TEACHING EVALUATION BY THE STUDENTS OF ENGINEERING EDUCATION: A CASE FOR INTERNATIONAL UNIVERSITY OF BANGLADESH

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ABSTRACT

Over the years, educational researchers have investigated many factors that affect student learning. At the heart of this line of inquiry is the core belief that teachers can make a difference. There are different dimensions of teaching which ultimately make the differences succeed. This study used the students' classroom observation technique to evaluate the performance level of teachers in different dimensions of teaching. It examined the overall performance level of teaching in terms of department, subjects and teachers' nature of appointment whether full time or part time. The result shows that though the departments' performance levels were not identical, the differences were not significant enough. Similar findings were observed on the case of performances in subjects and teachers category. However it was revealed that the senior and experienced teachers had greater influences in managing and motivating students and they had profound knowledge on subject matter. On the other hand, young teachers were very good in communication methods like using different teaching aids and teaching styles.

Keywords: difficulties, ELC, placement exam, academic, instructional, linguistic, socio cultural

INTRODUCTION

The global scenario is changing rapidly with the changes in technology and socio-economic structures. In effect, the responsibilities of engineers are being affected too. Rugarcia and his colleagues (2000) pointed out several areas of competencies that will pose challenges to future engineers. To cope with this evolving condition, engineers must have the ability to identify, formulate and solve new engineering-related problems, and must understand the impact of their solutions in the global and societal context. To be equipped with such skills, some changes are needed in the curriculum, teaching methods, and delivery modes where the engineers are acculturated (Edens, 2000). Teaching in classroom will be a crucial factor in this regard. Effective teaching methods based on learning theories and models are now widely accepted. Inductive, problem-based, cooperative, active teaching and learning styles already proved their efficacies in responding to the shifting demands of students (Kabir, Khan & Mahmud, 2008).

Though, in developing countries, poor teaching by engineering faculty has been shown to be a contributing factor to student attrition from engineering programs. As such, studying the beliefs and practices of faculty who are committed to teaching may provide ideas on how to improve engineering education (Jindal & Aggarwal 2011).

BACKGROUND AND LITERATURE REVIEW

Numerous studies and reports have called for curricular alignment towards modern engineering education (The Journal of Engineering Education, 2005). Various techniques were also used to evaluate the teachers' teaching performance. One of them is student evaluations of teaching in the classroom which became ubiquitous in higher education, including engineering programs as educators and administrators use them frequently for critical functions in their institutions (Giesey, Chen & Hoshower 2004). Research indicates as well that students' evaluations of teachers have been a long mainstay in higher education and are widely used in universities (Hativa 1996, p. 341). In fact, studies addressing students' evaluation of higher education faculty can be traced back from the early 1900s (Darr, 1977). During this span of time, students' evaluation of faculty has been framed in several perspectives.

Results from studies which assessed the stability of classroom performance indicate that evaluations of faculty provided by students are stable across considerable periods of time (Marsh & Overall, 1981). As the teachers' teaching evaluation by the students through the classroom observations captures information about teachers' instructional practices (Mujis, 2006), some educators placed great faith in their reliability (Giesey, Chen & Hoshower 2004). Therefore, we utilized classroom observation techniques of students in evaluating teachers' performances as it reveals information about things that cannot be seen from other sources. Through close observation of teachers in their delivery of lectures, much can be discovered about how students learn and how students respond to particular teaching approaches. Classroom assessment helps teachers obtain useful feedback on what, how much, and how well their students are learning from their teaching strategies.

Teachers can then use this information to refocus their teaching to help students make their learning more efficient and more effective (Angelo & Cross, 2011). Students' evaluations of teaching are used for formative and summative activities (Hobson & Talbot, 2001). Formatively, engineering educators have reported using them for both improving the professor's teaching (Haering, 2002; Pisupati, Mathews & Scaroni, 2003), and improving the course content and format (Jae, 2000; Srinivasan, Perez, Palmer, Anderson & Boye, 2003). Summative use includes university's administration utilizing them for decisions regarding tenure, promotion and salary raises (Snaford-Bernhardt, Virkler & Barker, 2001; Centra, 2003). McKeachie (1986) suggests that there is no reason to wait until the end of the semester in administering the evaluation form. Teaching evaluation whether formative or summative, can be useful for course improvement as well as for ameliorating student morale (Abbott et al., 1990).

However, in criticizing and arguing equity issues in the fair application of teacher evaluation instruments and procedures, teachers have often directed their comments to classroom context characteristics. Salient among these features were issues on students' level of ability and range of individual differences among students' ability levels. As the argument typically proceeds, teachers who have more heterogeneous than homogeneous classes in terms of ability levels have a distinct disadvantage in producing effects on student learning and subsequent achievement, particularly as can be inferred from standardized test scores (Wright, Horn & Sanders, 1997).

Administrative use of student evaluations tends to be quite controversial (Eble, 1988; Johnson, 1988; Lowman, 1985), especially when salary, promotion, and tenure decisions are involved. The first problem is that student evaluations are often not well administered. Evaluation of

teaching for administrative use by faculty or chair visits to the classroom is even more controversial than the use of student ratings. Since ratings based on visits by professors who were not trained in the evaluation of teaching tend to be much less reliable than student ratings, this practice should not be used for administrative purposes (Wankat & Oreovicz, 1993).

The final use of student ratings is to serve as information for other students who are potential consumers of the courses (Canelos and Elliott, 1985; Marsh, 1984). Some universities have established a tradition of student-run evaluations which were then published in student guides. There is no doubt that these guides have effects on the elective courses which students enroll in.

In the context of Bangladesh, education is a top priority sector in the socio-economic development of the country (Ministry of Education, 2011). A significant part of today's generation is interested in engineering studies. As a result, universities in the country have to take on great responsibility of educating these youngsters. However, to introduce our engineering universities in the international community, we must first adopt modern methods of teaching and increase the quality of education to reach the standards of the frontline Western universities (Hassan, 2009).

In this regard, this study was conducted to find out the teachers' performances in classroom situations in the Islamic University of Technology (IUT). Particularly, it analyzed and compared the overall teaching performances of teachers on the bases of department, subject and teacher's category without evaluating the individual teacher performances. The University Grants Commission (UGC) of Bangladesh official website listed that there are only three international universities in Bangladesh which include South Asian University, Asian University for Women, and Islamic University of Technology (University Grants Commission, 2012). Yet, among the three universities, only Islamic University of Technology (IUT) provides a program in engineering and technology. Apart from being an internationally recognized educational and research institution in Bangladesh, it is also regarded as one of the top universities for technical education and the most diverse in terms of students' multicultural backgrounds. By doing this empirical inquiry, both teachers and their students will be empowered to improve the quality of learning in classroom settings.

AIMS OF THE STUDY

The current inquiry intends to look into the over-all teaching performance of teachers in IUT in various aspects of its curriculum. As such, this study endeavored to answer the following questions:

Research Question I

What are the teachers' levels of teaching performance as perceived by students?

Research Question II

Are there any significant differences among the teachers' levels of teaching performance when grouped according to department, subjects and nature of appointment?

PROCEDURES OF THE STUDY

This study was conducted in the summer semester of academic year 2010-2011 by the final year students of TVE department in the undergraduate level as a partial fulfillment of the completion

of the course: *Observation and Practice Teaching (TVE 4258),* in order to enhance the students' learning experience about teaching in real classroom situation.

Target Area: The target area of this study was the undergraduate classrooms of all the Engineering Departments of the university. In addition to classrooms for engineering subjects, classrooms of the general subjects offered to engineering students were also chosen for observation. The classroom teaching was conducted by full-time as well as part-time teachers. The classroom was selected on the basis of random sampling.

Tools of the study: To assess the classroom performance of the teachers, a structured questionnaire was tailored for the purpose of this study. This questionnaire contains ten items in different dimensions of assessing the performance in classroom instruction. Each of the dimensions used for assessing classroom performance was clearly stated. These dimensions are as follow: (1) students' motivation; (2) management; (3) knowledge; (4) teaching method; (5) teaching aids; (6) students' participation; (7) communication skill; (8) presentation; (9) evaluation techniques; and (10) remedial measures. Each item within a particular dimension of teacher performance is rated by students on a Likert-type scale. Scale values for each item ranges from 1 to 5, with higher values denoting a more positive response. Ratings for items associated with a particular dimension of classroom performance are summed to form a composite value for that particular dimension of classroom performance.

Each and every point of the questionnaire was explained very clearly to students before the observation was made. The necessary instructions were given to students during the data collection procedures. The study time was taken one semester which is 16 weeks in length. There were 38 students in the class. Each student was supposed to observe 15 classes from the four engineering departments of the university. However, a total of 555 observations were made by the students throughout the semester. Observation was made based on three categories: a) department; b) subject; and c) teacher. The following table shows the details of the observations in each category.

Table 1: Category-wise classroom observations

Category		Observation	Total
Department	Mechanical and Chemical Engineering (MCE)	148	
	Civil and Environmental Engineering (CEE)	81	555
	Electrical and Electronic Engineering (EEE)	155	
	Computer Science and Engineering (CSE)	171	
Subject	Technical/Engineering	468	555
	General	87	
Teacher	Full time	415	555
	Part Time	140	

Techniques of Analysis: Collected data were used to calculate the level of classroom performances on the bases of departments, teachers and subjects. Ranking was given by calculating the cumulative index for each category and each criterion. Homogeneity and

distribution of the data was checked properly. One-way analysis of ANOVA was done to test the significance in the differences between the performance level among the departments, teachers and subjects. Homogeneity of variance and One-way Analysis of Variance (ANOVA) were done through the 19th version of Statistical Packages for Social Sciences (SPSS).

ANALYSIS AND RESULTS

Data were analyzed separately on each department. At the same time, comparison of teachers' performance of different subjects was made.

Table 2: Teachers' performances in MCE Department
(Figures in the parenthesis indicate the respective percentages)

	Criteria	Excellent	Good	Average	Bellow Average	Total lacking
1.	Students' motivation	57(38.51)	51(34.45)	20(13.51)	13(8.78)	7(4.72)
2.	Classroom management	73(49.32)	49(33.10)	60(10.81)	8(5.40)	2(1.35)
3.	Subject Knowledge	70(47.29)	57(38.51)	16(10.81)	4(2.70)	1(0.66)
4.	Teaching method	58(39.18)	61(41.21)	18(12.16)	10(6.75)	1(0.62)
5.	Using teaching aids	52(35.13)	67(45.27)	23(15.54)	5(3.37)	1(0.62)
6.	Learners' participation	51(34.45)	54(36.48)	25(16.89)	14(9.45)	4(2.7)
7.	Communication skills	64(43.24)	55(37.14)	15(10.13)	10(6.75)	4(2.7)
8.	Style of presentation	36(24.32)	60(40.54)	29(19.59)	8(5.40)	3(2.02)
9.	Evaluation techniques	46(31.08)	58(39.18)	26(17.56)	8(5.40)	10(6.75)
10.	Remedial measures	44(29.72)	48(32.43)	24(16.21)	12(8.10)	20(13.51)

Table 2 shows that among the observed teachers of MCE department, 38.51% were found to be excellent and 34.45%, 13.51% and 8.78% were found as good, average and below average respectively at the criterion of students motivation towards learning. Out of 148 observed classes, 73 teachers were ranked as excellent and 49 teachers as good. It indicates that teachers of MCE department are efficient in managing classes. Table shows that teachers' performance is excellent or good in the rest of the criteria. Some teachers are just a bit below the expected outcomes in remedial measures.

Table 3: Teachers' performances in EEE Department
(Figures in the parenthesis indicate the respective percentages)

	Criteria	Excellent	Good	Average	Bellow Average	Total Lacking
1.	Students' motivation	69(44.51)	51(32.90)	26(16.77)	4(2.58)	5(3.22)
2.	Classroom management	69(44.51)	60(38.70)	14(9.03)	10(6.45)	2(1.29)
3.	Subject knowledge	88(56.77)	45(29.03)	19(12.25)	1(.64)	2(1.29)
4.	Teaching method	51(32.90)	67(43.22)	28(18.06)	9(5.80)	0(0)
5.	Using teaching aids	48(30.96)	70(45.16)	30(19.35)	7(4.51)	0(0)
6.	Learners' participation	71(45.80)	45(29.03)	26(16.77)	11(7.09)	2(1.29)
7.	Communication skills	78(50.32)	53(34.19)	18(11.61)	4(2.58)	2(1.29)
8.	Style of presentation	59(38.06)	56(36.12)	30(19.35)	6(3.87)	4(2.58)
9.	Evaluation techniques	50(32.25)	60(38.70)	25(16.12)	10(6.45)	10(6.45)
10.	Remedial measures	50(32.25)	56(36.12)	27(17.41)	14(9.03)	8(5.16)

A total of 155 observations were made in Electrical and Electronics Engineering department under various aspects of evaluation. It can be observed from the table that most of the teachers performed excellently and goodly under each criteria. On the other hand, very few teachers were observed to be totally lacking in most of the criteria like *"using teaching aids"* and consciousness about *"learners' participation."*

Table 4: Teachers' performances in CSE Department
(Figures in the parenthesis indicate the respective percentages)

Criteria	Excellent	Good	Average	Bellow Average	Total Lacking
1. Students' motivation	60(35.08)	64(37.42)	29(16.95)	11(6.43)	7(4.09)
2. Classroom management	66(38.59)	60(35.08)	30(17.54)	11(6.43)	4(2.33)
3. Subject knowledge	80(46.78)	56(32.74)	23(13.45)	9(5.26)	3(1.75)
4. Teaching method	61(35.67)	75(43.85)	23(13.45)	9(5.26)	3(1.75)
5. Using teaching aids	66(38.59)	56(32.74)	40(23.39)	7(40.09)	2(1.16)
6. Learners' participation	50(29.23)	72(42.10)	24(14.03)	20(11.69)	5(2.92)
7. Communication skills	74(43.27)	63(36.84)	20(11.69)	10(5.84)	4(2.33)
8. Style of presentation	59(34.50)	71(41.52)	31(18.12)	3(1.75)	7(4.09)
9. Evaluation techniques	57(33.33)	67(39.18)	23(13.45)	16(9.35)	8(4.67)
10. Remedial measures	67(29.82)	44(25.73)	48(28.07)	11(6.42)	17(9.94)

In Computer Science and Engineering department, a total of 171 observations were made where majority of the teachers were ranked as excellent and good in most of the criteria, reasonable number of teachers are average, and very few teachers are totally lacking. Teachers in this department should take note of the remedial measure as number of observations is remarkable in this category.

Table 5: Teachers' performances in CEE Department
(Figures in the parenthesis indicate the respective percentages)

Criteria	Excellent	Good	Average	Bellow Average	Total Lacking
1. Students' motivation	38(46.91)	34(41.97)	9(11.11)	0(0)	0(0)
2. Classroom management	48(69.25)	23(28.39)	7(8.64)	2(2.46)	1(1.23)
3. Subject knowledge	46(56.79)	31(38.27)	3(3.7)	1(1.23)	0(0)
4. Teaching method	35(43.20)	35.(43.20)	11(13.58)	0(0)	0(0)
5. Using teaching aids	39(48.14)	27(33.33)	10(12.34)	4(4.93)	1(1.23)
6. Learners' participation	26 (32.09)	40(49.38)	9(11.11)	4(4.93)	2(2.46)
7. Communication skills	46(56.79)	22(27.16)	7(8.64)	6(7.40)	0(0)
8. Style of presentation	40(49.38)	27(33.33)	10(12.34)	4(4.93)	0(0)
9. Evaluation techniques	25(30.86)	32(39.90)	15(18.51)	6(7.40)	3(3.7)
10. Remedial measures	28(34.56)	24(29.62)	16(19.75)	8(9.87)	5(6.17)

Civil and Environmental Engineering Department has been newly established in IUT. As the number of teachers is less in this department, only 81 observations were made. Though this department is newly established, performances of teachers were observed very well with respect to some criteria. It is remarkable that no teachers are totally lacking on five criteria i.e.; *"students' motivation"* towards learning, *"subject knowledge"*, *"using appropriate methods and techniques"*, *"communication skills",* and *"style of presentation"*.

Comparison of the different departments in terms of the performance level

A comparison among the different departments seemed to be essential in having a clear picture of the teachers' performance levels. In order to compare the performance of the teachers from different departments, it is necessary to assign numerical scores to different aspects of evaluation of the performance levels. For the purpose of quantifying the qualitative categories like excellent, good, average, below average and totally lacking, we use Likert scaling technique. The total score for 148 teachers from MCE department, 155 teachers from EEE department, 171 teachers from CIT department, and 81 teachers from CEE department for ten different criteria are shown in the following table. As the numbers of observations were not the same for all departments, percentages of respondents were taken into consideration for this calculation.

Table 6: Total Assigned Scores per Department

	Criteria	Department			
		MCE	**EEE**	**CIT**	**CEE**
1.	Students' motivation	393.16	412.84	392.88	435.76
2.	Classroom management	423.58	418.63	401.08	491.88
3.	Subject knowledge	428.98	439.27	417.48	453.11
4.	Teaching method	411.34	403.16	406.37	429.54
5.	Using teaching aids	410.2	402.51	457.42	422.13
6.	Learners' participation	390.44	401.9	382.94	403.62
7.	Communication skills	411.35	429.64	412.79	433.31
8.	Style of presentation	355.35	403.15	400.53	427.1
9.	Evaluation techniques	382.35	383.76	387.09	387.93
10.	Remedial measures	345.66	381.18	357.29	376.44

From Table 6, it can be observed that with respect to criterion 1, the classroom performance of the teachers of CEE department is the best followed by EEE department. Teachers of MCE and CIT department are in the lowest position in this criterion. In criterion 2, teachers of CEE department performed the best and CIT department teachers garnered the lowest score. In criterion 3, the performance level of the CEE department are the best followed by EEE, MCE and CIT department. In criterion 5, teachers of CIT department are well ahead of all other subjects. In the similar fashion, the classroom performance level of the teachers from different departments at different criteria of evaluation can be compared on the basis of the scores.

Table 7 shows the ranking among the departments. It means that there are some differences in the performances of the teachers which are reflected in the ranking whether they are significant or non-significant.

Table 7: Ranking of the departments

	Criteria	Department			
		MCE	**EEE**	**CIT**	**CEE**
1.	Students' motivation	1.00	1.05	1	1.10
2.	Classroom management	1.06	1.04	1	1.22
3.	Subject knowledge	1.02	1.05	1	1.08
4.	Teaching method	1.02	1	1.00	1.06
5.	Using teaching aids	1.01	1	1.18	1.04
6.	Learners' participation	1.01	1.04	1	1.05
7.	Communication skills	1	1.04	1.00	1.05
8.	Style of presentation	1	1.13	1.27	1.2
9.	Evaluation techniques	1	1.01	1.01	1.01

10.	Remedial measures	1	1.06	1.00	1.05
	Cumulative index	10.12	10.42	10.46	10.86
	Rank	**4**	**3**	**2**	**1**

Table 8: Homogeneity of variances between the groups

Test of Homogeneity of Variances			
Levene Statistic	**df1**	**df2**	**Sig.**
.563	3	36	.643

Through the use of Levene test, it was assumed that the groups have approximately equal variances. It tested the null hypothesis that there is no difference among the variances of the group (called homogeneity of variance). If the significance value of Levene's test is less than the critical value (typically 0.05), the obtained differences in variances are unlikely to have occurred based on random sampling. As the significance value (.643) is greater than 0.05, the null hypothesis of equal variances is accepted and it is concluded that there is no difference between the variances in the distribution of the data.

Table 9: Significance in the differences between the performances of the department

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5304.821	3	1768.274	2.477	.077
Within Groups	25703.573	36	713.988		
Total	31008.394	39			

In order to test the significant differences among the performance levels of different departments, one way ANOVA was done at 5% level of significance. The result of the test shows that the significance value which is 0.077 is greater than 0.05. Thus we can accept the null hypothesis by concluding that there is no significant difference that exists among the performance level of the teachers from different departments.

Comparison between Part-time and Full-time Teachers

The total assigned scores of the full-time teachers and part-time teachers in each criterion are described in Table 10. It can be seen that the overall performance of the part-time teachers are better than the full-time teachers' over-all performance.

Table 10: Total Assigned Scores of the Full time teachers and Part time teachers

Criteria	Full-time Teachers	Part-time Teachers
1. Students' motivation	402.58	414.23
2. Classroom management	420.18	418.51
3. Subject knowledge	429.09	437.05
4. Teaching method	403.31	413.51
5. Using teaching aids	406.17	411.36
6. Learners' participation	392.92	407.08
7. Communication skills	408.38	417.08
8. Style of presentation	400.88	400.69
9. Evaluation techniques	371.74	384.24
10. Remedial measures	369.16	382.8

With reference to Table 10, Table 11 was formulated which shows the rank of the full-time teachers and part-time teachers in the levels of their teaching performances.

Table 11: Ranking of the Full-time and Part-time teachers

	Criteria	Full-time teachers	Part-time teachers
1.	Students' motivation	1	1.02
2.	Classroom management	1	1
3.	Subject knowledge	1	1.01
4.	Teaching method	1	1.02
5.	Using teaching aids	1	1.01
6.	Learners' participation	1	1.03
7.	Communication skills	1	1.02
8.	Style of presentation	1	1
9.	Evaluation techniques	1	1.03
10.	Remedial measures	1	1.03
	Cumulative index	10	10.17
	Rank	**2**	**1**

It was revealed that the part-time teachers are ahead of full-time teachers in the overall teaching performances. Whether this difference is significant or not, t-test was done to verify this. The result of t-test is shown in the following table.

Table 12: Significance in the differences between the performances by teachers' category

Variable		t	df	Sig	Level of Significance
Type of Teachers	Full-time Part-time	1.29	18	.21	Not Significant

Table 12 shows that the significance value of 0.432 is greater than 0.05 in Levene's test. Thus, there is homogeneity of data. Since 0.212 which is the significance value in the t-test is greater than 0.05, then the null hypothesis was accepted. Thus, no significant difference can be demarcated between the classroom performances of the part-time and full-time teachers.

Comparison between the Subjects

Table 13 shows that the overall performance of technical subject teachers is better than the general subject teachers. Except the *subject knowledge,* the performance in technical subject is better observed in all criteria of teaching.

Table 13: Total Assigned Scores by subjects

Criteria		General Subject	Technical Subject
1.	Students' motivation	403.21	405.89
2.	Classroom management	405.66	422.83
3.	Subject knowledge	437.82	436.19
4.	Teaching method	406.82	409.09
5.	Using teaching aids	391.84	407.58
6.	Learners' participation	382.87	397.57
7.	Communication skills	401.02	421.92
8.	Style of presentation	394.88	407.82
9.	Evaluation techniques	362.01	379.02
10.	Remedial measures	329.83	371.28

Based on the information in Table 13, the following table was formulated to show the ranking between the subjects. It shows the performance of teachers in technical subjects is better than the performance of teachers in general subject.

Table 14: Ranking by Nature of Subjects

	Criteria	General subject	Technical subject
1.	Students' motivation	1	1
2.	Classroom management	1	1.04
3.	Subject knowledge	1	1
4.	Teaching method	1	1
5.	Using teaching aids	1	1.04
6.	Learners' participation	1	1.03
7.	Communication skills	1	1.05
8.	Style of presentation	1	1.03
9.	Evaluation techniques	1	1.04
10.	Remedial measures	1	1.12
	Cumulative index	10	10.35
	Rank	2	1

However, t-test was done in previous analyses to find out whether the differences between the performance of the teachers in general subjects and technical subjects are significant or not.

Table 15: Significant differences between the performances by subject

Variable		T	df	Sig	Level of Significance
Nature of Subjects Being Taught	General Subjects Technical subjects	1.29	18	.21	Not Significant

Apparently, the probability value based on t-test is 0.212 which is greater than 0.05. Hence, it indicates no significant difference between the performances of the teachers of general subjects and technical subjects.

CONCLUSION AND RECOMMENDATIONS

Though differences can be discerned from the rankings of the teachers based on the collected data, in-depth statistical analysis revealed that there are no significant differences among the performance level of teaching in terms of department, teachers and subject. However, some conclusion and recommendations can be made on the bases of raw data analyses.

It was observed that teachers who possessed doctorate degrees and were teaching for many years can understand their students very well as evidenced by very high performance levels in managing the class. Teachers with less experience might be lacking in class management skills and subject knowledge. Yet in some cases, it was observed that young teachers are performing better than senior teachers on some criteria of teaching like *using teaching aids*, *communication skills* and *style of presentation*. The teachers who are not very experienced but not less experienced like assistant professors and associate professors manifested good command over

almost all criteria of teaching. However, majority of the teachers' performances are quite questionable, especially in the criteria of *evaluation* and *remedial measure* of students during the instruction.

It was noticed that part-time teachers were better than the full-time teachers to some extent. This is somehow logical given that part time teachers have a wide range of teaching experience and some of them are teaching in different universities. Most of them are professors or associate professors. But in IUT, most of the teachers are young.

It was observed as well that most of the teachers were using lecture method of teaching which is always not suitable to catch the attention of students. Sometimes, teachers can use different teaching methods which will increase students' interests towards subjects they are teaching. Proper use of teaching aids has a great impact on students' learning. Most of the classrooms were not equipped with multimedia projector which is an essential aspect of teaching engineering subjects. IUT authority is suggested to prioritize this issue. Teachers are also encouraged to show concern for the diverse multicultural community in IUT. As the university caters to the necessities of student from varying countries, races, cultures and the likes, directions should be drafted towards making the learning process accessible to all students despite their differences.

The university managing committee is recommended to give proper emphasis on collecting or purchasing sufficient reference books, teaching aids and other learning materials. Seminar or workshops on quality teaching should be organized occasionally at university premises. Newly appointed teachers with no teaching experience must undergo teacher training programs before starting to teach in order to enhance their teaching methodologies.

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