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

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University of Management & Technology

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Chapter 1

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.

Chapter 2

Objectives of the Study

- To identify the grey areas in the performance of Faculty members.
- To identify Training needs for Faculty members having academic performance below the average.
- To suggest measures for the determination of effectiveness of training imparted in order to enhance Teaching effectiveness.

Significance of the Study

The significance of this study is to contribute towards body of knowledge in relation to the measurement of Teaching Effectiveness through capturing of Voice of Students and then to identify the Training needs for the faculty members having academic performance below the average.

Research on teacher effectiveness, based on teacher ratings and student achievement gains, has found the following qualities important:

- Strong general intelligence and verbal ability that help teachers organize and explain ideas, as well as to observe and think diagnostically
- Strong content knowledge – up to a threshold level that relates to what is to be taught; knowledge of how to teach others in that area (content pedagogy), in particular how to use hands-on learning techniques and how to develop higher-order thinking skills.
- Adaptive expertise that allow teachers to make judgments about what is likely to work in a given context in response to students' needs.

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.

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Chapter 3

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).

Chapter 4

Research Methodology

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

Population: Students of the universities will comprise the population of this research.

Target Population: Students of University of Management & Technology (Lahore) and University of Central Punjab (Lahore) were the target population of this research.

Sample Population: The students of Electrical Engineering Department will be part of this study.

Sampling Technique: 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.

Data Collection Tool: 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.

The outcomes of this type of investigation may present the much needed statistical evidence which is necessary to catch administrative and government support for further future studies.

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.

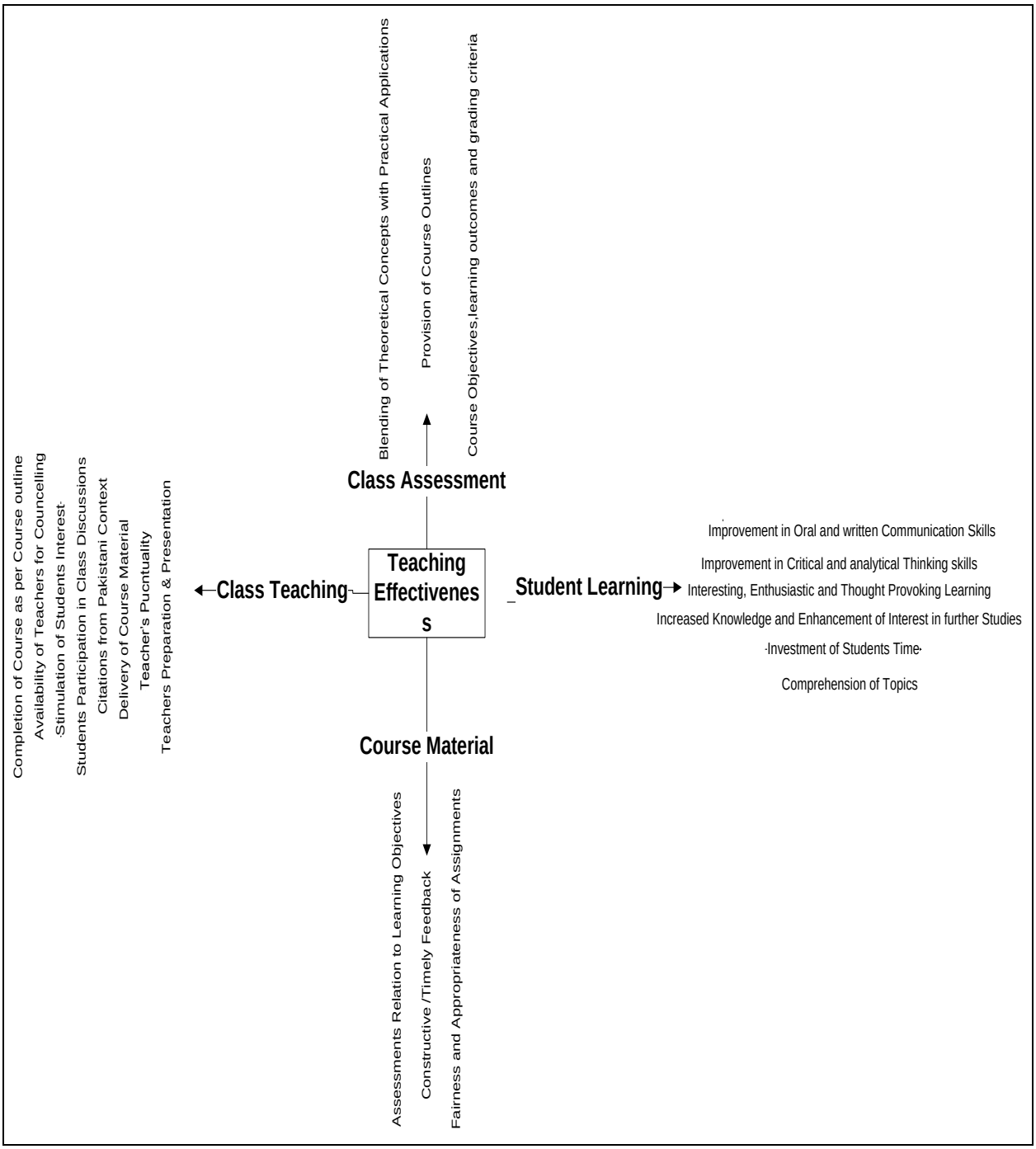

Fig 1: Measurement Model of Teaching Effectiveness

Chapter 5

Data Analysis

Reliability Analysis

The Cronbach-alph 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.

Table 1: Internal Consistency Reliability of Each Construct

Construct	Cronbach's Alpha
Overall Reliability	0.809
Course Material	0.878
Class Teaching	0.725
Class Assessment	0.930
Resources	1.000

Descriptive Analysis:

Table 2: The course content was clearly organized

	Disagree	Neutral	Agree	Strongly Agree
Frequency	2	16	22	10
Percent	4	32	44	20

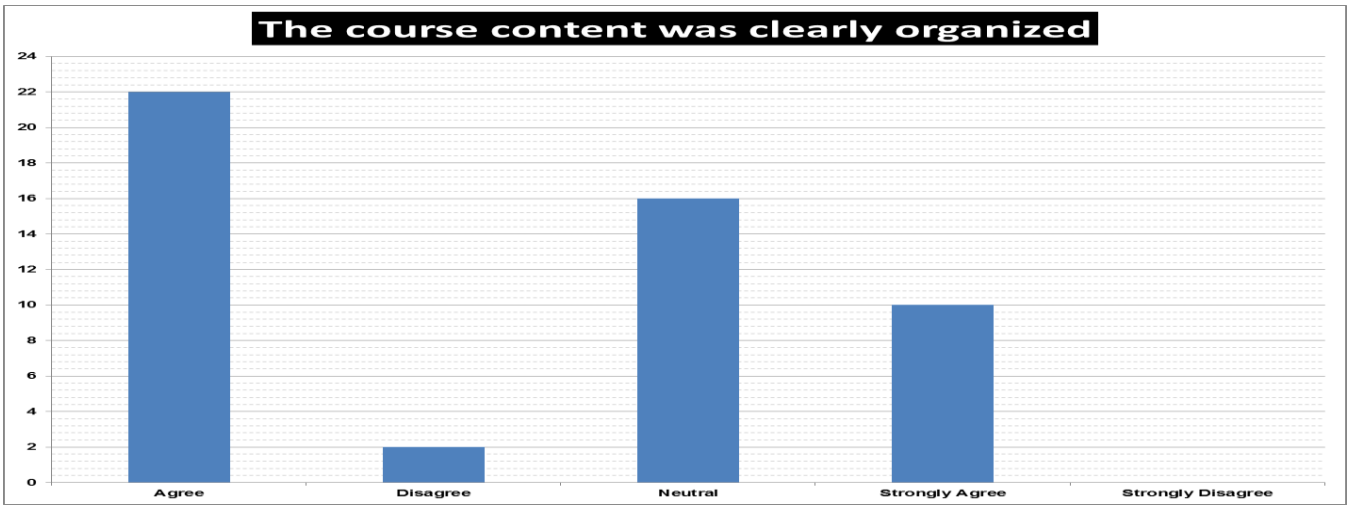

Fig 2: The course content was clearly organized

Table 2 & Fig 2 shows that 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.

Table 3: The Text covered the course outline

	Disagree	Neutral	Agree
Frequency	11	35	4
Percent	22	70	8

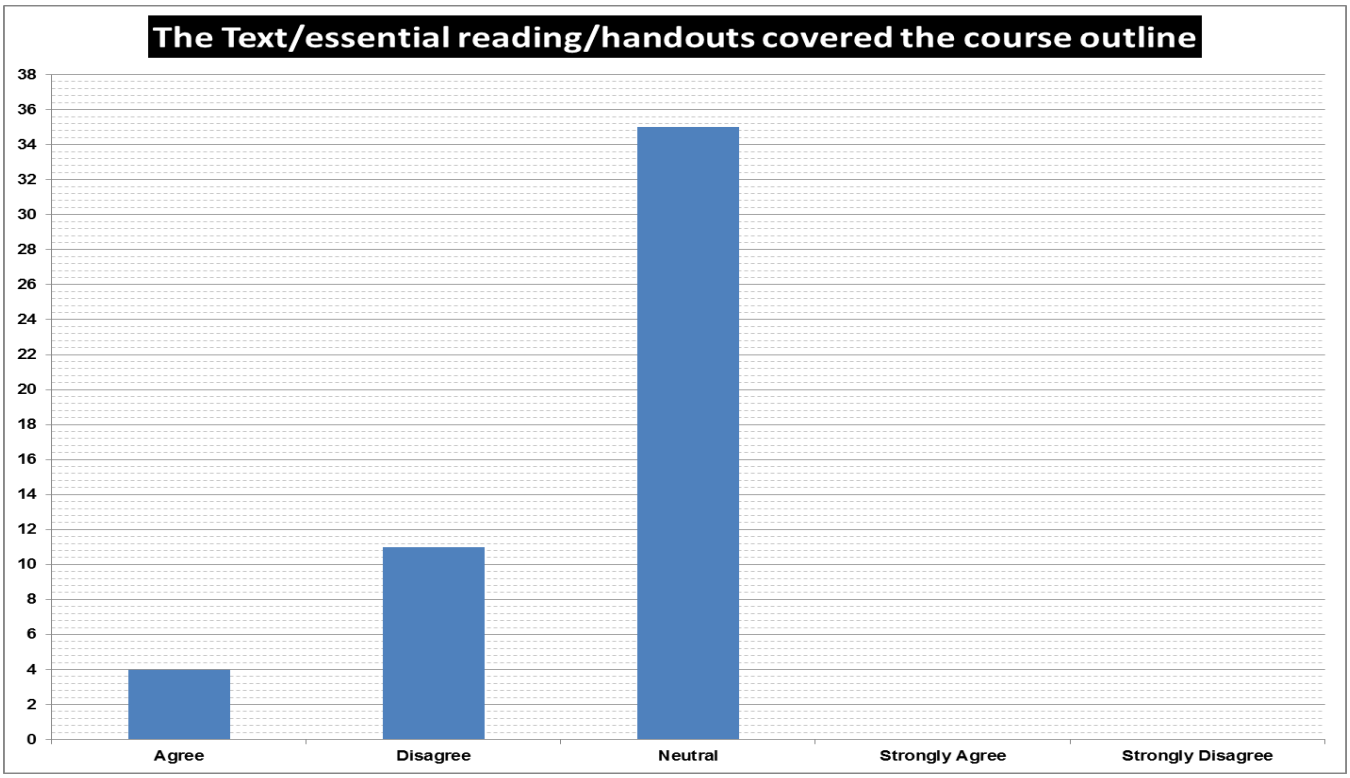

Fig 3: The Text/essential reading/handouts covered the course outline

Table 3 & Fig 3 shows that 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.

Table 4: The course content was easy to understand

	Disagree	Neutral	Agree	Strongly Agree
Frequency	5	19	16	10
Percent	10	38	32	20

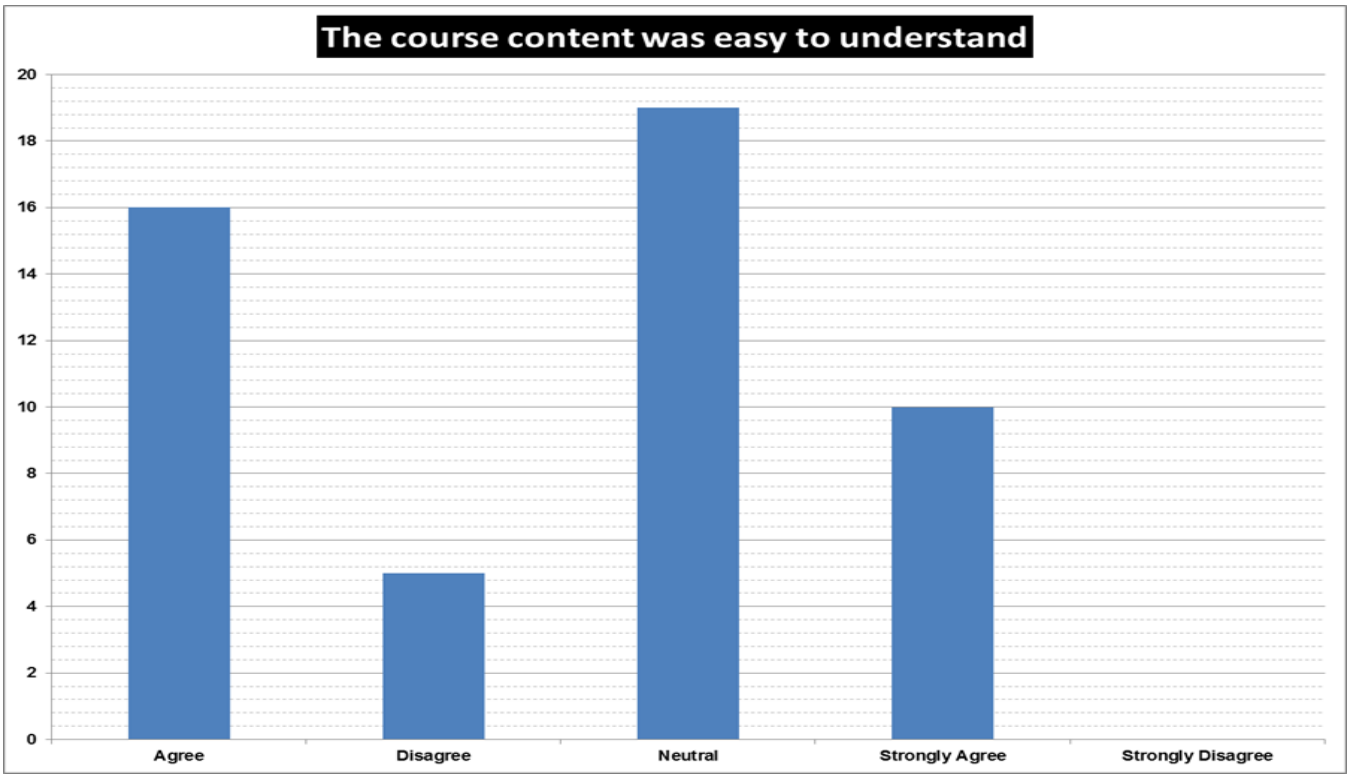

Fig 4: The course content was easy to understand

Table 4 & Fig 4 shows that 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.

Table 5: Course content was challenging

	Disagree	Neutral	Agree	Strongly Agree
Frequency	5	19	16	10
Percent	10	38	32	20

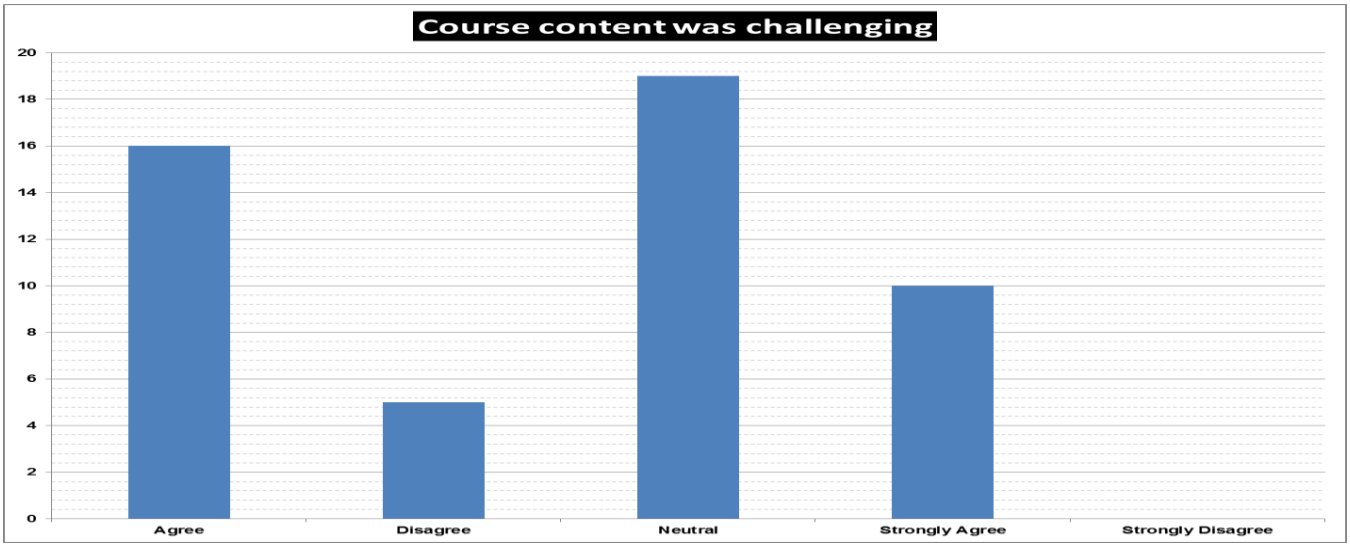

Fig 5: Course content was challenging

Table 5 & Fig 5 shows that 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.

Table 6: The course has made me very interested in further studies

	Disagree	Neutral	Agree	Strongly Agree
Frequency	5	19	16	10
Percent	10	38	32	20

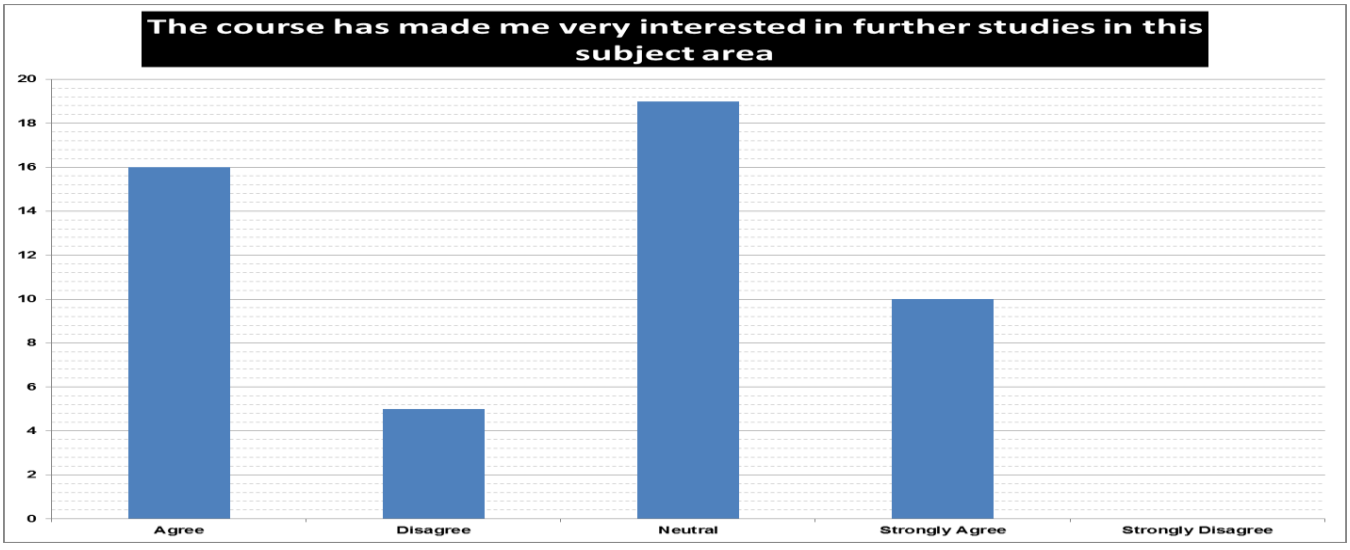

Fig 6: The course has made me very interested in further studies in this subject area

Table 6 & Fig 6 shows that 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.

Table 7: Teacher encourages students' participation

	Neutral	Agree	Strongly Agree
Frequency	14	18	18
Percent	28	36	36

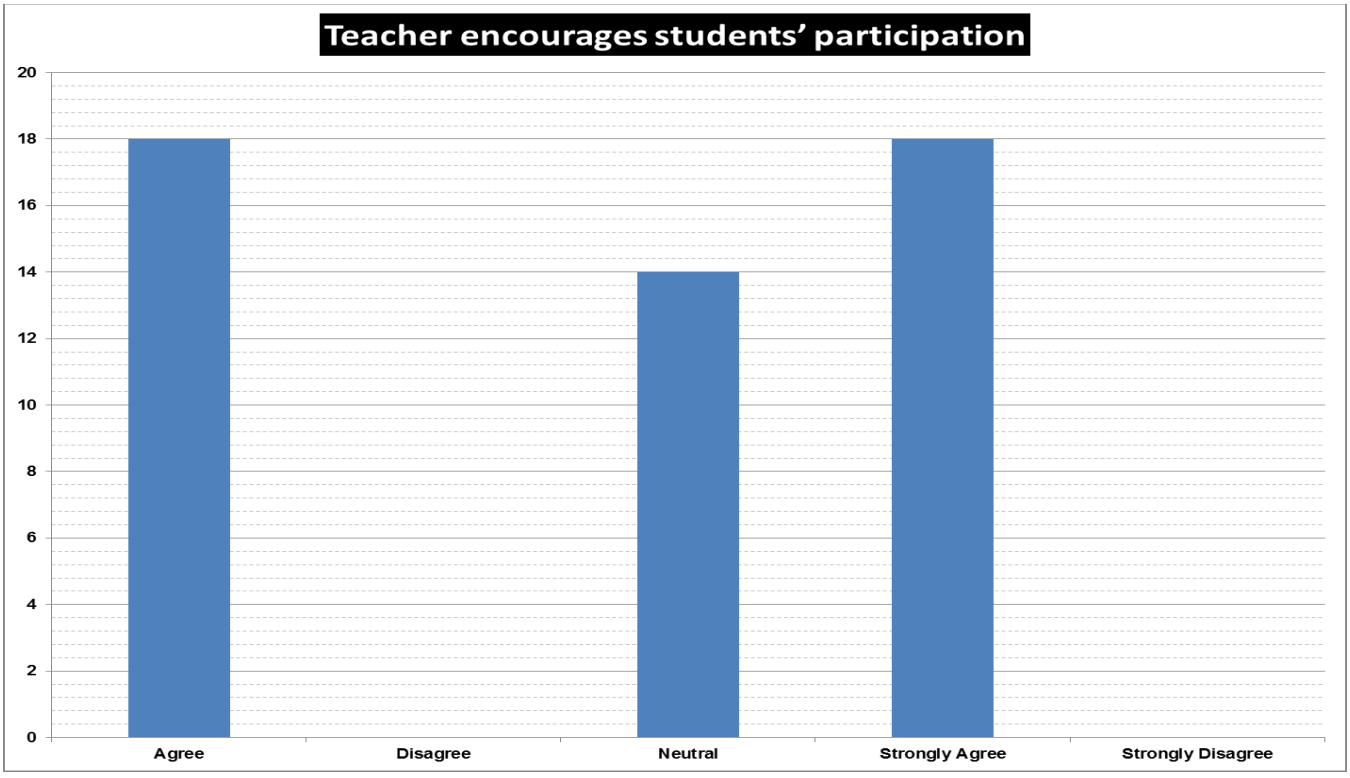

Fig 7: Teacher encourages students' participation

Table 7 & Fig 7 shows that 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.

Table 8 Teacher is available during scheduled office hours

	Neutral	Agree	Strongly Agree
Frequency	10	28	12
Percent	20	56	24

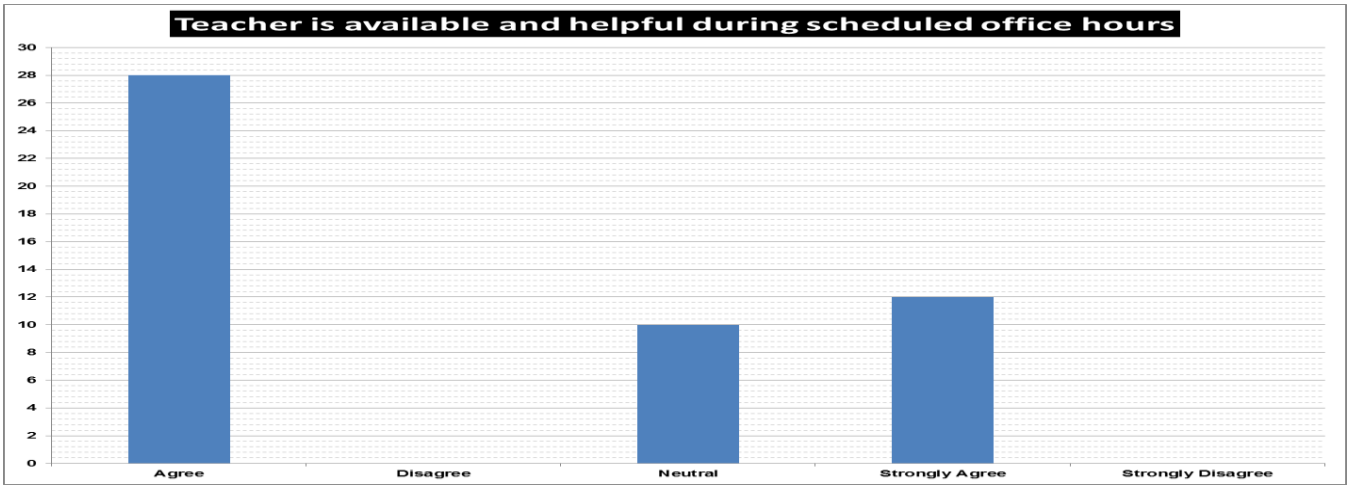

Fig 8: Teacher is available and helpful during scheduled office hours

Table 8 & Fig 8 shows that 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.

Table 8: Teacher is prepared for class

	Neutral	Agree	Strongly Agree
Frequency	6	24	20
Percent	12	48	40

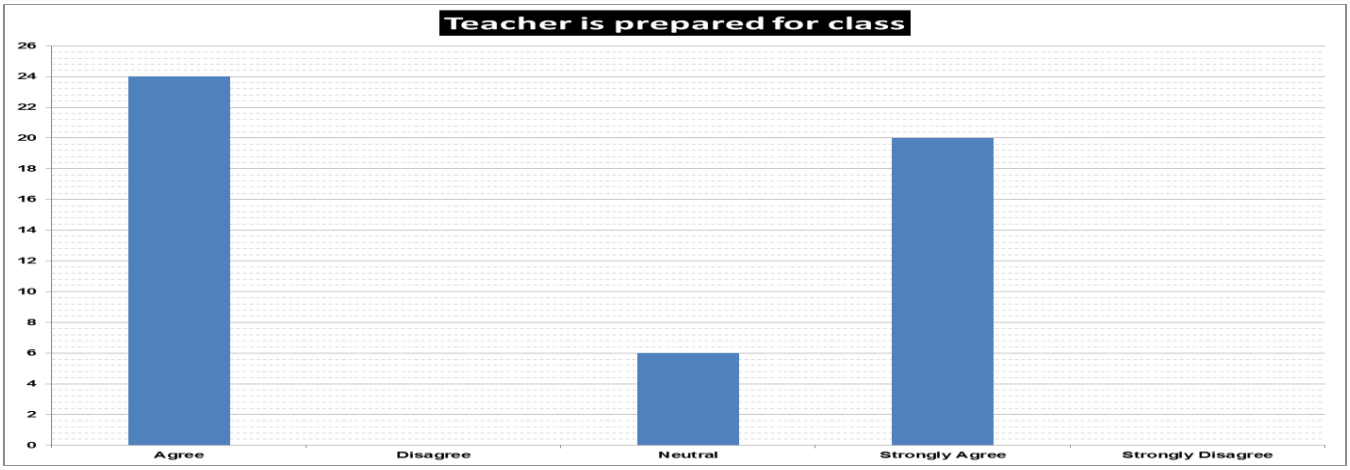

Fig 8: Teacher is prepared for class

Table 8 & Fig 8 shows that 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.

Table 9: Teacher is punctual

	Neutral	Agree	Strongly Agree
Frequency	6	24	20
Percent	12	48	40

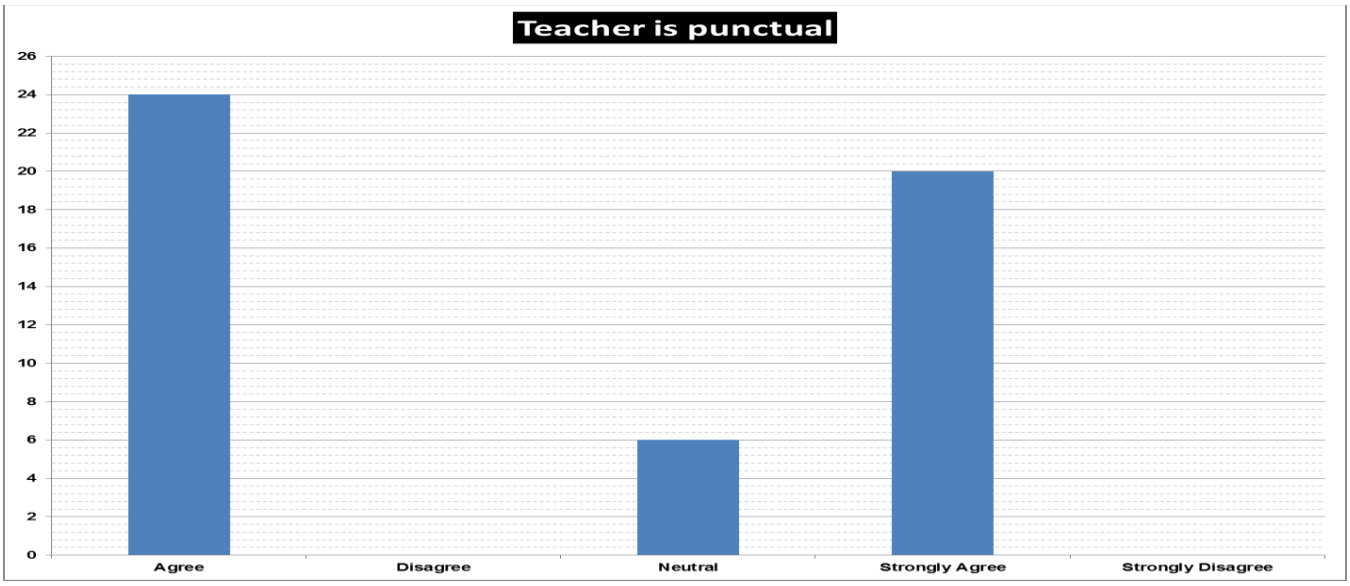

Fig 9: Teacher is punctual

Table 9 & Fig 9 shows that 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.

Table 10: Teacher has clear presentation

	Neutral	Agree	Strongly Agree
Frequency	6	24	20
Percent	12	48	40

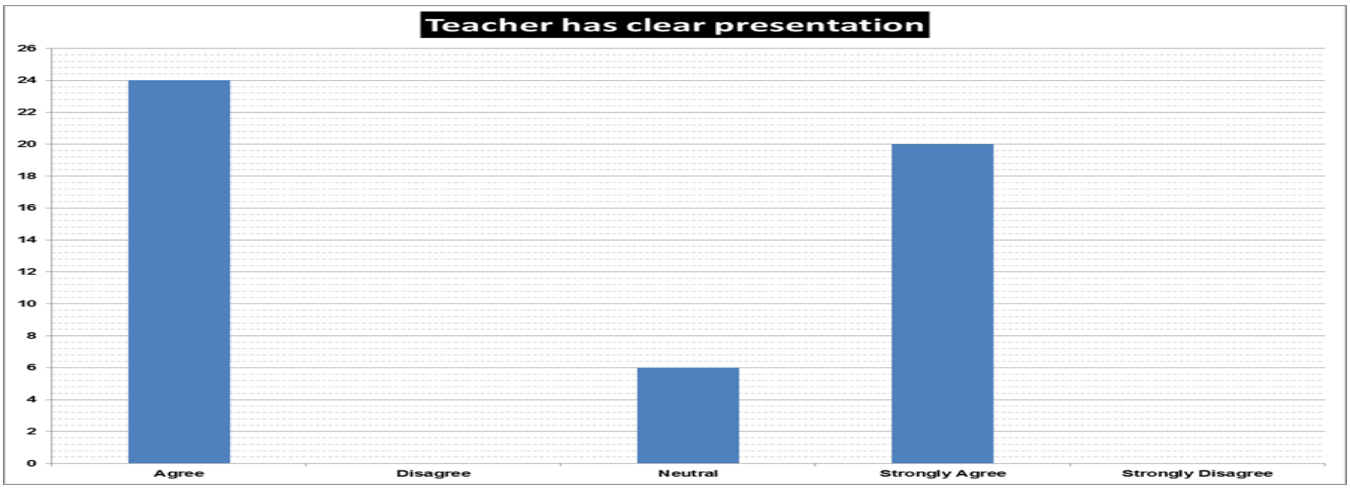

Fig 10: Teacher has clear presentation

Table 10 & Fig 10 shows that 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.

Table 11: Teacher is knowledgeable about the subject

	Neutral	Agree	Strongly Agree
Frequency	6	24	20
Percent	12	48	40

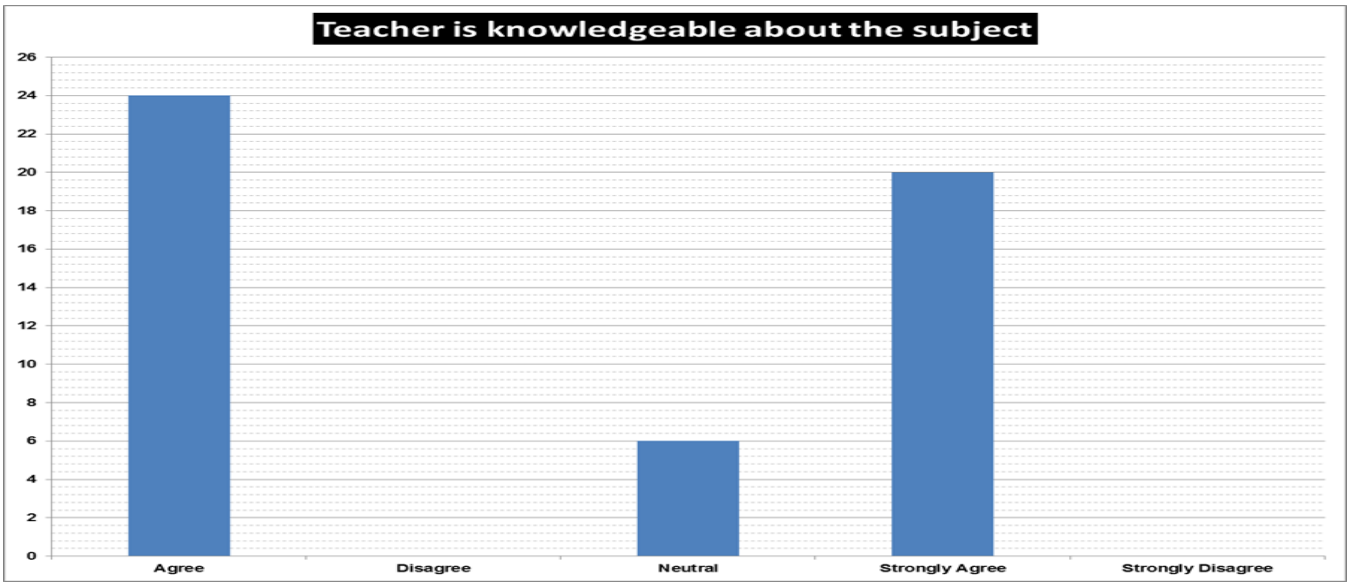

Fig 11: Teacher is knowledgeable about the subject

Table 11 & Fig 11 shows that 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.

Table 12: Teacher motivates to consult Library/internet resources

	Disagree	Neutral	Agree	Strongly Agree
Frequency	4	14	18	14
Percent	8	28	36	28

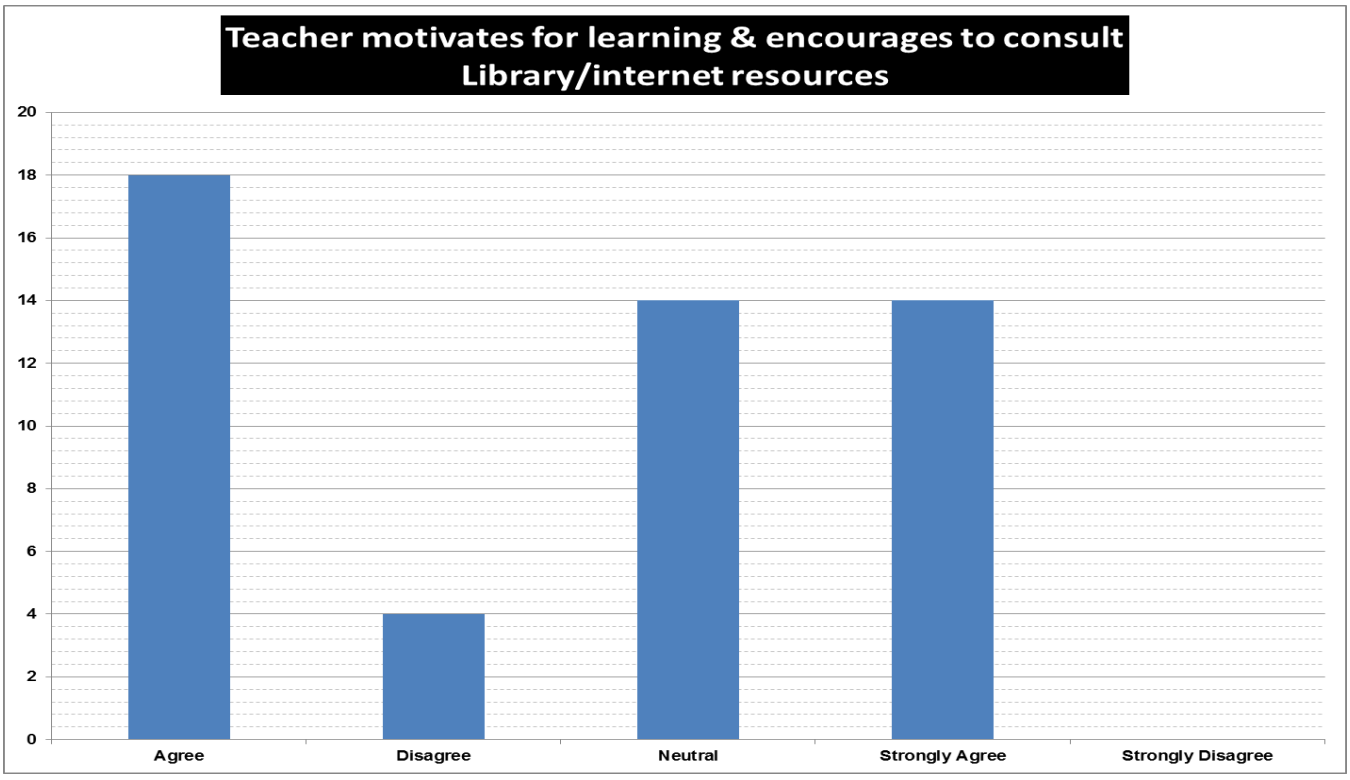

Fig 12: Teacher motivates for learning & encourages consulting Library/internet resources

Table 12 & Fig 12 shows that 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.

Table 13: Teacher uses variety of instructional methods

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Frequency	02	2	22	16	8
Percent	04	04	44	32	16

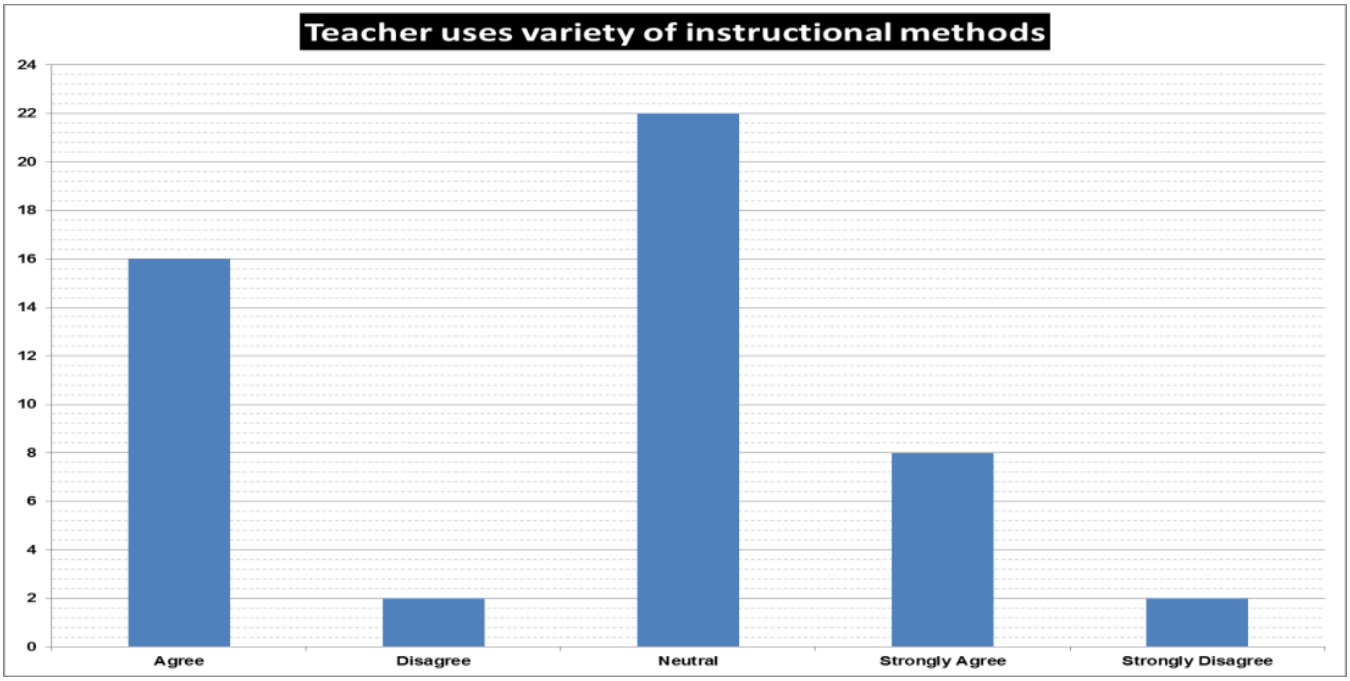

Fig 13: Teacher uses variety of instructional methods

Table 13 & Fig 13 shows that 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.

Table 14: Teacher is fair in grading

	Disagree	Neutral	Agree	Strongly Agree
Frequency	2	14	18	16
Percent	4	28	36	32

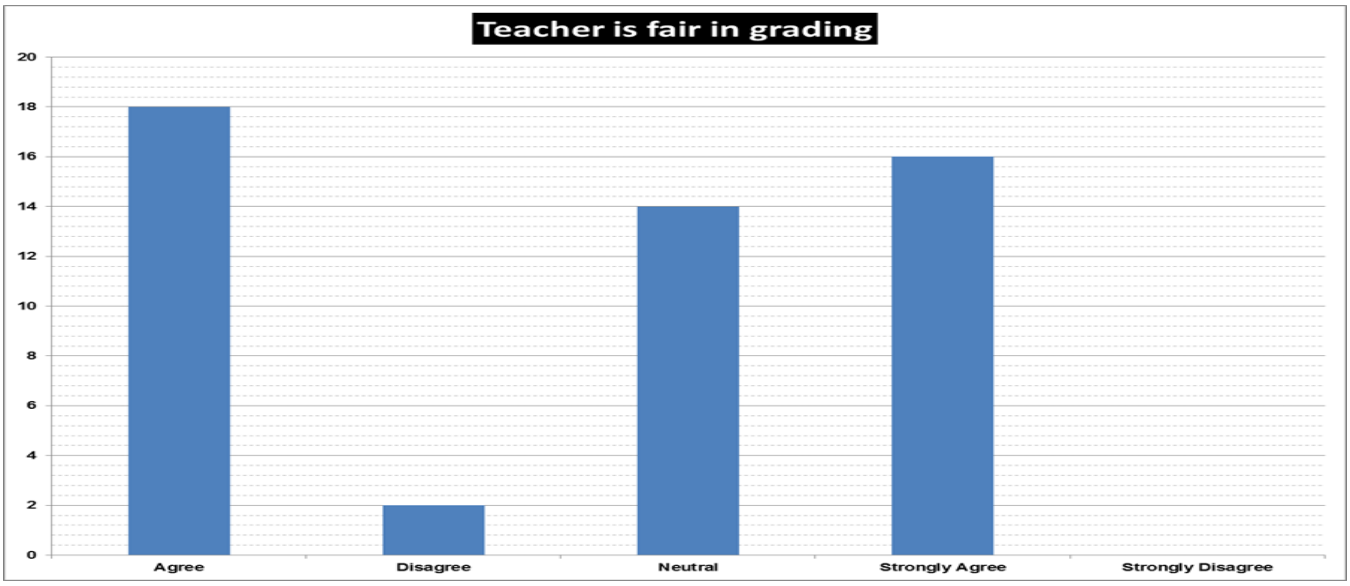

Fig 14: Teacher is fair in grading

Table 14 & Fig 14 shows that 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.

Table 15: Teacher is concerned about the student's progress

	Disagree	Neutral	Agree	Strongly Agree
Frequency	4	11	20	15
Percent	8	22	40	30

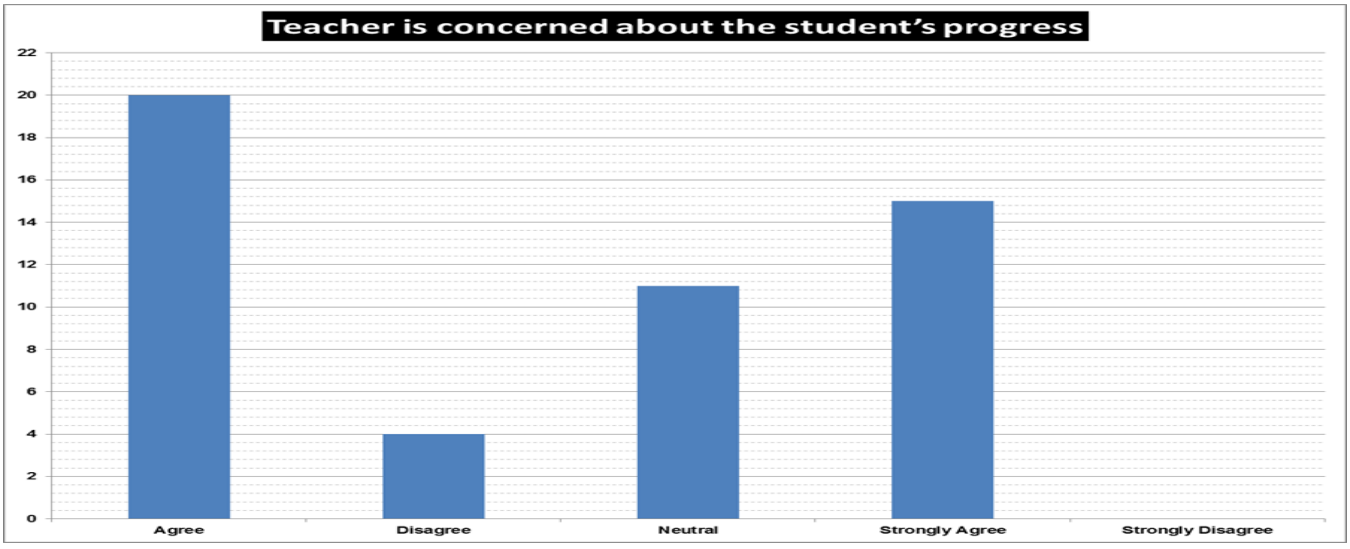

Fig 15: Teacher is concerned about the student's progress

Table 15 & Fig 15 shows that 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.

Table 16: Teacher gives tests that show the understanding of students

	Disagree	Neutral	Agree	Strongly Agree
Frequency	6	14	19	11
Percent	12	28	38	22

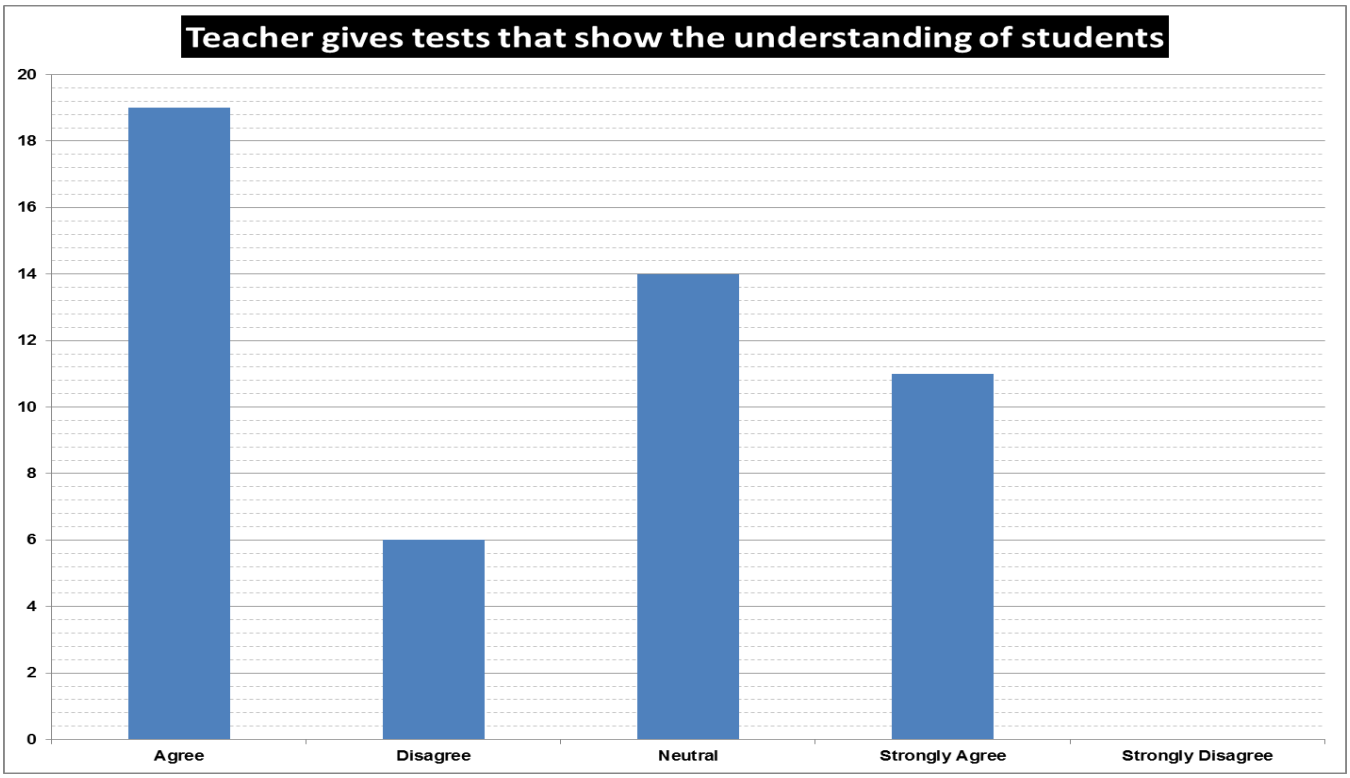

Fig 16: Teacher gives tests that show the understanding of students

Table 16 & Fig 16 shows that 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 students.

Table 17: Teacher provides feedback on quizzes/assignments promptly

	Disagree	Neutral	Agree	Strongly Agree
Frequency	6	14	19	11
Percent	12	28	38	22

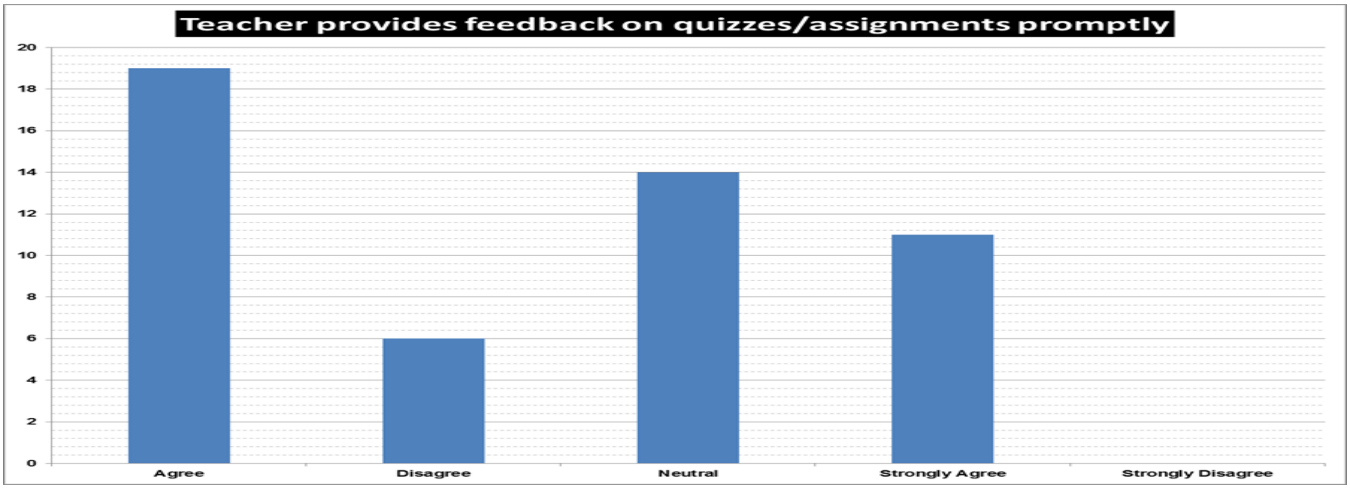

Fig 17: Teacher provides feedback on quizzes/assignments promptly

Table 17 & Fig 17 shows that 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.

Table 18: Teacher follows the schedule of quizzes/assignments strictly

	Disagree	Neutral	Agree	Strongly Agree
Frequency	6	14	19	11
Percent	12	28	38	22

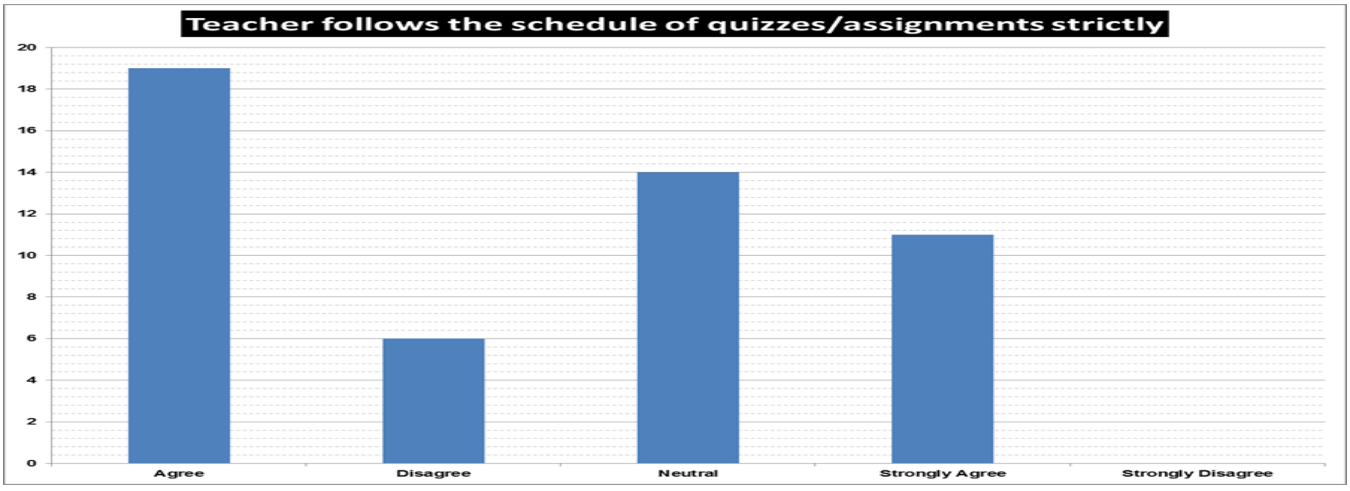

Fig 18: Teacher follows the schedule of quizzes/assignments strictly

Table 18 & Fig 18 shows that 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.

Table 19: Teacher provides guidance & counseling properly

	Disagree	Neutral	Agree	Strongly Agree
Frequency	4	11	20	15
Percent	8	22	40	30

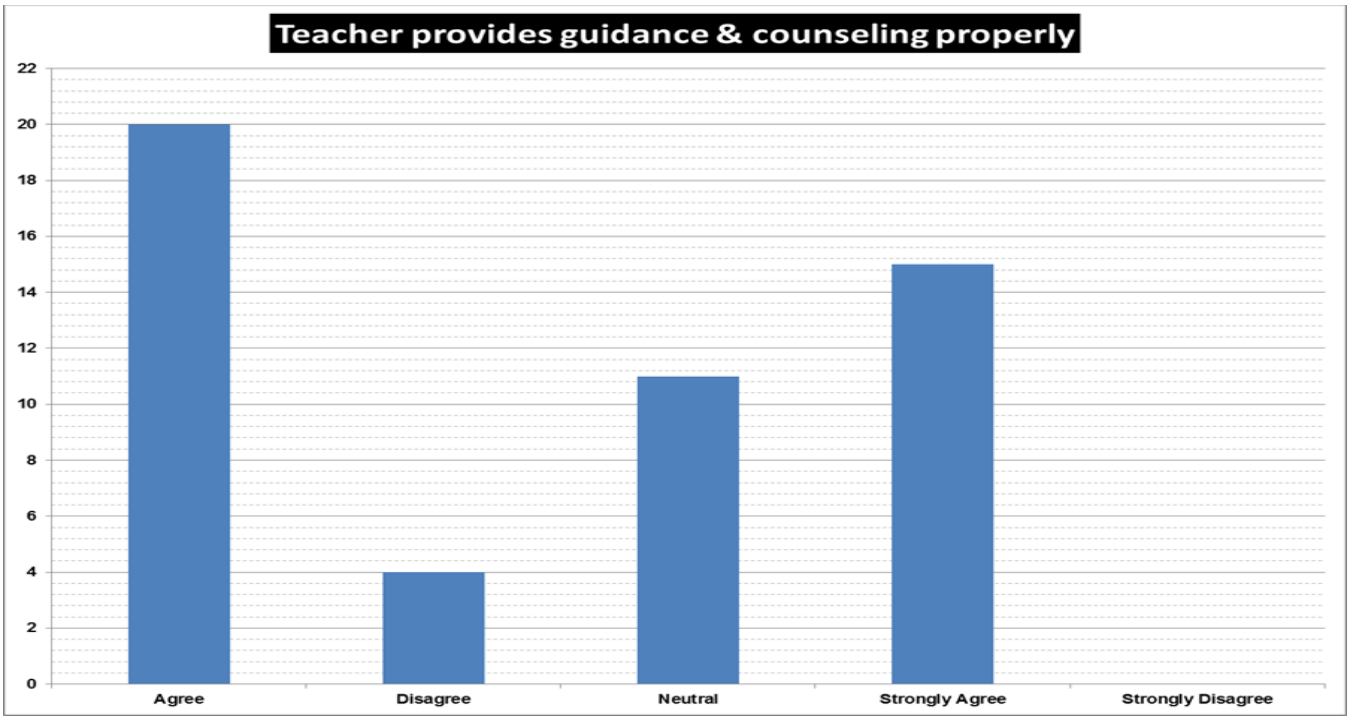

Fig 19: Teacher provides guidance & counseling properly

Table 19 & Fig 19 shows that 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.

Table 20: Learning Resources in the library are sufficient

	Disagree	Neutral	Agree
Frequency	12	30	8
Percent	24	60	16

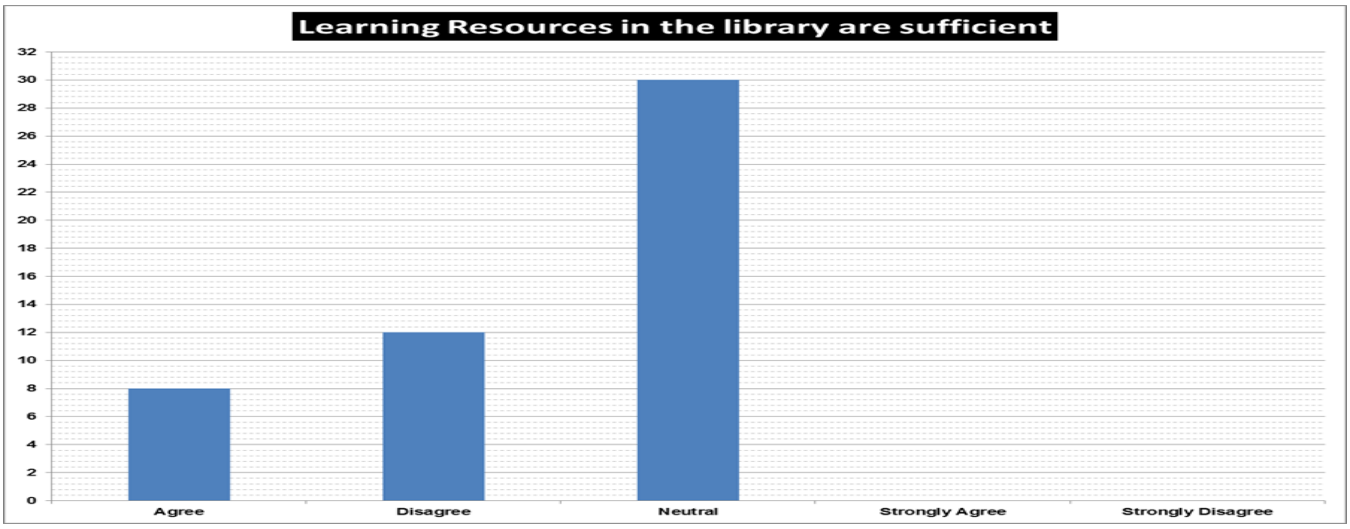

Fig 20: Learning Resources in the library are sufficient

Table 20 & Fig 20 shows that 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.

Table 21: Lab & Computing facilities are sufficient

	Disagree	Neutral	Agree
Frequency	12	30	8
Percent	24	60	16

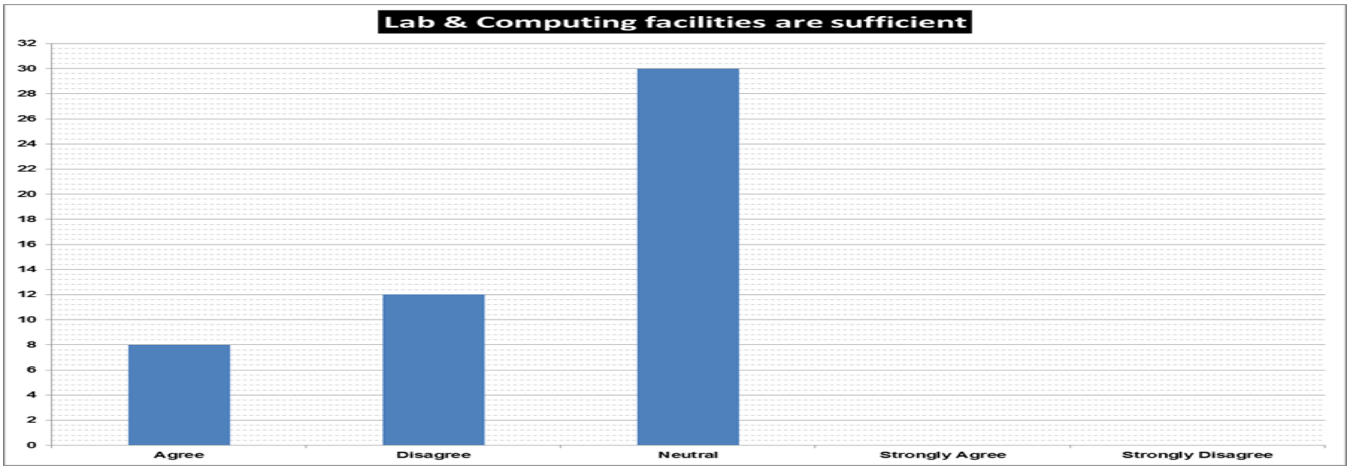

Fig 21: Lab & Computing facilities are sufficient

Table 21 & Fig 21 shows that 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.

Table 22: Other resources are sufficient (play grounds, café etc)

	Disagree	Neutral	Agree
Frequency	12	30	8
Percent	24	60	16

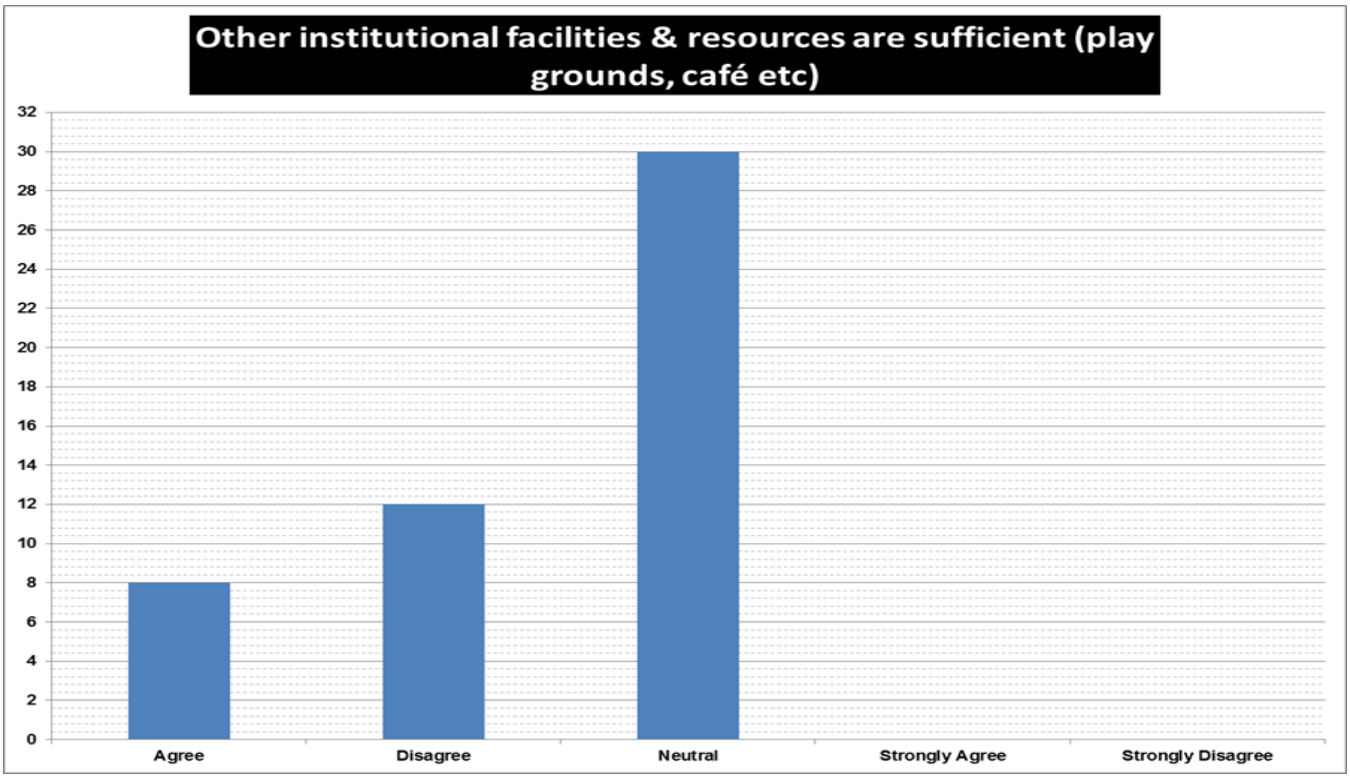

Fig 22: Other institutional facilities & resources are sufficient (play grounds, café etc)

Table 22 & Fig 22 shows that 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:

Table 23: Correlation Analysis

	Course Material	Class Teaching	Class Assessment	Resources
Course Material	1.000	0.373*	0.277*	-0.103**
Class Teaching		1.000	0.127*	-0.487**
Class Assessment			1.000	-0.337**
Resources				1.000

**Correlation is significant at 0.01 level (2-tailed).
*Correlation is significant at 0.05 level (2-tailed).

Table 23 shows the 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).

Table 24: 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 24 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 25: 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 25 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 26: 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 26 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 27: 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 27 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 28: 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 28 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 29: 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 29 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 30: 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 30 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 31: 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 31 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 32: 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[a]	.359	.317	.372	.359	8.586	3	46	.000

Table 33: ANOVA in Simple Linear Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.572	3	1.191	8.586	.000[b]
	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 34: 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 multicolinearity exits in the data as the value of tolerance and VIF lie within the criteria. According to Hair et al., (2010) Tolerence 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.

Homogenity of Error terms

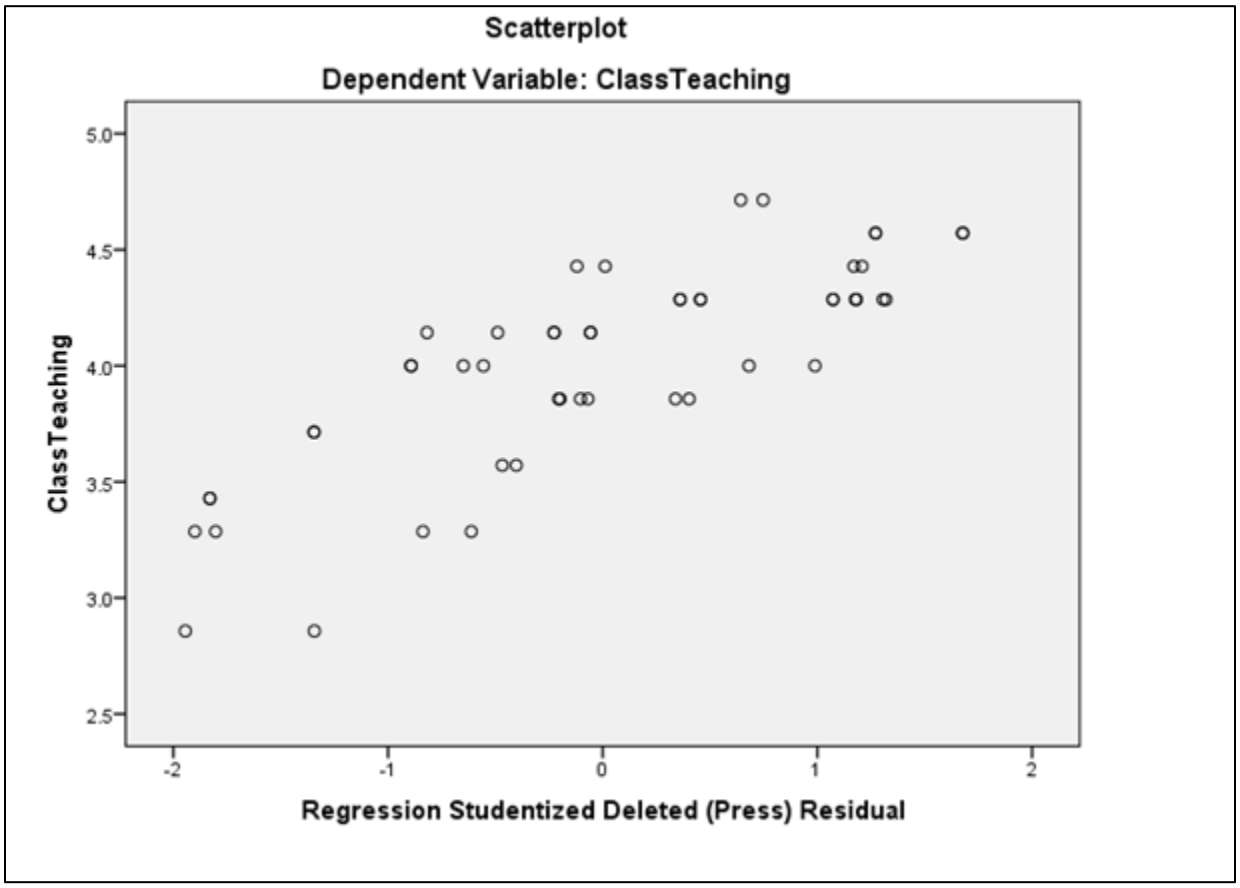

Fig 24: Homoceidisticity

Chapter 6

Discussion

After the analysis of the data faculty members having averages below than the department average.

The trainings are identified for the above mentioned faculty members in the following areas:

1. Fairness and appropriateness of Assessments
2. Connection of Assessments with Learning Objectives
3. Provision of Constructive Feedback on Quizzes / assignments and in a timely manner
4. Learning experiences in this course were interesting, enthusiastic and thought provoking
5. Enhancement of Interest in further studies in the subject area
6. Improvement in thinking skills (analytical & critical)
7. Imparting Oral and written communication skills amongst the students
8. Understanding of relevant topics by giving citations from various sources

After imparting the trainings by an experienced Trainer / Mentor on the above mentioned topic, the academic performance of the mentioned resource persons can be enhanced which can add value to the Departmental performance as well as the university academic performance. When the university's academic performance will be enhanced, it will definitely attract other students from other Higher Educational institutes ultimately enhancing the image of the university in the eyes of the Peers.

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).

It is significant to differentiate between the related but discrete thoughts of teacher and teaching quality. *Teacher quality* might be thought of as the collection of personal characteristics, skills, and understandings an individual brings to teaching, including dispositions to act upon in convinced traditions. The characteristics / traits preferred of a teacher may vary depending on conceptions of and goals for education; thus, it might be more creative to think of teacher *qualities* that appear linked with what teachers are predictable to be and do.

Although less directly studied, most educators would comprise this inventory a set of dispositions to sustain learning for all students, to teach in a fair and impartial manner, to be enthusiastic and able to adapt instruction to help students succeed, to strive to continue to learn and improve, and to be willing and able to collaborate with other professionals and parents in the service of individual students and the school as a whole.

Chapter 7

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 multicolinearity exits in the data as the value of tolerance and VIF lie within the criteria. According to Hair et al., (2010) Tolerence 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.

Chapter 8

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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