

# Understanding the Voice of Students (VoS) to Enhance Teaching Effectiveness

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The voice of Clients is a common term as far as Quality Assurance is concerned and this term is also rigorously addressed in literature but this topic is still to be explained as far as voice of the Students (VoS) is concerned in relation to their satisfaction about the Academic programs offered by any Higher Educational Institute (HEI), their satisfaction with the Teaching Quality and above all with that of higher educational institute. This study determined the capturing the voice of students against the Teaching effectiveness after having a Quantitative survey from Electrical Engineering Department Students of a University of Management and Technology & University of Central Punjab recognized by Higher Education Commission, Pakistan. The (VoS) is measured, studied and analyzed for the identification of grey areas in the programs and teaching methodologies. After the identification of grey areas, this paper also discusses about the remedial measures in order to overcome the loop holes. The framework would help HEIs to integrate the Student's feedback with the aim of continual improvement in the higher education.

**Key words:** Students Satisfaction Level, Higher Education, Voice of Students

## Introduction

Academic achievement or performance is the outcome of education — the extent to which a student, teacher or institution has achieved their educational goals. The quality of education depends on the teachers as reflected in the performance of their duties. Teachers have been shown to have an important influence on students' academic achievement and they also play a crucial role in educational achievements because the teacher is ultimately responsible for translating policy into action and principles based on practice during interaction with the students (Afe, 2001). Finally useful recommendations were made based on the results of the study.

Teaching evaluation through Students feedback is a regular and routine activity which aims at enhancing the quality of education in the light of voice of Students. This teaching effectiveness is measured mostly at the end of the semester to gauge the level of satisfaction of students. In relation to this a Student feedback questionnaire has been designed which focuses on the following elements: Course Material, Class Teaching, Class Assessment, and Resources. The

questions under various categories are mentioned in the Annexure I (Students Feedback Questionnaire).

Student voice here in this research paper describes capturing of the quantitative measurement of Students satisfaction in relation to Teaching effectiveness. And teaching effectiveness means:

- The satisfaction of students in relation to the effective course material management
- Class Teaching as per the set norms of the program and University and up to the entire satisfaction of students
- Timely, fair and constructive feedback to students against their submitted quizzes, assignments and Projects
- Enhancing Students Learning by imparting oral, communication, analytical and critical thinking skills.

## **Hypotheses**

- $H_1$ : There is a relation between course materials, class teaching, class assessment and resources.
- $H_2$ : There is a significant difference between UMT and UCP course materials.
- $H_3$ : There is a significant difference between UMT and UCP class teaching.
- $H_4$ : There is a significant difference between UMT and UCP class assessment.
- $H_5$ : There is a significant difference between UMT and UCP resources.
- $H_6$ : There is a significant difference between genders and course materials.
- $H_7$ : There is a significant difference between genders and class teaching.
- $H_8$ : There is a significant difference between genders and class assessment.
- $H_9$ : There is a significant difference between genders and resources.

## **Literature Review**

Student voice describes the different perspectives of Students throughout schools focused on education. "Student voice is giving students the ability to influence learning to include policies, programs, contexts and principles". And also it can be helpful in improving the teaching effectiveness.

Student voice is the individual and collective perspective and actions of students within the context of learning and education. It is acknowledged in universities as both a symbolic practice and as a pragmatic concern.

Teaching effectiveness is a composite area of study supported by a widespread body of experimental study. The emergent effective teaching performance is an ingredient of every teacher pays much concentration in the research text. What is teaching effectiveness? There is harmony relating to some of the outcomes that should be resulting from it. Effective teaching should inspire student interest and vigorous education, persuade student analytical, logical, and creative thoughts, and boost both their aspiration and capability for future education (Kullbert, 1989; Baker, 1990).

A study about teaching effectiveness by Buskist (2002) discovered three proportions of successful educational staff. First, they be devoted to the topic substance, the skill of education, and students. Second, they are practical in their motivating to become improved teacher, and finally, they give emphasis to interface between students and teacher while on the other hand, Feldens and Duncans (1986) reported that efficient academic staffs have dimensions as student participation, classroom organization and management, clarity, acceptance of students, punctuality, and systematization. In light of the research on effective teaching and in an effort to provide focal point for hard work to improve university teaching, these factors were further clustered under three foci for staff improvement namely improving interpersonal associations, civilizing organization, organization, assessment and enhancing knowledge and perceptive.

Early study on teaching effectiveness by Feldman (1976) identifies twenty categories of effective teacher. The categories are then subdivided into three dimensions named as presenter, facilitator, and an effective manager.

Braskamp, et. al. (1979) then exposed ten Qualities for teacher effectiveness. Those traits are then been divided into two dimensions called understanding and specialized maturity. The first dimension relates to the characteristics of teacher, while the second dimension is related to subject matter.

The endeavor of teaching is to make student learning probable (Ramsden, 1992). High quality teaching in higher education is generally acknowledged with the encouragement of effective educational opportunities for students (Broder & Dorfman, 1994).

Further, Ansari et, al. (2000) concluded the teacher effectiveness into five dimensions called knowledge of subject, groundwork and organization of lectures, clarity of presentation, eagerness, aptitude to inspire students thought and interest.

Throughout its history, however, research on teacher effectiveness has found few consistent relationships between teacher variables and effectiveness measures, typically operationalized as student test scores (e.g., Barr, 1961; Morsh and Wilder, 1954; Rosenshine, 1970). Questions related to teacher effectiveness have a long intellectual history within the broader field of research on teaching and teacher education, as well as research on school effectiveness (Doyle, 1977; Raudenbush and Willms, 1995).

## **Methods**

A quantitative approach will be implemented in order to present statistical results about the feedback of the student.

Students of the universities will comprise the population of this research. Students of University of Management & Technology (Lahore) and University of Central Punjab (Lahore) were the target population of this research. The students of Electrical Engineering Department will be part of this study. Data were gathered from 50 students of these 2 universities in Lahore. Students of each university were chosen by simple random sampling to collect data for approaches to studying. Self-administered survey method is adopted for data collection for the present study. No prior instructions or training will be given to the participating students about approaches to study. The primary tool used for data collection was questionnaires. Questionnaire consisting statements on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) has been employed for measuring all concepts involved in the study.

Questionnaire regarding students feedback had been distributed among students were disseminated course material, class teaching, class assessment and resources provided by the university. The questionnaires were piloted first by a small scale study to check the appropriateness and reliability of data.

Every questionnaire is checked for omissions, legibility and consistency before entering into the computer for tabulation.

Data analysis is carried out through SPSS as frequency tables, reliability analysis, correlation analysis, Independent Sample T-Test & Regression are then interpreted. Descriptive Figures is prepared through MS Excel 2010.

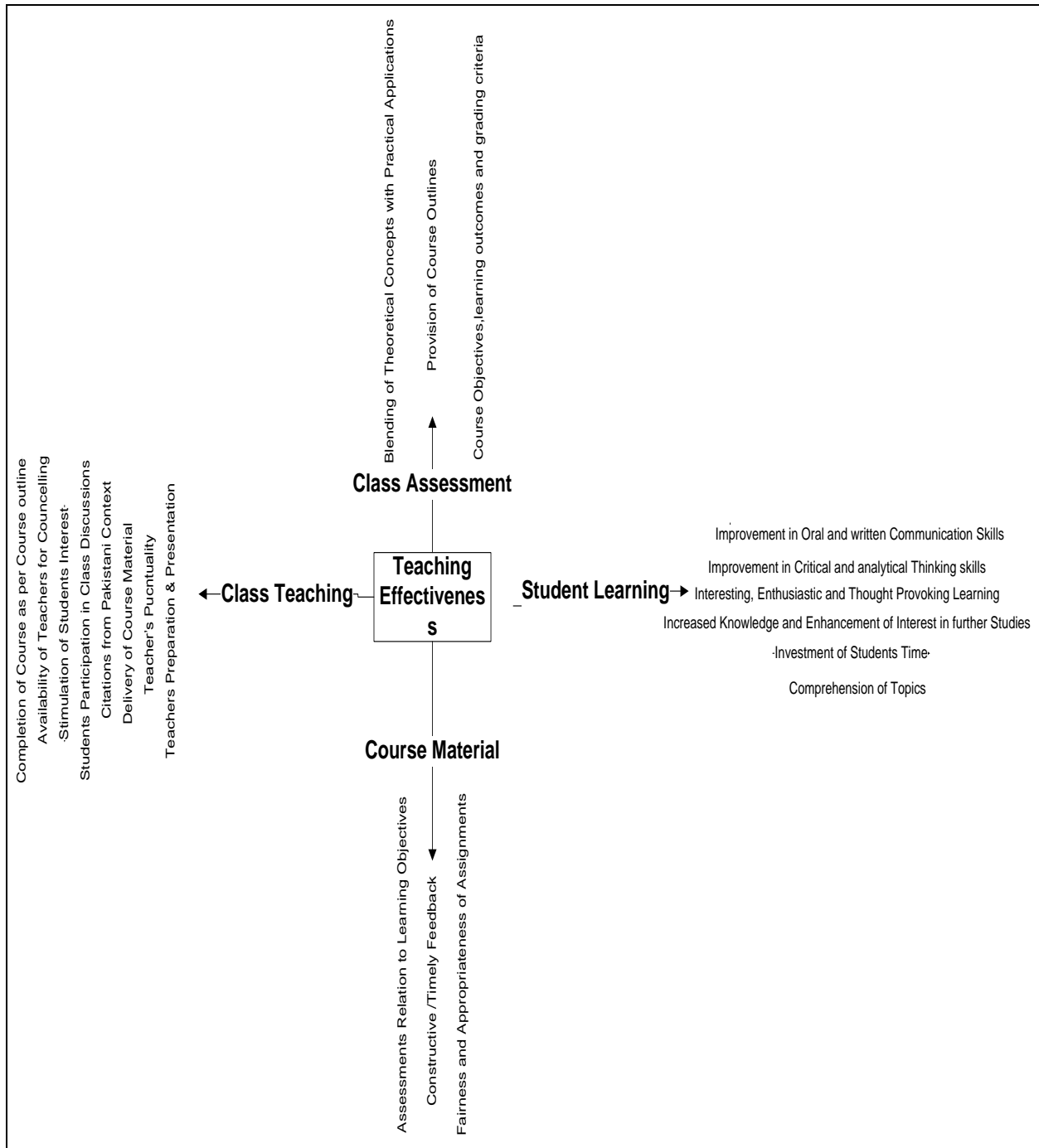


Fig 1: Measurement Model of Teaching Effectiveness

## **Data Analysis**

### **Reliability Analysis**

The Cronbach-alpha value for Student's feedback questionnaire have 22 questions used for this research is estimated to be 0.809. The Cronbach-alpha for items is 0.878 (Course Material), 0.725 (Class Teaching), 0.930 (Class Assessment) and 1 (Resources) (Table 1). *Nie et al.* (1975) suggested that a score of more than 0.70 was satisfactory. Hence, reliability coefficients depicted adequate reliability for this research.

### **Descriptive Analysis:**

Majority of the students i.e. 32 (64%) agreed/Strongly agreed to question that the course content was clearly organized. This means that majority of the students are satisfied with the course content.

Majority of the students 35 (70%) responded with the neutral option for the text/essential reading/handouts covered the course outline. This means students are neither agreed nor disagreed with the question. To improve the student satisfaction text/essential reading/Handouts should properly cover the course content defined.

Majority of the students i.e. 26 (52%) agreed/Strongly agreed to question that the course content was easy to understand. Course content should be clearly defined, well organized. It will help students to understand the course content easily.

Majority of the students i.e. 26 (52%) agreed/Strongly agreed to question that the course content was challenging. Course content should not be challenging for the students. It should be easy to understand so students read the course with interest.

Majority of the students i.e. 26 ( 52% ) out of 50 agreed/Strongly agreed to question that the course has made me very interested in further studies in this subject area. As previously asked question showing that course content was challenging for more than 50% of the students which decreases student's interest in further studies in this subject. Course content should never be challenging.

Majority of the students i.e. 36 (72%) agreed/Strongly agreed to question that teacher encourages students participation. Which is a positive gesture; it helps students to clear their concepts and increases their confidence.

Majority of the students i.e. 40 (80%) agreed/Strongly agreed to question that teacher is available and helpful during scheduled office hours. Students can easily get help whenever required and the result showed that students are highly satisfied with the teacher availability.

Majority of the students i.e. 44 (88%) agreed/Strongly agreed to question that teacher is prepared for class. Teacher should always come with preparation to take the class otherwise he/she would not be able to clear concepts of the students and students get confused. Results showed high satisfaction.

Majority of the students i.e. 44 (88%) agreed/Strongly agreed to question that teacher is punctual. Punctuality is not about being on time, It basically about your own commitments. Results showed that teacher is punctual and committed. Students are observing the teachers and learning from them so Punctuality of a teacher can have good impact on the class.

Majority of the students i.e. 44 (88%) agreed/Strongly agreed to question that teacher has clear presentation. If teacher is well prepared and present the lecture clearly, it will clear the concepts of the students.

Majority of the students i.e. 44 (88%) out of 50 agreed/Strongly agreed to question that teacher is knowledgeable about the subject. If teacher is not well prepared or has no knowledge about the subject then definitely he/she cannot present the lecture clearly and students will not be satisfied with that teacher. Teacher should always be well prepared and knowledgeable about the subject to present the lecture.

Majority of the students i.e. 32 (64%) agreed/Strongly agreed to question that teacher motivates for learning & encourages to consult library/internet resources. One course book is not enough to understand all the concepts clearly, students must consult other reference books or internet resources and teachers should motivate and encourage them. According to the results teacher has this positive quality.

Majority of the students i.e. 24 (48%) out of 50 agreed/Strongly agreed and 22 (44%) of the students are neutral to question that teacher uses variety of instructional methods. Teacher should adopt different teaching methods to let students understand most out of the lecture. But

according to this survey, students neither agree nor disagree that teacher uses variety of instructional method. So teacher should adopt/use different methods for students to learn more and better.

Majority of the students i.e. 34 (68%) agreed/Strongly agreed to question that teacher is fair in grading. Fair grading motivates and encourages student to work even harder when their hard work pays off.

Majority of the students i.e. 35 (70%) agreed/Strongly agreed to question that teacher is concerned about the student's progress. Student's progress depends on the teacher. Teacher should be concerned about each student not only the toppers.

Majority of the students i.e. 30 (60%) agreed/Strongly agreed to question that teacher gives tests that show the understanding of students. Test taken should not be so difficult that tortures student mentally but it should be Conceptual that tests the understanding of the student.

Majority of the students i.e. 30 (60%) agreed/Strongly agreed to question that teacher provides feedback on quizzes/assignments promptly. After taking tests/quizzes/assignments teacher should provide positive or negative feedback regarding the quizzes or assignments and guide students about how to recover their weaknesses. Majority of the student agreed with this positive activity of the teacher.

Majority of the students i.e. 30 (60%) out of 50 agreed/Strongly agreed to question that teacher follows the schedule of quizzes/assignments strictly. Teacher should strictly follow the schedule of assignments and quizzes as if the student could not understand the topic during lecture he/she can clear concept while preparing for the test/assignment and it will help in understanding the future lectures.

Majority of the students i.e. 35 (70%) out of 50 agreed/Strongly agreed to question that teacher provides guidance & counseling properly. It is the duty of a teacher to provide proper guidance & counseling and this survey shows a positive results.

Majority of the students i.e. 30 (60%) responded with the neutral (neither agree nor disagree) option for the question that learning resources in the library are sufficient. It is important for a teacher to motivate students to consult library to get help from reference books other than course book only and for this library resources should be sufficient enough to provide all related



books. Results of this surveys shows that library of the university don't have the sufficient learning resources which needs improvement.

Majority of the students i.e. 30 (60%) responded with the neutral (neither agree nor disagree) option for the question that lab and computing facilities are sufficient. Practical work is also as important as the theoretical and for practical labs and computing facilities should be sufficient enough that students can perform every task they learn in theory. Results of this survey shows that lab and computing facilities are not sufficient which needs improvement.

Majority of the students i.e. 30 (60%) out of 50 responded with the neutral (neither agree nor disagree) option for the question that other institutional facilities & resources are sufficient (play grounds, café etc.). Sports and other co-curricular activities are as important as the studies so universities should provide all the related resources. These universities do not provide such resources as majority of the students neither agreed nor disagreed with the questions.

### **Correlation Analysis:**

Correlation coefficients between the key variables of the study. Course Material and Resources ( $r = -0.103$ ,  $p < 0.01$ ), indicates a comparatively strong negative correlation. Class Teaching and Resources ( $r = -0.487$ ,  $p < 0.01$ ), indicates a comparatively strong negative correlation. Class Assessment and Resources ( $r = -0.337$ ,  $p < 0.01$ ), indicates a comparatively strong negative correlation. A weak relationship exists between Course Material and Class Teaching ( $r = 0.373$ ,  $p > 0.01$ ). A weak relationship exists between Course Material and Class Assessment ( $r = 0.277$ ,  $p > 0.01$ ). Also a weak relationship exists between Class Teaching and Class Assessment ( $r = 0.127$ ,  $p > 0.01$ ). The interpretations are based on *Cohen et al.* (2013)

## Independent Sample T-Test

Table 1: Independent Sample T-Test (w.r.t Course Material and University)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t University)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Course Material	Equal variances assumed	0.115	.736	0.327	48	.745	.064	.196	-.330	.458
	Equal variances not assumed			0.327	47.914	.745	.064	.196	-.330	.458

Table 1 indicates the difference of opinion among the UMT and UCP respondents about the course material. The significance level for Course Material is 0.736 which show that there is no significant difference of opinion (because the significance level is greater than  $p$ -value which is 0.736)

Table 2: Independent Sample T-Test (w.r.t Class Teaching and University)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t University)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Class Teaching	Equal variances assumed	0.000	1.000	0.000	48	1.000	.000	.129	-.259	.259
	Equal variances not assumed			0.000	48.000	1.000	.000	.129	-.259	.259

Table 2 indicates the difference of opinion among the UMT and UCP respondents about the class teaching. The significance level for class teaching is 1.000 which show that there is no significant difference of opinion (because the significance level is greater than  $p$ -value which is 1)

Table 3: Independent Sample T-Test (w.r.t Class Assessment and University)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t University)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Class Assessment	Equal variances assumed	0.254	.617	0.538	48	.593	.120	.223	-.329	.569
	Equal variances not assumed			0.538	47.561	.593	.120	.223	-.329	.569

Table 3 indicates the difference of opinion among the UMT and UCP respondents about the class assessment. The significance level for class teaching is 0.617 which show that there is no significant difference of opinion (because the significance level is greater than  $p$ -value which is 0.617)

Table 4: Independent Sample T-Test (w.r.t Resources and University)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t University)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Resources	Equal variances assumed	0.000	1.000	0.000	48	1.000	.000	.181	-.364	.364
	Equal variances not assumed			0.000	48.000	1.000	.000	.181	-.364	.364

Table 4 indicates the difference of opinion among the UMT and UCP respondents about the resources provided by the university. The significance level for resources is 1.000 which show that there is no significant difference of opinion (because the significance level is greater than  $p$ -value which is 1.000)

Table 5: Independent Sample T-Test (w.r.t Course Material and Gender)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t Gender)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Course Material	Equal variances assumed	1.648	.205	2.373	48	.022	.440	.186	.067	.814
	Equal variances not assumed			2.337	40.077	.025	.440	.188	.060	.821

Table 5 indicates the difference of opinion among the male and female respondents about the course material. The significance level for course material is 0.205 which show that there is no significant difference of opinion (because the significance level is greater than  $p$ -value which is 0.205)

Table 6: Independent Sample T-Test (w.r.t Class Teaching and Gender)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t Gender)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Class Teaching	Equal variances assumed	11.489	.001	6.178	48	.000	.594	.096	.401	.788
	Equal variances not assumed			6.014	31.558	.000	.594	.099	.393	.796

Table 6 indicates the difference of opinion among the male and female respondents about the class teaching. The significance level for class teaching is 0.001 which show that there is significant difference of opinion (because the significance level is less than  $p$ -value which is 0.001)

Table 7: Independent Sample T-Test (w.r.t Class Assessment and Gender)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t Gender)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Class Assessment	Equal variances assumed	7.226	.010	2.443	48	.018	.516	.211	.091	.941
	Equal variances not assumed			2.406	39.734	.021	.516	.215	.082	.950

Table 7 indicates the difference of opinion among the male and female respondents about the class assessment. The significance level for class teaching is 0.010 which show that there is significant difference of opinion between Gender and Class Assessment (because the significance level is less than  $p$ -value which is 0.010)

Table 8: Independent Sample T-Test (w.r.t Resources and Gender)

		Levene's Test for Equality of Variances		t-test for Equality of Means (w.r.t Gender)						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Resources	Equal variances assumed	0.150	.700	-4.058	48	.000	-.635	.156	-.949	-.320
	Equal variances not assumed			-4.024	44.500	.000	-.635	.158	-.952	-.317

Table 8 indicates the difference of opinion among the male and female respondents about the resources. The significance level for resources is 0.700 which show that there is no significant difference of opinion (because the significance level is less than  $p$ -value which is 0.700)

## Regression Analysis

### 1- Normality

Since the value of Shapiro Wilk is greater than 0.04 so here the results conclude that data follows normal distribution.

### 2- Linearity

Table 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.599 <sup>a</sup>	.359	.317	.372	.359	8.586	3	46	.000

Table 10: ANOVA in Simple Linear Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.572	3	1.191	8.586	.000 <sup>b</sup>
	Residual	6.380	46	.139		
	Total	9.953	49			
a. Dependent Variable: Class Teaching						
b. Predictors: (Constant), Resources, Course Material, Class Assessment						

For Model A, R square (0.359) indicates 35.9% variation in Class teaching as dependent variable is explained by student encouragement, teacher office hours, teacher prepared, teacher punctual, clear presentation, teacher knowledge . It can also be concluded that from the sig 0.000 value that class teaching and demographic responses have relationship and are significant and the model is good for data set.

Table 11: Relationship between Class Teaching and Course Material, Class assessment and Resources

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
A	(Constant)	4.518	.487		9.267	.000		
	Course Material	.237	.081	.361	2.941	.004	.923	1.830
	Class Assessment	-.081	.075	-.141	-1.085	.004	.827	1.509
	Resources	-.353	.089	-.497	-3.964	.000	.887	1.628

It can be easily observable from table 34 that the value of VIF and Tolerance are within the acceptable range so it can be concluded that there is no multicollinearity exists in the data as the value of tolerance and VIF lie within the criteria. According to Hair et al., (2010) Tolerance should be greater than 0.2 and VIF should be between 2 & 3. When individuals are association are examined the outcome shows that the all three components Course Material, Class Assessment & Resources mostly like are positively associated with class teaching at  $p < 0.0001$ , on the other side variables shows positive relationship.

### Homogeneity of Error terms

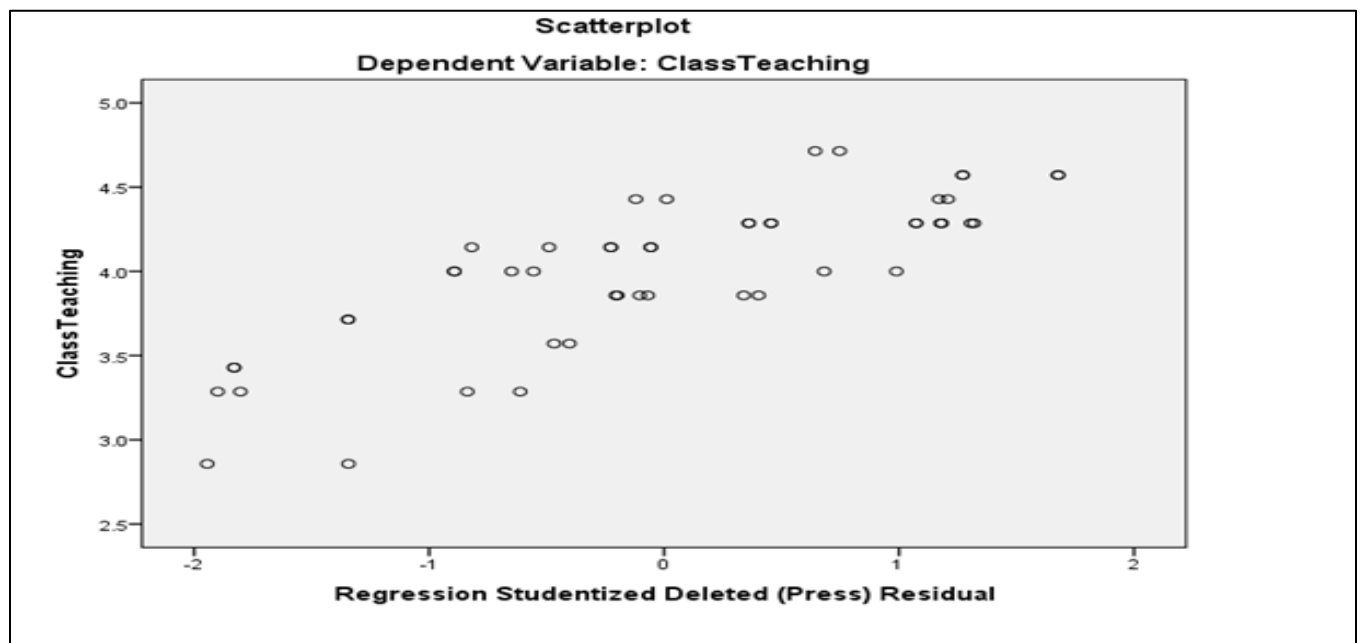


Fig 2: Homoecidisticity

## Conclusion

The key objective of this study is to contribute in the knowledge specifically about the Students feedback about the teaching methodology.

In order to achieve the study objectives, self-administered survey was conducted in Electrical Engineering department of UMT and UCP based organizations to analyze student feedback about course material, class teaching, class assessment and resources provided by the universities.

The significance level for Course Material is 0.736 which show that there is no significant difference of opinion between UMT and UCP because the significance level is greater than  $p$ -value which is 0.736.

The significance level for class teaching is 1.000 which show that there is no significant difference of opinion between UMT and UCP because the significance level is greater than  $p$ -value which is 1

The significance level for class teaching is 0.617 which show that there is no significant difference of opinion between UMT and UCP because the significance level is greater than  $p$ -value which is 0.617

The significance level for resources is 1.000 which show that there is no significant difference of opinion between UMT and UCP because the significance level is greater than  $p$ -value which is 1.000

The significance level for course material is 0.205 which show that there is no significant difference of opinion between Male and Female because the significance level is greater than  $p$ -value which is 0.205.

The significance level for class teaching is 0.001 which show that there is significant difference of opinion between Male and Female because the significance level is less than  $p$ -value which is 0.001

The significance level for class teaching is 0.010 which show that there is significant difference of opinion between Gender and Class Assessment because the significance level is less than  $p$ -value which is 0.010

The significance level for resources is 0.700 which show that there is no significant difference of opinion between Gender and resources because the significance level is less than  $p$ -value which is 0.700

R square (0.359) indicates 35.9% variation in Class teaching as dependent variable is explained by student encouragement, teacher office hours, teacher prepared, teacher punctual, clear presentation, teacher knowledge . It can also be concluded that from the sig 0.000 value that



class teaching and demographic responses have relationship and are significant and the model is good for data set.

The value of VIF and Tolerance are within the acceptable range so it can be concluded that there is no multicollinearity exists in the data as the value of tolerance and VIF lie within the criteria. According to Hair et al., (2010) Tolerance should be greater than 0.2 and VIF should be between 2 & 3. When individuals are association are examined the outcome shows that the all three components Course Material, Class Assessment & Resources mostly like are positively associated with class teaching at  $p < 0.0001$ , on the other side variables shows positive relationship.

Teaching strategies affect the study approaches of the students. Student centered approach to teaching can foster critical thinking and problem solving skills. In order to prepare students to face the challenges in practical life, teachers are required to follow teaching approaches and provide the learning opportunities to students that engage them to think critically. Conceptual change/student focused (CCSF) approaches to teaching are more likely to challenge student abilities to think creatively and look for innovative solutions to problems and situations.

### **Limitations and Recommendations**

In the light of findings of the present study, discussion and conclusion, some recommendations are put for future researchers and professional recruiters.

More studies focusing on Other HEC recognized universities to expand the available literature and use the results to compare with and validate the present study.

The results of the study were gathered at a special point in time and thus it was necessary to conduct a longitudinal research in order to observe the change that occurred over the time period.

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