

Affiliated Undergraduate College Teacher Instruction Rating

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ABSTRACT

Student ratings are one of the most frequently used methods for evaluating teacher effectiveness in colleges and Universities. But these ratings awarded by students to teachers are influenced by students' personality characteristics, course characteristics and also by the type of institution. In India, most of the undergraduate colleges are affiliated to a University. University will conduct the exams and and declare the results. Student grades are not in the hands of a teacher. Even internal assessment marks are based on the exams conducted in the college. In such a situation, students are in a position to judge the performance of teachers without any fear and also in anticipation of favour. This paper explores different attributes which students consider important to provide ratings of teaching effectiveness and also examines the influence of academic ability and English Language proficiency of the students on ratings of teaching effectiveness in an affiliated general degree college.

Key words: Teacher effectiveness, affiliated general degree college, student ratings, student personality characteristics

INTRODUCTION

Student rating of instruction have gained widespread use in undergraduate colleges and have been the focus of much discussion on teaching effectiveness. Despite the general agreement that student ratings are a valid indicator of teaching effectiveness, teachers often suspect that

student rating differ according to their various background characteristics. Put differently, there is the possibility that background characteristics of students or factors that have nothing to do with the effective teaching could bias student ratings. If this is the case, student evaluations as a valid indicator of teaching effectiveness could be called into question.

Effective teaching is multifaceted in nature. It is composed of at least four attributes: knowledge of what is being taught, enthusiasm for teaching, rapport between teacher and student, and organization of the learning situation (Dukes & Victoria, 1989). Therefore, it is not surprising that many factors influence students' perceptions on effective teaching. It has been a common experience of teachers that they observe lot of variation in the student ratings even though they teach the same topics to the entire class in the same environment and in the same manner. Researchers suggest that various characteristics of students and courses cause variation in student ratings. Beran & Vialoto (2005) argued that class attendance was related to students' rating. That is, students who attended classes more often, compared to those who did not, provided higher ratings. The relationship between student ratings and student grades is one external factor that has received much attention in the literature. There is a large body of literature that finds a positive correlation between grades and student ratings (see for example Olivares, 2001; Griffin, 2004). This positive relationship leaves many to conjecture that instructors may be lenient in grading or develop easy assessments to influence student ratings. The evidence for this conjecture is mixed – some research has found that student ratings of teacher effectiveness are biased by grading leniency or reduced workload, and other research finds that these factors have little effect on student ratings. Marsh and Roche (2000) observed that student ratings were correlated with higher prior subject interest, higher expected grades, higher levels of Workload/Difficulty, and a higher percentage of students taking the course for general interest only. Some factors which have been researched as potentially affecting student ratings include the following: student characteristics, course characteristics, and teacher characteristics. Some of the student characteristics which have been researched for possible biasing effects include academic ability as measured by grade point average and age. These factors have shown little relationship to student ratings (Centra, 1993).

In India, most of the undergraduate colleges are affiliated to a University. University will conduct the exams and and declare the results. Student grades are not in the hands of a

teacher. Even internal assessment marks are based on the exams conducted in the college. In such a situation, student ratings cannot be biased by grading leniency and reduced work load. Students are in a position to judge teaching effectiveness of teachers without any prejudice or fear. In such situations, what teacher characteristics students consider important to give their ratings? Not much research has been done on the factors that cause variation in the student ratings of teacher effectiveness, under these situations.

In this paper, two attributes of students are considered for their possible impact on ratings of teacher effectiveness. The first one is academic ability and the other is English language proficiency of students. A study by Peterson and Irving (2008) found that NZ secondary students were likely to take responsibility for their success, but more likely to blame the teacher for their failure. It is quite natural for human beings who suffer from failures to point fingers at others for their failure and those who are successful would claim that it is their own effort which brought them success. For academically weaker students, teachers are the natural choice for them to blame. They are expected to give low ratings to teacher effectiveness. As far as the role of English language proficiency of students is concerned, Kocoglu(2013) argued that among factors that are directly related to students' evaluations of teaching is their self-perceived level of their foreign language proficiency where the native language is not used as the medium of instruction in the courses. Therefore, university programs need to take foreign language proficiency into consideration while interpreting student evaluation of results because these results would have important implications about assessing and improving the teacher/course quality in higher education. Therefore, the purpose of this study is to find out whether academic ability and English language proficiency have an impact on student ratings of teaching effectiveness in an undergraduate college affiliated to a University.

Objectives

The objectives of this paper are

1. To explore the factors which students consider important while judging teacher effectiveness.
2. To study the impact of academic ability of student on ratings of teacher effectiveness.

3. To study the impact of English language proficiency of students on ratings of teacher effectiveness.

Methodology

Data for the study was obtained from B.Sc. final year students of an undergraduate degree college affiliated to Mangalore University, Karnataka. Care was taken to see that the sample comprised students with varied academic ability. Feedback on two senior teachers of Science was collected from each student using a questionnaire. Prior consent of the teachers was taken before collecting the data. Students were assured of the confidentiality of the information. The questionnaire included 12 five-point Likert-scale items on teaching ability of the instructors. The Likert-scale included five points ranging from 5 (strongly agree) through to 1 (strongly disagree). The participants indicated their extent of agreement with the statements pertaining to the classroom teaching roles of a teacher in the questionnaires. The questionnaire covered included the following 12 items:

1. I can clearly understand and follow what is being taught
2. He/she makes the sessions very interesting as well as informative
3. The lecturer has enough knowledge about the subject
4. The lecturer clears doubt whenever raised by anyone
5. The lecturer is clearly audible to me
6. Syllabus was completed uniformly (neither too fast nor too slow)
7. The lecturer makes sure that all the students understood all the topics. (i.e. the lecturer keeps asking students if they understood or not)

8. The lecturer comes well prepared for the class
9. The lecturer was always fair and impartial
10. The lecturer is skilled at developing a class atmosphere conducive to learning.
11. The lecturer has a good manner (e.g. friendly, helpful, professional, and enthusiastic).
12. The lecturer encouraged students to participate in class discussion/debate.

The questionnaire included one global item asking for the overall assessment rating for the teacher out of 10. Academic ability of the students was assessed by the percentage marks scored in the previous semester exam. Students were asked to indicate their English language proficiency by choosing one of the categories good, average and poor.

To assess the relative importance of the attributes in deciding the overall assessment ratings on a teacher, multiple linear regression was used with overall assessment score as dependent variable and 12 items which assess multidimensional aspects of good teaching as predictor variables. To assess the impact of academic ability and English language proficiency on student ratings of teaching effectiveness, ANOVA tests were carried out. All the analysis was done in SPSS.

Table 1 gives the results of the multiple regression analysis of overall assessment score with 12 items which assess multidimensional aspects of good teaching as predictor variables.

Model	Unstandardized coefficients		t	sig.	Correlations			Collinearity statistics	
	B	Std. error			Zero order	Partial	Total	Tolerance	VIF
Constant	.996	.896	1.111	.272					
I can clearly understand and follow what is being taught	.252	.165	1.527	.134	.557	.217	.101	.284	3.522
He/she makes the sessions very interesting as well as informative	-.02	.154	-.114	.909	.608	-.017	-.008	.315	3.174
The lecturer has enough knowledge about the subject	-.02	.240	-.088	.931	.540	-.013	-.006	.393	2.545
The lecturer clears doubts whenever raised	-.19	.172	-1.16	.254	.322	-.166	-.077	.421	2.378
The lecturer is clearly audible to me	.756	.202	3.741	.000	.675	.479	.248	.278	3.602
Syllabus was completed uniformly	.074	.111	.667	.508	.258	.097	.044	.454	2.203
The lecturer makes sure that all the students understood all the topics.	.055	.124	.445	.658	.626	.065	.030	.354	2.828
The lecturer comes well prepared for the class	.415	.169	2.451	.018	.611	.337	.163	.333	3.003
The lecturer was always fair and impartial	-.04	.152	-.235	.816	.584	-.034	-.016	.340	2.937
The lecturer is skilled at developing a class atmosphere conducive to learning.	.107	.148	.727	.471	.586	.105	.048	.280	3.567
The lecturer has a good manner (e.g. friendly, helpful, professional, and enthusiastic).	-.23	.207	-1.12	.267	.514	-.162	-.075	.423	2.362
The lecturer encouraged students to participate in class discussion/debate.	.480	.148	3.232	.002	.676	.426	.215	.433	2.309

Dependent Variable: Overall rating of the teaching effectiveness

Even though model fit appears to be good ($R^2 = 0.817$), it can be observed that there are too many predictors in the model with non-significant coefficients. A look at the variance inflation factor values (VIF) and also at the tolerance values suggests that there are serious problems with multi-collinearity issues. Predictors are highly inter-correlated and that small changes in the data values may lead to large changes in the estimates of the coefficients. To resolve multicollinearity issues, stepwise regression was carried out on the factors obtained by factor analysis of z-scores of the predictor variables. The results are given in table 2.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.306	.125		66.187	.000
REGR factor score 12	.521	.124	.385	4.212	.000
REGR factor score 5	.549	.118	.425	4.659	.000
REGR factor score 4	.534	.120	.407	4.455	.000
REGR factor score 7	.327	.117	.256	2.802	.008
REGR factor score 1	.368	.139	.242	2.646	.011

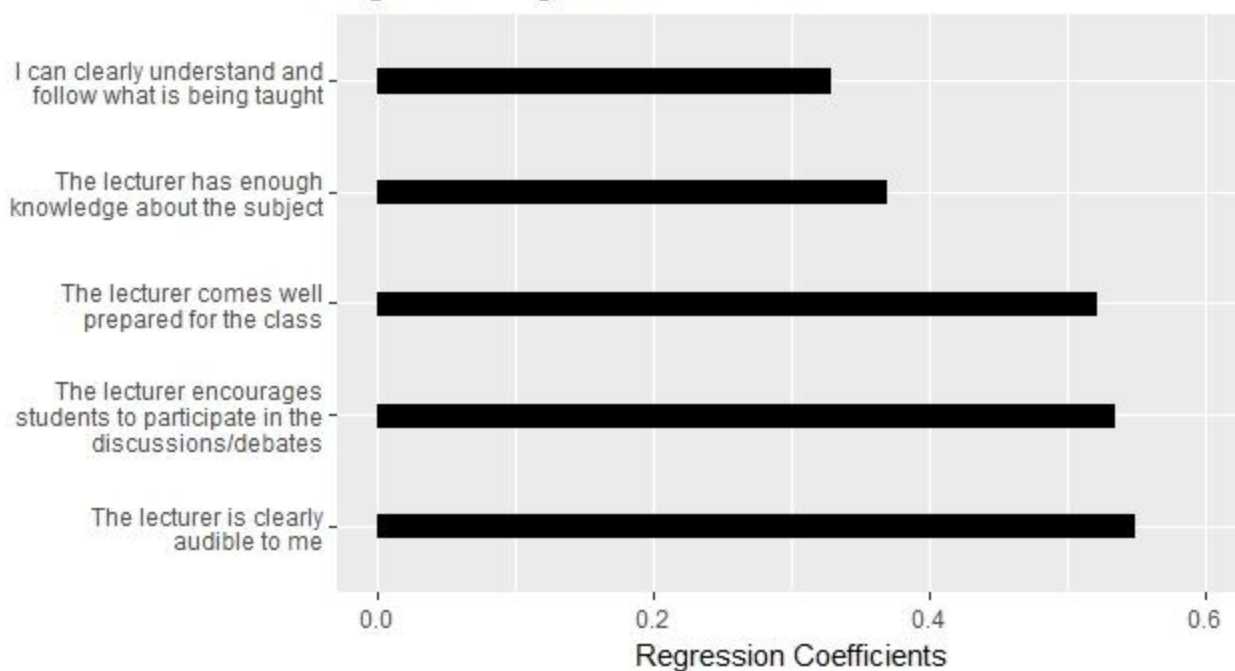
a. Dependent Variable: Overall rating of the teaching effectiveness

The stepwise algorithm chooses factor scores 12, 5, 4, 7, and 1 as predictors which contribute significantly to the student ratings of teaching effectiveness. Table 3 gives the corresponding predictor variables loading on these factors.

Table 3: Predictor variables loading on the factors	
Factor score	Predictor
Factor score 12	The lecturer is clearly audible to me
Factor score 5	The lecturer encourages students to participate in the discussions/debates
Factor score 4	The lecturer comes well prepared for the class
Factor score 7	The lecturer has enough knowledge about the subject
Factor score 1	I can clearly understand and follow what is being taught

Thus it is clear that students regard those teachers who are knowledgeable, goes well prepared for the class, confident enough to allow for discussions/debates in the class and audible to the students so that student clearly understands what is being taught in the class. Students give higher ratings to teachers (regression coefficient = 0.549) if they encourage discussions in the class followed by the preparations made by the teacher (regression coefficient = 0.534). Figure 1 visually presents the relative importance of the predictors of student ratings.

Figure 1: Regression Coefficients



Impact of academic ability and English Language proficiency of students on ratings of teacher effectiveness

Table 4 gives the results descriptive statistics of student ratings of teachers A and B classified according to academic ability of the students.

Table 4: Descriptive Statistics

Dependent Variable: Overall rating of the teaching effectiveness

Teacher Identification Number	Academic Performance	Mean	Std. Deviation	N
Teacher A	80% or more	8.5000	.54772	6
	70 – 79.9 %	8.4813	.80058	8
	60 – 69.9	8.8575	.80758	8
	50-59.9	7.8263	1.64363	8
	Total	8.4107	1.08086	30
Teacher B	80% or more	8.8333	.98319	6
	70 – 79.9 %	7.8711	1.21112	9
	60 – 69.9	8.2988	.45127	8
	50-59.9	6.8071	1.95201	7
	Total	7.9293	1.38584	30
Total	80% or more	8.6667	.77850	12
	70 – 79.9 %	8.1582	1.05468	17
	60 – 69.9	8.5781	.69473	16
	50-59.9	7.3507	1.80575	15

Total	8.1700	1.25584	60
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It can be observed that students who scored percentage marks between 50 and 60 have given low ratings on both the teachers A and B. To verify whether difference between group means is not because of chance, two factor ANOVA was carried out and results are given in table 5.

Table 5: Tests of Between-Subjects Effects

Dependent Variable: Overall rating of the teaching effectiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	22.733 ^a	7	3.248	2.402	.033	.244
Intercept	3942.807	1	3942.807	2915.701	.000	.982
Teacher	3.164	1	3.164	2.339	.132	.043
Marks	16.499	3	5.500	4.067	.011*	.190
Teacher * Marks	3.153	3	1.051	.777	.512	.043
Error	70.318	52	1.352			
Total	4097.985	60				
Corrected Total	93.051	59				

a. R Squared = .244 (Adjusted R Squared = .143)

From this ANOVA table, it can be inferred that that the hypothesis of no difference between two teachers may be accepted ($F = 2.339$, $p = 0.132$) whereas the hypothesis of no difference in the student ratings of teacher effectiveness between different academic performance groups may be rejected ($F = 4.067$, $p = 0.011$). Also, post-hoc tests confirm that mean rating of teacher effectiveness of the group 50-59 differ significantly from other groups (Table 6). Figure 2 depicts the mean ratings given by different academic ability groups to the teachers A and B

Table 6: Multiple Comparisons

Dependent Variable: Overall rating of the teaching effectiveness

Tukey HSD

(I) Academic Performance	(J) Academic Performance	Mean Difference	Std. Error	Sig.	95% Confidence Interval
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		(I-J)			Lower Bound	Upper Bound
80% or more	70 – 79.9 %	.5084	.43844	.655	-.6552	1.6721
	60 – 69.9	.0885	.44408	.997	-1.0901	1.2672
	50-59.9	1.3160*	.45038	.026	.1207	2.5113
70 – 79.9 %	80% or more	-.5084	.43844	.655	-1.6721	.6552
	60 – 69.9	-.4199	.40505	.729	-1.4949	.6551
	50-59.9	.8076	.41194	.216	-.2858	1.9009
60 – 69.9	80% or more	-.0885	.44408	.997	-1.2672	1.0901
	70 – 79.9 %	.4199	.40505	.729	-.6551	1.4949
	50-59.9	1.2275*	.41793	.025	.1182	2.3367
50-59.9	80% or more	-1.3160*	.45038	.026	-2.5113	-.1207
	70 – 79.9 %	-.8076	.41194	.216	-1.9009	.2858
	60 – 69.9	-1.2275*	.41793	.025	-2.3367	-.1182

Based on observed means.

The error term is Mean Square(Error) = 1.352.

*. The mean difference is significant at the .05 level.

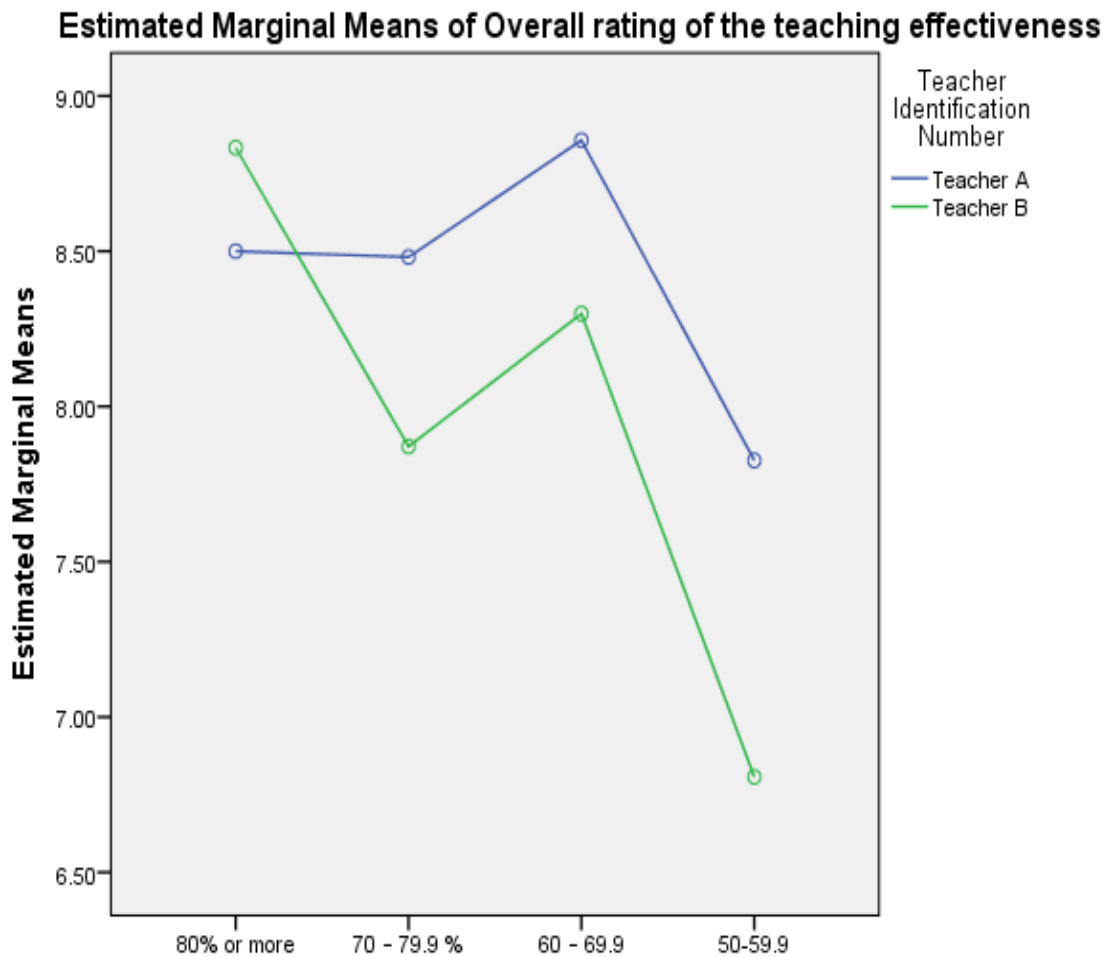


Figure 2 Academic Performance

A similar type of analysis was carried out to study the impact of English Language proficiency of students on the ratings of teaching effectiveness. Table 7 gives the results descriptive statistics of student ratings of teachers A and B classified according English Language proficiency of the students. It can be observed that students whose English proficiency is low have given low ratings on both the teachers A and B. To verify whether difference between group means is not because of chance, two factor ANOVA was carried out and results are given in table 8.

Table 7: Descriptive Statistics

Dependent Variable: Overall rating of the teaching effectiveness

Teacher Identification Number	English Language proficiency	Mean	Std. Deviation	N
Teacher A	Good	8.6372	.77804	18
	Average	8.3911	.59725	9
	Poor	7.1100	2.71409	3
	Total	8.4107	1.08086	30
Teacher B	Good	7.7389	1.26199	19
	Average	8.9475	.55477	8
	Poor	6.4200	2.12819	3
	Total	7.9293	1.38584	30
Total	Good	8.1759	1.13549	37
	Average	8.6529	.62845	17
	Poor	6.7650	2.21383	6
	Total	8.1700	1.25584	60

Table 8: Tests of Between-Subjects Effects

Dependent Variable: Overall rating of the teaching effectiveness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	25.294 ^a	5	5.059	4.032	.004	.272
Intercept	2207.860	1	2207.860	1759.584	.000	.970
Teacher	1.053	1	1.053	.839	.364	.015
English	16.072	2	8.036	6.404	.003*	.192
Teacher English	6.230	2	3.115	2.482	.093	.084
Error	67.757	54	1.255			
Total	4097.985	60				
Corrected Total	93.051	59				

a. R Squared = .272 (Adjusted R Squared = .204)

From this ANOVA table, it can be inferred that the hypothesis of no difference between two teachers may be accepted ($F = 0.839$, $p = 0.364$) whereas the hypothesis of no difference in the student ratings of teacher effectiveness between different English Language proficiency groups may be rejected ($F=6.404$, $p=.003$). Also, post-hoc tests confirm that mean rating of teacher effectiveness of the group low differ significantly from other groups (Table 9). Figure 3 depicts the mean ratings given by different academic ability groups to the teachers A and B.

Table 9: Multiple Comparisons

Dependent Variable: Overall rating of the teaching effectiveness

Tukey HSD

(I) English Language proficiency	(J) English Language proficiency	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Good	Average	-.4770	.34108	.348	-1.2978	.3438
	Poor	1.4109*	.51232	.021	.1781	2.6438
Average	Good	.4770	.34108	.348	-.3438	1.2978
	Poor	1.8879*	.55278	.003	.5577	3.2182
Poor	Good	-1.4109*	.51232	.021	-2.6438	-.1781
	Average	-1.8879*	.55278	.003	-3.2182	-.5577

Based on observed means.

The error term is Mean Square(Error) = 1.355.

*. The mean difference is significant at the 0.05 level.

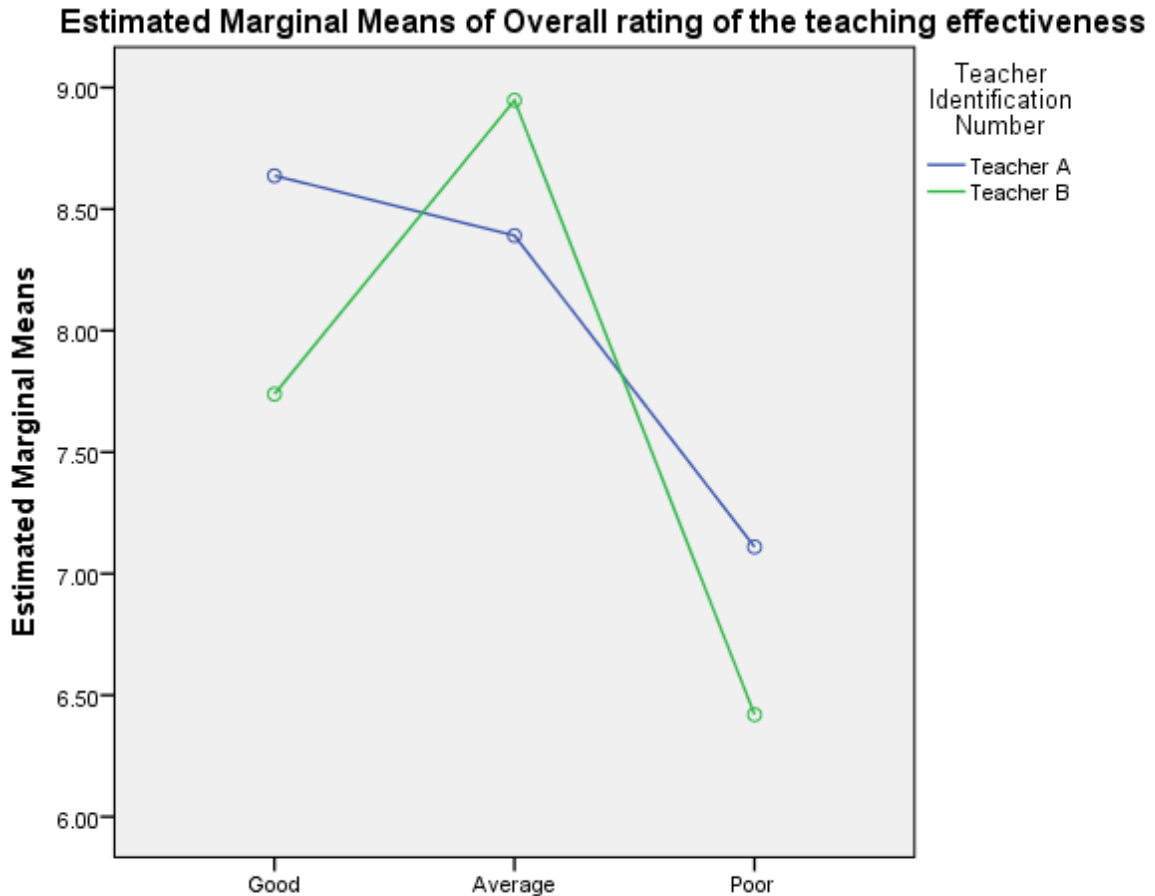


Figure 3 English Language proficiency

Discussion

Now a day, student ratings on teaching effectiveness is being used widely for assessing the teaching ability of teachers in colleges, Universities etc. Students regard those teachers who are knowledgeable, goes well prepared for the class, confident enough to allow for discussions/debates in the class and audible to the students so that student clearly understands what is being taught in the class. Also, it has been shown that students with low academic ability rate their teachers low with respect to teaching effectiveness whereas students having high academic ability give high ratings to their teachers. Similarly, ratings on teaching effectiveness depend on the English Language proficiency of students.

It is clear from this paper that student personality characteristics and expectations influence rating of teaching effectiveness of their teachers. In other words, ratings of students usually reflect to some extent their personality characteristics. It is also clear that

different students have different personality characteristics, and that these influence teacher ratings differentially. In addition, users of student ratings should consider the possible influences of students' personality characteristics in any possible use of these ratings.

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