Do Teachers Discriminate? An Analysis of Students' Perception

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Abstract: The study sought to examine the responses received from the students to determine if there were differences in students' perceptions with respect to student-teacher relationships, assurance of justice and fairness by teachers. The study is based on primary data collected trough purposive sampling done in Unnao district of Uttar Pradesh. Secondary data have also been used wherever found necessary. Various Statistical tests like independent sample t test, ANOVA, Levins test, Welch & Brown-Forsythe test have been applied in this study. Results revealed that there is no evidence of any gender or cast discrimination by teachers while teaching in intermediate schools as for as students' perception is concerned.

Index Terms - Gender, Social, Discrimination, Students' Perception

Introduction

Perception is the expression of what our mind conceives from his surroundings. It is integration and interpretation of our thoughts about any object. This study attempts to delineate the students perception about possibility of techers discrimination in terms of social category and gender. The study sought to examine the responses received from the students to determine if there were differences in students' perceptions with respect to student-teacher relationships, assurance of justice and fairness by teachers.

Data received from field survey have been the primary database for this study. The study made use of statistical tests like independent sample t test, with the help of cross tabulation, charts and graphs etc relevant information has also been presented.

Objectives of the Study

The broad objective of the study is to explore and analyze the Students' Perception about fairness and justice in teachers' action in intermediate colleges. In other words this study seeks to find the answer that Do teachers' discriminate in terms of social category or gender. In other words the main objective of the study is to answer how cast and gender neutral student teacher relationship is and how fair and just teaching is.

Hypotheses

- H_0: There is no significant difference between students' perception about Student – Teacher Relationship in terms of gender.
- H_0: There is no significant difference between students' perception about Student – Teacher Relationship in terms of social category
- H_0: There is no significant difference between students' perception about Fairness and Justice in teaching in terms of gender.

- H_0: There is no significant difference between students' perception about Fairness and Justice in teaching in terms of social category.

Research Methodology

The study is based on primary data collected trough purposive sampling done in Unnao district of Uttar Pradesh. Secondary data have also been used wherever found necessary. Sampling design was as follow:
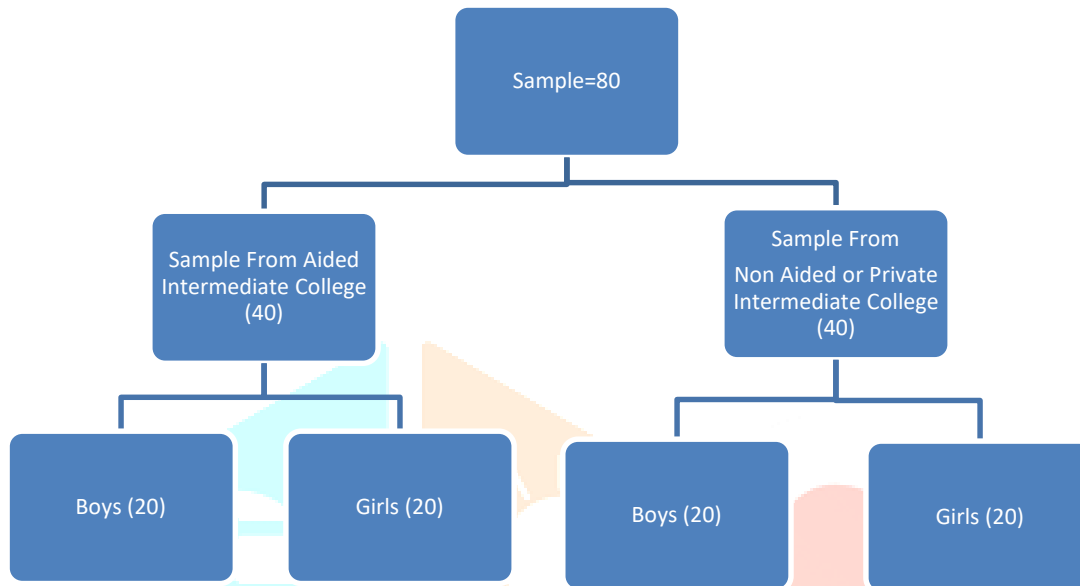
To obtain the objectives of the study and to come up with trustworthy and un biased results suitable parametric or non parametric statistical tests like t Test, ANOVA, Brown-Forsythe test have been employed in the study wherever find appropriate. Other relevant tools of analysis like descriptive statistics and cross tabulations have also been utilized.

Students responses have been scaled on five point scale ranging from strongly disagree to strongly agree (1 for strongly disagree, 2 for disagree, 3 for unsure, 4 for agree and 5 for strongly agree). Descriptive statistics of the responses received from students has been summarised in the table 1 below:

Table1
Descriptive Statistics of Variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SCHOOL_TYPE	80	0.00	1.00	.5000	.50
STREAM	80	0.00	1.00	.5000	.50
GENDER	80	0.00	1.00	.5000	.50
CATEGORY	80	1.00	3.00	1.8250	.59
GOOD_RELATION1	80	3.00	5.00	4.7250	.50
POLITE_BEHAVIOUR2	80	1.00	5.00	4.5750	.74
FRIENDLY_TEACHER3	80	2.00	5.00	4.4250	.77
TRUST_TEACHERS4	80	2.00	5.00	4.7500	.63
ENJOY_WORKING5	80	2.00	5.00	4.5250	.71
TREAT_DIGNITY6	80	3.00	5.00	4.4250	.59
NONE_BETTER7	80	1.00	5.00	3.6000	1.44
REFRAIN_IMPROPER8	80	1.00	5.00	4.2500	1.12
VALUE_STUDENTS9	80	3.00	5.00	4.5000	0.59
TREAT_FAIRLY10	80	2.00	5.00	4.6750	0.69
KNOW_HOW11	80	2.00	5.00	4.5500	.63
PREPARED_TEACH12	80	1.00	5.00	4.6750	.73
TEST_MATERIAL13	80	4.00	5.00	4.5250	.50
TIME_ASKQ14	80	2.00	5.00	4.4500	.78

TIME_NOTES15	80	2.00	5.00	4.1250	.79
STRATEGIES_LEARN16	80	1.00	5.00	4.6500	.76
ENCOURAGE_ASKQ17	80	3.00	5.00	4.5500	.63
CLASS_DISCUSSION18	80	2.00	5.00	3.7250	.98
FEEDBACK_ASSIGNMENT19	80	1.00	5.00	4.2500	.94
PROJECT_MATERIAL20	80	1.00	5.00	4.1000	1.26
WORKWITH_CLASSMATES21	80	2.00	5.00	3.9000	.86
DIFFERENT_IDEAS22	80	2.00	5.00	4.0750	.79
ENJOY_MENTAL_EFFORT23	80	2.00	5.00	4.5000	.78
DISCUSSION_TEACHERS24	80	2.00	5.00	4.3250	.82
THEORY_REALWORLD25	80	3.00	5.00	4.7250	.55
EVALUATION_SELF26	80	1.00	5.00	3.7500	1.31
RUBRICS_ASSIGNMENTS27	80	2.00	5.00	4.5500	.63
PROFESSIONAL_EXPERIENCE28	80	2.00	5.00	4.5750	.67
BETTER_TEACHERS_OTHER_STREAM29	80	1.00	5.00	3.2500	1.42
BETTER_TEACHERS_OTHER_SCHOOLS30	80	1.00	5.00	3.4500	1.56
Overall Score (Sum_Scores)	80	108.00	146.00	129.15	10.23

Source: Researcher's calculation based on Field survey (2018)

Students' Perception about Student Teacher Relationship

Students perception about student teacher relationship has been recorded with the help of 5 questions in the questionnaire containing questions like do you think (1) you have good relationship with your teachers (2) your teachers treats politely (3) your teachers act friendly,(4) you trust your teachers (5) you enjoy working with your teachers. Descriptive statistics of the responses related to student teacher relationship reveal that the selected 80 students have given on an average 23 score out of a maximum score of 25, which shows good students teacher relationship.

Student – Teacher Relationship and Gender

The way male and female perceives their surrounding, collect information and construct their belief differs in many cases. The same can be true with respect to their perception about student teacher relationship. Present study keeps this aspect in mind while analysing perceptions and the observations as listed in the table 2.

Table 2: Group Statistics for Student – Teacher Relationship and Gender

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
Relation	MALE	40	22.5500	1.67867	.26542
	FEMALE	40	23.4500	1.76795	.27954

Source: Researcher's calculation based on Field survey (2018)

It is evident from the table 2 that female students have given greater score (mean 23.45) as compared to male students (mean 22.50) which in turn shows their greater satisfaction as far as student teacher relationship is concerned. However, to test the significance of mean difference a statistical hypothesis has been framed:

H_0: There is no significant difference between students' perception about Student – Teacher Relationship in terms of gender.

H_1: There is significant difference between students' perception about Student – Teacher Relationship in terms of gender.

To test above mentioned hypothesis independent sample t test has been employed and the results of the same are summarised in the table 3.

Table 3: t Test for Student – Teacher Relationship and Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Relation	Equal variances assumed	.535	.467	-2.335	78	.022	-.90000	.38547	-1.66742	-.13258
	Equal variances not assumed			-2.335	77.792	.022	-.90000	.38547	-1.66745	-.13255

Source: Researcher's calculation based on Field survey (2018)

With the equal variances assumed (p=0.467 for levene's test), independent sample t test suggest that at 5 % level of significance and 78 degrees of freedom the p value is calculated to be 0.022, hence the null hypothesis cannot be accepted and alternate hypothesis is accepted which suggest that: *"There is significant difference between students' perception about Student – Teacher Relationship in terms of gender (L.S. 5%, D.F. 78, p = 0.022)."*

At 5% level of significance and 78 degrees of freedom one tailed t test also yields the same result. One tailed t test suggest that with calculated value of p being 0.01, the null hypothesis of no difference between the samples cannot be accepted rather one tailed alternate hypothesis is accepted which suggest *"the mean perception score of female students about student teacher relationship is statistically significantly greater than that of male students. (L.S. 5%, D.F. 78, p = 0.011)"* which suggests girls have better student teacher relationship in their perception and they do not find any discrimination in terms of gender.

Student – Teacher Relationship and Social Category

In Indian perspective caste or social category plays an important role in determining various socio economic cultural and political issues. Hence, one can ask **does social category has any impact on students' perception particularly related to the student teacher relationship.** Present study keeps this aspect in mind while analysing perceptions. The observations are listed in the table 4.

Table 4

Descriptive Statistics for Student – Teacher Relationship and Social Category

	N	Mean	Std. Dev.	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
GEN	22	22.63	2.01	.42916	21.7439	23.5289	19.00	25.00
OBC	50	23.08	1.75	.24882	22.5800	23.5800	18.00	25.00
SC OR ST OR MINORITY	8	23.50	.92	.32733	22.7260	24.2740	22.00	24.00
Total	80	23.00	1.77	.19809	22.6057	23.3943	18.00	25.00

Source: Researcher's calculation based on Field survey (2018)

As evident from the table 4 that the students related to general category have least scores (mean=22.64) as compared to that of students related to OBC (mean= 23.08) and SC/ST (mean = 23.50). However to test the statistical significance of mean differences null and alternate hypotheses have been made:

H_0: There is no significant difference between students' perception about Student – Teacher Relationship in terms of social category.

H_1: There is no significant difference between students' perception about Student – Teacher Relationship in terms of social category.

To test the significance of differences in these mean scores one way ANOVA could be applied. However, unequal sample size between groups and varying standard deviation suggest unequal variances. Hence before proceeding with One Way ANOVA, Levene's test is applied. The results of the same have been summarised in the table 5.

Table 5

Levene's Test for Student – Teacher Relationship and Social Category

Relation

Levene Statistic	df1	df2	Sig.
2.924	2	77	.060

Source: Researcher's calculation based on Field survey (2018)

The levene's test suggests that with p value of 0.060, the homogeneity of variances cannot be questioned at 5% level of significance. Hence with the assumption of normality, one way anova has been applied in the study and the results of the same have been tabulated in the table 6.

Table 6

ANOVA test for Student – Teacher Relationship and Social Category

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.229	2	2.615	.829	.440
Within Groups	242.771	77	3.153		
Total	248.000	79			

Source: Researcher's calculation based on Field survey (2018)

One way ANOVA test suggest that at 5 % level of significance, with the calculated value of p being 0.440 the null hypothesis cannot be rejected. Hence, the study suggests:

"There is no significant difference between students' perception about Student – Teacher Relationship in terms of social category {L.S. 5%, D.F. (2,77), p = 0.440}". Hence, there is no evidence of discrimination made by teachers while maintain student teacher relationship.

Students' Perception about Fairness and Justice in Teaching

Students perception about fairness and justice has been recorded with the help of 5 questions in the questionnaire containing questions like do you think your teachers: (1) treat you with dignity (2) do not make partiality (3) refrain from improper comments (4) value you (5) treats every student fairly.

Descriptive statistics of the responses related to student teacher relationship reveal that the selected 80 students have given on an average 21.45 score out of a maximum score of 25, which shows a great level of fairness and justice is being insured.

The way male and female perceives their surrounding, collect information and construct their belief differs in many cases. The same can be true with respect to their perception about fairness and justice in teaching. Present study keeps this aspect in mind while analysing perceptions and the observations are listed in the table 7.

Table 7

Group Statistics for Fairness and Justice in teaching and Gender

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
Fair_Justie	MALE	40	21.1000	2.75309	.43530
	FEMALE	40	21.8000	1.55580	.24599

Source: Researcher's calculation based on Field survey (2018)

It is evident from the table 7 that female students have given greater score (mean 21.80) as compared to male students (mean 21.10) which in turn shows their greater satisfaction as far as fairness and justice in teaching is concerned. However, to test the significance of mean difference a statistical hypothesis has been framed:

H0: There is no significant difference between students' perception about fairness and justice in teaching in terms of gender.

H1: There is significant difference between students' perception about fairness and justice in teaching in terms of gender.

To test above mentioned hypothesis independent sample t test has been employed and the results of the same are summarised in the table 8.

Table 8

t Test for Fairness and Justice in teaching and Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Fair_Justie	Equal variances assumed	11.700	.001	-1.400	78	.165	-.70000	.50000		-1.69542	.29542
	Equal variances not assumed			-1.400	61.604	.167	-.70000	.50000		-1.69961	.29961

Source: Researcher's calculation based on Field survey (2018)

Without assuming equal variances (p=0.001 for levene's test), independent sample t test suggest that at 5 % level of significance and 61.604 degrees of freedom the p value is calculated to be 0.165, hence the null hypothesis cannot be rejected, suggesting that:

*"There is no significant difference between students' perception about **fairness** and **justice** in teaching in terms of gender (L.S. 5%, D.F. 61.60, p = 0.165)." hence girls or boys do not perceive any unfairness or injustice in the behavior of teachers.*

Fairness and Justice in teaching and Social Category

In Indian perspective caste or social category plays an important role in determining various socio economic cultural and political issues and education is not free from this evil. Hence, one can ask does social category has any impact on students' perception particularly related to the fairness and justice in teaching. Present study keeps this aspect in mind while analysing perceptions. The observations are listed in the table 9.

Table 9

Fairness and Justice in teaching and Social Category

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
GEN	22	20.63	1.17	.25093	20.1145	21.1582	18.00	22.00
OBC	50	21.64	2.52	.35658	20.9234	22.3566	15.00	25.00
SC OR ST OR MINORITY	8	22.50	2.20	.77919	20.6575	24.3425	19.00	24.00
Total	80	21.45	2.24	.25151	20.9494	21.9506	15.00	25.00

Source: Researcher's calculation based on Field survey (2018)

As evident from the table 9 that the students related to general category have least scores (mean=20.63) as compared to that of students related to OBC (mean= 21.64) and SC/ST (mean = 22.50). However to test the statistical significance of mean differences null and alternate hypotheses have been made:

H_0: There is no significant difference between students' perception about fairness and justice in teaching in terms of social category.

H_1: There is no significant difference between students' perception about fairness and justice in teaching in terms of social category.

To test the significance of differences in these mean scores one way ANOVA could be applied. However, unequal sample size between groups and varying standard deviation suggest unequal variances. Hence, before proceeding with One Way ANOVA, Levene's test is applied. The results of the same have been summarised in the table 10.

Table 10

Levene's test for fairness and justice in teaching and Social Category

Levene Statistic	df1	df2	Sig.
4.637	2	77	.013

Source: Researcher's calculation based on Field survey (2018)

The levene's test suggests that with p value of 0.013, the homogeneity of variances cannot be assured at 5% level of significance. Hence, in such a case Welch and Brown-Forsythe test for equality of means between three groups is applied. The result of the same has been tabulated in the table 11.

Table 11
Welch & Brown-Forsythe test for fairness and justice in teaching and Social Category

	Statistic[a]	df1	df2	Sig.
Welch	4.303	2	18.868	.029
Brown-Forsythe	3.246	2	20.807	.059

Source: Researcher's calculation based on Field survey (2018).

Following the Brown-Forsythe test the results reveal that at 5% level of significance and p = 0.059 the null hypothesis cannot be rejected. Hence, the study suggests:

***"There is no significant difference between students' perception about* fairness and justice in teaching *in terms of social category {L.S. 5%, D.F. (2,20.80), p = 0.059,* Brown-Forsythe statistics = 3.246}".**

One could notice from the table 11 that the Welch test and Brown-Forsythe test yield different result at 5% level of significance, notwithstanding Brown-Forsythe test is preferred over Welch test. It is because of the robustness of Brown-Forsythe test.

Findings and Conclusion:

We can summarise the findings of the study as follow:

"The mean perception score of female students about student teacher relationship is statistically significantly greater than that of male students. (L.S. 5%, D.F. 78, p = 0.011)" which suggests girls have better student teacher relationship in their perception and they do not find any discrimination in terms of gender.

"There is no significant difference between students' perception about Student – Teacher Relationship in terms of social category {L.S. 5%, D.F. (2,77), p = 0.440}". Hence, there is no evidence of discrimination made by teachers while maintain student teacher relationship.

"There is no significant difference between students' perception about fairness and justice in teaching in terms of gender (L.S. 5%, D.F. 61.60, p = 0.165)." hence girls or boys do not perceive any unfairness or injustice in the behavior of teachers.

"There is no significant difference between students' perception about fairness and justice in teaching in terms of social category {L.S. 5%, D.F. (2,20.80), p = 0.059, Brown-Forsythe statistics = 3.246}".

All the four hypotheses none has indicated any adverse perception about teachers whether it is student teacher relationship or fairness and justice in teaching. Only one hypothesis rejected which yielded significantly better student teacher relationship for girls as compared to that of boys and that can not fall in gender discrimination.

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