestern University in the United States* (pp. 92–97). HERDSA. [Online] Retrieved August 16, 2018, from www.herdsa.org.au/system/files/Carey.pdf
- Chaudhary, A. R., Iqbal A. & Gillani, S. Y. M. (2009). The nexus between higher education and economic growth: An empirical investigation for Pakistan. *Pakistan Journal of Commerce and Social Sciences*, *3*, 01–09.
- 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.
- Douglas, J., Douglas, A. & Barnes, B. (2006). Measuring student satisfaction at a UK University. *Quality Assurance in Education*, 14(3), 251–267.
- Hennig-Thurau, T., Langer, M. F. & Hansen, U. (2001). Modeling and managing student loyalty: an approach based on the concept of relationship quality. *Journal of Service Research*, *3*(4), 331–344.
- IQAC Manual. (2016). Institutional Quality Assurance Cell Manual of Southeast University, Printed version published in 2016.
- Kara, A. & DeShields, Jr., O. W. (2004). Business student satisfaction, intentions and retention in higher education: an empirical investigation. *Marketing Educator Quarterly*, 03(Fall 2004), 1–16.
- Kotler, P., Lane, K. K., Koshy, A., & Jha, M. (2009). Marketing management—A South Asian perspective. Pearson Publication.

- Krejcie, R. V. & Morgan, D. W. (1970). Table for determining sample size from a given population. *Educational* and *Psychological Measurement*, *30*(3), 607–610.
- 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.
- Monem, M. & Baniamin, H. M. (2010, December). Higher education in Bangladesh: status, issues and prospects. *Pakistan Journal of Social Sciences*, *30*(2), 293–305.
- Navarro, M. M., Iglesias, P. M. & Torres, R. P. (2005). A new management element for universities: satisfaction with the offered courses. *International Journal of Educational Management*, *19*(6), 505–526.
- NEP. (2010). National Education Policy 2010 (Final), Ministry of Education, the Peoples' Republic of Bangladesh. Retrieved August 18, 2018, from http://old.moedu.gov.bd/index.php?option=com content&task=view&id=338&Itemid=416
- Palacio, A. B., Menesses, G. D. & Perez Perez, P. J. (2002). The configuration of the university image and its relationship with the satisfaction of students. *Journal of Educational Administration*, 40(5), 486–505.
- Pervin, L. A. (1967). Satisfaction and perceived self-environment similarity: a semantic differential study of student-college interaction. *Journal of Personality*, *35*, 623–624.
- Reid, N. (2008). *Quality assurance in higher education in Pakistan—focus on the learner*. 2nd International Conference on Assessing Quality in Higher Education (ICAQHE).
- SEU Catalogue. (2017). Southeast University student catalogue. Printed version published in 2017.
- SEU EEE Prospectus. (2018). Student prospectus of Electrical and Electronic Engineering Department of Southeast University. Printed version published in 2018.
- UGC. (2018). Retrieved August 20, 2018, from http://www.ugc.gov.bd/en/home/university/private/75
- UKessays. (2013). *Research article on Role of Private Universities in Bangladesh Higher Education*. Retrieved August 18, 2018, from <u>https://www.ukessays.com/essays/marketing/private-universities.php?vref=1</u>