

*Performance of Teachers -
An Assessment*

CHAPTER VI

PERFORMANCE OF TEACHERS - AN ASSESSMENT

Higher education is connected with academic activities of the teachers, student, administration, research work and financial support by the government. The most important apprehension in education can be taken as quality, relevance and quality of education service. Performance is a continuing, collaborative process designed to boost the teachers' capability and productivity. Performance is a goal-oriented process directed towards organizational development in a position to augment of teachers, teams and organizational productivity.

This chapter deals with the analysis and interpretation of Performance Assessment of the teachers working in engineering colleges. Different factors of Performance Assessment have been analyzed for possible significant difference among the groups of selected demographic/ job related factors and academic related variables. The mean scores for each factor were computed by using descriptive statistics. The mean scores will indicate the level of performance for each factor. Higher the score more will be the performance of the respective factor. Statistical analysis has been carried out for each factor separately and inferences have been drawn. Analysis carried out in this chapter are Descriptive statistics, Chi-Square, t-Test, ANOVA, Correlation and Regression.

Objective-3: To assess the performance of engineering teachers based on assessment score

Performance Assessment

The Performance assessment scores are prescribed by the UGC has been considered for calculating the performance of teachers in engineering colleges. The Questionnaire is framed by self-evaluative indicators. The indicators selected from UGC Academic performance indicators (API). The process of Academic performance index (API) or performance assessment system has been introduced to calculate the performance of the teachers. Performance assessment indicators are presented in the following table.

Table: 6.1 Performance Assessment Scale (Count of work done from 2015-2019)

S. No.	Particulars	Total (Scores)	
1.	Publication in refereed journals	10/Publication	
2.	Publication in Scopus index online/printed	25/Publication	
3.	Text books or Reference Books Published by International Publishers	30/Book	
4.	Subjects Books by National level publishers/ Central Govt. Publications with ISBN/ISSN numbers.	29/Publication	
5.	Chapters contributed to edited knowledge based volumes published by International Publishers	10/Chapter	
6.	Chapters in knowledge based vol by Indian/National level books.	5/Chapter	
7.	Completed project report which is accepted by funding agency	20/Project	
8.	Industrial visits arranged by you to manufacturing industry	15/IV	
9.	Project concepts eligible for product development got accepted by manufacturers/company.	25/project	
10.	Major Projects amount mobilized with grants above 5.0 lakhs	15/project	
11.	Minor Projects Amount mobilized upto Rs. 5.00 lacks	10/ project	
12.	Online courses completed (if any)	5/Project	
13.	Faculty internship completed (If any)	10/work	
14.	Research Guidance	M.Phil.	Ph.D
	d) How many research scholars completed their research under your guidance	5	5
	e) How many research scholars are doing research work under your guidance	3	10
	f) How many papers are published with the research scholars?	7	12
	Thesis submitted	3	10

S. No.	Particulars	Total (Scores)	
TRAINING COURSES AND CONFERENCE /SEMINAR/ WORKSHOP PAPERS			
15.	Soft skills programs, faculty development programs attended less than a week	7	
16.	Soft skills development programs, faculty development programs attended more than a week	10	
17.	Participation in conferences	Participated	Presented
	a)International conference	5	7
	b)National conference	3	5
	c)Regional/State level	2	3
18.	Invited as guest lectures, resource persons for the seminar& conference	7/Int 5/Nat	
19.	Awards received(International/national)	15/Int 10/Nat	
20.	Number the Membership in other professional bodies	16	
21.	Development of e-learning module(How many modules are given by you)	8/ Module	

Source: Scores For Academic Performance Indicators (APIs) In Recruitments and Career Advancement Scheme (CAS) Promotions Of University / College Teachers as per UGC regulations.

Academic Performance Indicators (API)

The scores are taken from the Academic Performance Indicators [In Recruitments and Career Advancement Scheme (CAS) Promotions of University / College Teachers as per UGC regulations].

- ◆ Each indicator of the performance appraisal is taken according to the current academic basis, which is followed in few of the institutions.
- ◆ The changes with the category and statements have been made for the convenience of the respondents.

- ◆ Where as in regard to valuation of papers and invigilation of institutions are paid then and there, those were not included in the table of Performance assessment.
- ◆ According to the UGC's Academic performance index the total score of all the four categories. And for the relevance of the current study the multiples of the score is taken for calculating the five years academic performance.

The performance assessment index is including four different categories, such as, Category I, II, III and IV. The details of each category and the items included in each category are given below.

Table 6.2. Academic Performance Indicators (API)

S. No.	Nature of Activity	Questions Representing
1.	Category I (Teaching, Learning, & evaluation related activities)	Q9 to Q13, Q15 & Q16
2.	Category II (Co-Curricular, Extension and Professional Development Related Activities)	Q8, Q18, Q19, Q20, Q21
3.	Category-III (Research & Academic Contributions)	Q14 & Q17
4.	Category- IV (Research articles, publications, research work)	Q1 to Q7

Source: Scores for Academic Performance Indicators (APIS) In Recruitments and Career Advancement Scheme (CAS)

The Performance Assessment score is given for each question and according to the scores the individual capacity to contribute is calculated and however, for the present study, according to weights assigned for each activity and each category overall performance score has been calculated based on the sum of the number of activities with respective weights that is given in the Performance Index table.

Descriptive Statistics for Performance Assessment Category Scores

Performance is based on individual's capacity to contribute for different aspects. The present study, the weights have been assigned for each activity and each category score and overall performance score has been calculated based on the sum of the number of activities multiplied respective weights given in the Performance Index table. Based on

the API given in table 6.1 individual scores have been calculated to measure the performance of teachers refer (**Annexure II**) for individual score. Based on individual assessment, overall performance assessment score are calculated. Overall scores for each category is given below.

Table 6.3. Descriptive Statistics for Performance Assessment Category Scores

	N	Minimum	Maximum	Mean	Std. Deviation
Category I score	400	47.00	356.00	183.75	63.78
Category II score	400	22.00	158.00	81.67	28.35
Category IV score	400	46.00	348.00	179.67	62.36
Category IV score	400	43.00	325.00	167.42	58.11
Performance Assessment	400	158.00	1187.00	612.52	212.59

Source: Primary Data

It is observed from the above table that, the category I score (Teaching, Learning and evaluation) varies between minimum of 47 to maximum of 356. The average category I score is 183.75. The result shows that there is high variation in performance of Category I activity there is various differences between minimum and maximum scores.

In the case of Category II (Co-Curricular, Extension and Professional Development Related Activities) it is observed that, the value varies between minimum of 22 to maximum of 158. The average category II score is 81.67. The result shows that there is high variation in performance of Category II activity there is various differences between minimum and maximum scores.

In the case of Category III (Research & Academic Contributions) it is observed that, the value varies between minimum of 46 to maximum of 348. The average category III score is 179.67. The result shows that there is high variation in performance of Category III activity there is various differences between minimum and maximum scores.

In the case of Category IV (Research articles, publications, research work) it is observed that, the values varies between minimum of 43 to maximum of 325.

The average category IV score is 167.42. The result shows that there is high variation in performance of Category IV activity there is various differences between minimum and maximum scores.

In the case of overall Performance assessment, it is observed that, the value varies between minimum of 158 to maximum of 1187. The average score is 612.52. The result shows that there is high variation in the overall performance assessment so it results that there is various differences between minimum and maximum scores.

The performance scores of all the four categories and overall performance assessment of the respondents have been grouped into three classifications namely Low, Moderate and High. For this purpose, the (Mean \pm 0.5S.D) classification procedure has been followed.

The respondents whose scores (category wise as well as overall performance) fall below the value of (Mean-0.5SD) have been grouped into Low performer for the particular category and the respondents whose scores fall above the value of (Mean+0.5SD) have been classified into High performers in the respective category. The respondents whose scores fall between (Mean-0.5SD) and (mean+0.5SD) have been classified as Moderate performers.

In the case of Category I, it is seen from the table given above that the mean and S.D values are 183.75 and 63.78 respectively. The Mean-0.5SD and Mean+0.05SD values are calculated below.

$$\mathbf{Low} = \text{Mean}-0.05\text{SD} = 183.75 - (0.5 \times 63.78) = 152 \text{ (rounded off)}$$

$$\mathbf{High} = \text{Mean}+0.05\text{SD} = 183.75 + (0.5 \times 63.78) = 216 \text{ (rounded off)}$$

The cut off values for Low and High are 152 and 216 respectively.

The respondents whose scores fall below 152 will be classified as low performers and the respondents whose scores fall at and above 216 will be classified as high performers and the respondents with scores falling between 152 and 216 is considered as Moderate performers. In the same manner low, moderate and high score is calculated for the other categories and for overall performance assessment.

Category wise Performance of the Respondents

Based on the above table category wise performances of the respondents are given in the following table.

Table 6.4. Category wise Performance of the Respondents

		Frequency	Percentage
Category I	Low (≤ 151)	158	39.5
	Moderate (152-216)	94	23.5
	High (≥ 217)	148	37.0
Category II	Low (≤ 66)	142	35.5
	Moderate (67-96)	111	27.8
	High (≥ 97)	147	36.8
Category III	Low (≤ 147)	151	37.8
	Moderate (148-211)	124	31.0
	High (≥ 212)	125	31.3
Category IV	Low (≤ 137)	174	43.5
	Moderate (138-196)	101	25.3
	High (≥ 197)	125	31.3
Performance Assessment	Low (≤ 505)	163	40.8
	Moderate (506-719)	100	25.0
	High (≥ 720)	137	34.3

Source: Primary data

It is observed from the above table that 39.5 percent of the respondents are low performers with respect to category I followed by 37.0 percent of the respondents are high performers. Only 23.5 percent of the respondents are found in the moderate level.

Regarding Category II 36.8 percent of respondents fall under high performing category and 35.5 of the per cent respondents are categorized under low performing category.

With respect to Category III 37.8 per cent of the respondents fall under the category low and equal percent of respondents fall under moderate and high performing category (31.3%).

In case of Category IV 43.5 per cent of the teachers fall under low performing category, 31.3 percent are fall under high performing category and 25.3 per cent of the respondents categorize under moderate performing level.

The overall performance assessment score results shows that, 40.8 per cent of the teachers fall under low performing category, 34.3 per cent fall under high performing category and 25.0 per cent are categorized under moderate performing level.

Performance of Teachers in Working in Engineering Colleges

The scores of each factor have compared among the group of selected job related factors and performance assessment category. The mean scores are calculated by descriptive statistics and to determine the significance of the factors t-test, ANOVA and Chi square analysis have been applied.

Distribution for Job related factors Vs Performance Assessment Category I

Chi square test for Job related factors and performance assessment category I wise distribution is presented in the following table.

Table 6.5. Distribution for Category I Scores Vs Selected Job-Related Factors

	Category I score						Total	
	Low		Moderate		High		No.	%
	No.	%	No.	%	No.	%		
Designation								
Professor	37	28.9	27	21.1	64	50.0	128	100
Associate Professor	49	47.1	21	20.2	34	32.7	104	100
Assistant Professor	72	42.9	46	27.4	50	29.8	168	100
Pay scale								
Up to Rs.20000	11	36.7	7	23.3	12	40.0	30	100
Rs.20001-40000	69	43.4	36	22.6	54	34.0	159	100
Rs.40001-60000	50	38.5	29	22.3	51	39.2	130	100
Rs.60001-80000	13	40.6	9	28.1	10	31.3	32	100
Rs.80001-100000	4	18.2	7	31.8	11	50.0	22	100
Above Rs.100000	11	40.7	6	22.2	10	37.0	27	100

	Category I score						Total	
	Low		Moderate		High		No.	%
	No.	%	No.	%	No.	%		
Teaching Experience								
Up to 5 yrs	21	50.0	7	16.7	14	33.3	42	100
6-10 yrs	42	47.7	22	25.0	24	27.3	88	100
11-15 yrs	37	35.2	26	24.8	42	40.0	105	100
16-20 yrs	23	35.9	13	20.3	28	43.8	64	100
21-25 yrs	18	32.1	14	25.0	24	42.9	56	100
Above 25 yrs	17	37.8	12	26.7	16	35.6	45	100
Type of management								
Aided	24	36.4	18	27.3	24	36.4	66	100
Self-finance	120	39.5	68	22.4	116	38.2	304	100
Government	14	46.7	8	26.7	8	26.7	30	100
Total	158	39.5	94	23.5	148	37.0	400	100.0
(Ns-Not significant, * - Significant at 5% level, ** - Significant at 1% level)								

Source: Primary data

The table gives the distribution of category I scores among selected job related factors. It is observed that among the respondents 50 percent of the professors are found to be high performing category. 47.1 percent of the associate professors and 42.9 percent of the assistant professors are fall under low performing category.

In the case of Pay Scale, the teachers who are earning up to Rs.20000, Rs.40001-60000 and Rs.80001-100000 are fall under high performing category. The teachers earning between Rs.20001-40000, Rs. 60001-80000 and Above Rs.100000 are fall under low performing category

With respect to teaching experience the teachers having experience between 11-15 years; 16-20 years and 21-25 years are fall under high performing category. The teachers who have experience up to 5 years, 5- 10 years and above 25 years are fall under low performing category.

It is seen that among the respondents from aided colleges, 36.4 percent are low performers and 36.4 percent are high performers. Among self-finance institutions 39.5 percent and 38.2 percent belong to Low and High performance groups. However,

in the case of Government colleges, percentage of low performers are high (46.7%) and only 26.7% of the respondents from government institutions are high performers

In order to find whether the category I scores are significantly associated with job related factors, such as, designation, pay scale, teaching experience and type of management chi square test has been applied the following hypothesis has been framed and tested.

Ho. There is no significant association between Job related factors and performance assessment category I score.

Table 6.5 (a). Performance Assessment Category I Vs Selected Job Related Factors

	Chi-Square Test			
	Value	Table Value	df	Sig.
Designation	16.266	13.277	4	**
Pay scale	6.281	18.307	10	Ns
Teaching Experience	9.673	18.307	10	Ns
Type of Management	2.231	9.488	4	Ns

Source: Primary Data

The chi-square test has been applied to verify the hypothesis. Since the calculated value is less than the table value it is inferred that there is no significant association between Pay scale, Teaching Experience, Type of management with Category I score. Hence, the hypothesis is accepted. In the case of Designation, the calculated value is more than the table value it is inferred that there is a significant association with Category I score at 1% significant level. Hence, the hypothesis is rejected in this case.

The result shows that, the teachers in the professor designation are fall under high performing category and they are performing better than other designation teachers. With respect to experience of the teachers who are having less experience and those who are having more than 25 years fall under low performing category when compare to other groups. Regarding the type of management the teachers working under self financing management are performing well when compare to aided college teachers.

The result also reveals that, there is a strong association between designation and performance of the teachers. The teachers who are Professors are found to be in high performing category.

Distribution for Category II Scores Vs Selected Job Related Factors

Chi square test for Job related factors and performance assessment category II wise distribution is presented in the following table.

Table 6.6. Distribution for Category II Scores Vs Selected Job Related Factors

	Category II Score						Total	
	Low (≤ 66)		Moderate (67-96)		High (≥ 97)		No.	%
	No.	%	No.	%	No.	%		
Designation								
Professor	34	26.6	30	23.4	64	50.0	128	100.0
Associate Professor	45	43.3	25	24.0	34	32.7	104	100.0
Assistant Professor	63	37.5	56	33.3	49	29.2	168	100.0
Pay scale								
Up to Rs.20000	9	30.0	9	30.0	12	40.0	30	100.0
Rs.20001-40000	61	38.4	44	27.7	54	34.0	159	100.0
Rs.40001-60000	46	35.4	33	25.4	51	39.2	130	100.0
Rs.60001-80000	12	37.5	11	34.4	9	28.1	32	100.0
Rs.80001-100000	4	18.2	7	31.8	11	50.0	22	100.0
Above Rs.100000	10	37.0	7	25.9	10	37.0	27	100.0
Teaching Experience								
Up to 5 yrs	18	42.9	11	26.2	13	31.0	42	100.0
6-10 yrs	36	40.9	28	31.8	24	27.3	88	100.0
11-15 yrs	34	32.4	29	27.6	42	40.0	105	100.0
16-20 yrs	22	34.4	14	21.9	28	43.8	64	100.0
21-25 yrs	16	28.6	16	28.6	24	42.9	56	100.0
Above 25 yrs	16	35.6	13	28.9	16	35.6	45	100.0
Type of management								
Aided	23	34.8	20	30.3	23	34.8	66	100.0
Self-finance	106	34.9	82	27.0	116	38.2	304	100.0
Government	13	43.3	9	30.0	8	26.7	30	100.0
Total	142	35.5	111	27.8	147	36.8	400	100.0
(Ns-Not significant, * - Significant at 5% level, ** - Significant at 1% level)								

Source: Primary data

The table gives the distribution of category II scores among selected job related factors. It is observed that among the respondents from 50 percent of the professors are high performing category, 43.3 percent of the associate professors are low performers and 37.5 percent of the assistant professors were also low performers.

In the case of Pay Scale, the teachers who are earning Rs.40001-60000, Rs.80001-100000 and above Rs.100000 are fall under high performing category. The teachers earning between Rs.20001-40000, Rs.60001-80000 and above Rs.100000 are fall under low performing category. Equal percent of teachers who are earning up to Rs.20000 (30 %) are fall under all the three categories.

Regarding teaching experience, the teachers having experience between 11-15 years; 16-20 years, 21-25 years and above 25 years are fall under high performing category. Most of the teachers who have experience up to 5 years and 5- 10 years are fall under low performing category.

It is seen from the above table that, among the respondents from aided colleges, 34.8 percent are low performers and 34.8 percent are high performers. Among self-finance institutions 38.2 percent belong to High performance groups. However, in the case of Government colleges, 43.3 per cent of the teachers fall under low performing category.

In order to find whether the category II scores are significantly associated with job related factors such as, designation, pay scale, teaching experience and type of management the following hypothesis has been framed and tested.

Ho. There is no significant association between Job related factors and performance assessment category II scores.

Table 6.6 (a). Performance Assessment Category II Vs Selected Job Related Factors

	Chi-Square Test			
	Value	Table value	df	Sig.
Designation	17.309	13.277	4	**
Pay scale	5.863	18.307	10	Ns
Teaching Experience	8.102	18.307	10	Ns
Type of Management	1.895	9.488	4	Ns

Source: Primary Data

The chi-square test has been applied to verify the hypothesis. Since the calculated value is less than the table value it is inferred that there is no significant association between Pay scale, Teaching Experience, Type of management, with Category II score. Hence, the hypothesis is accepted. In the case of designation, the calculated value is more than the table value it is inferred that there is a significant association with Category II score at 1% significant level. Hence, the hypothesis is rejected.

The result founds that, the teachers who are in the professor designation are found to be high performing category when compare to other groups. In case of experience the teachers who have less experience are found to be low performing category and the teachers have 11-25 years of experience are found to be in high performing category. Regarding the type of management the teachers working in aided and self finance colleges are found to be in both low and high performing category. But the teachers working in government colleges are more in low performing category when compare to other colleges.

Distribution for Category III Scores Vs Selected Job Related Factors

Chi square test for Job related factors and performance assessment category III wise distribution is presented in the following table.

Table 6.7. Distribution for Category III Scores Vs Selected Job Related Factors

	Category III Score						Total	
	Low (≤ 147)		Moderate (148-211)		High (≥ 212)		No.	%
	No.	%	No.	%	No.	%		
Designation								
Professor	35	27.3	43	33.6	50	39.1	128	100.0
Associate Professor	48	46.2	25	24.0	31	29.8	104	100.0
Assistant Professor	68	40.5	56	33.3	44	26.2	168	100.0
Pay scale								
Up to Rs.20000	11	36.7	9	30.0	10	33.3	30	100.0
Rs.20001-40000	66	41.5	45	28.3	48	30.2	159	100.0
Rs.40001-60000	48	36.9	40	30.8	42	32.3	130	100.0
Rs.60001-80000	12	37.5	13	40.6	7	21.9	32	100.0
Rs.80001-100000	4	18.2	8	36.4	10	45.5	22	100.0
Above Rs.100000	10	37.0	9	33.3	8	29.6	27	100.0

	Category III Score						Total	
	Low (≤ 147)		Moderate (148-211)		High (≥ 212)		No.	%
	No.	%	No.	%	No.	%		
Teaching Experience								
Up to 5 yrs	20	47.6	10	23.8	12	28.6	42	100.0
6-10 yrs	39	44.3	29	33.0	20	22.7	88	100.0
11-15 yrs	36	34.3	33	31.4	36	34.3	105	100.0
16-20 yrs	23	35.9	16	25.0	25	39.1	64	100.0
21-25 yrs	17	30.4	21	37.5	18	32.1	56	100.0
Above 25 yrs	16	35.6	15	33.3	14	31.1	45	100.0
Type of management								
Aided	24	36.4	23	34.8	19	28.8	66	100.0
Self-finance	114	37.5	91	29.9	99	32.6	304	100.0
Government	13	43.3	10	33.3	7	23.3	30	100.0
Total	151	37.8	124	31.0	125	31.3	400	100.0
(Ns-Not significant, * - Significant at 5% level, ** - Significant at 1% level)								

Source: Primary data

The table gives the distribution of category III scores among selected job related factors. It is observed that among the respondents from 68 percent of the Assistant professors are found to be high performing category. 48 percent of the associate professors and 35 percent of the assistant professors are fall under low performing category.

In the case of Pay Scale, the teachers who are earning from Rs.80001-100000 are fall under high performing category. The teachers earning up to Rs.20000 and between Rs.20001-40000, Rs.40001-60000, Rs.60001-80000 and Above Rs.100000 are falling under low performing category

With respect to teaching experience the teachers having experience between 11-15 years; and 16-20 years are fall under high performing category. As well 21-25 years falls under moderate performers, the teachers who have experience up to 5 years, 6 - 10 years and above 25 years are fall under low performing category.

It is seen that among the respondents from aided colleges, 36.4 percent are low performers and 34.8 percent are high performers. Among self-finance institutions

37.5 percent and 32.6 percent belong to Low and High performance groups. However, in the case of Government colleges, percentage of low performers are high (43.3%) and only 23.3% of the respondents from government institutions are high performers

In order to find whether the category III scores are significantly associated with job related factors such as, designation, pay scale, teaching experience and type of management the following hypothesis has been framed and tested.

Ho. There is no significant association between Job related factors and performance assessment category III scores.

Table 6.7 (a). Performance Assessment Category III Vs Selected Job Related Factors

	Chi-Square Test			
	Value	Table value	df	Sig.
Designation	12.092	9.488	4	*
Pay scale	6.946	18.307	10	Ns
Teaching Experience	9.464	18.307	10	Ns
Type of Management	1.664	9.488	4	Ns

Source: Primary Data

The chi-square test was conducted to verify the hypothesis. Since the calculated value is less than the table value it is inferred that there is no significant association between Pay scale, Teaching Experience, Type of management, with Category II score. Hence the hypothesis is accepted. In the case of Designation, the calculated value is more than the table value it is inferred that there is a significant association with Category II score at 5% significant level. . Hence, the hypothesis is rejected in this case.

The result reveals that Category III also the teachers in the Professor designation are found to high performing group. Associate and Assistant professor are more in low performing group. Pay scale not an influencing factor for performance of the teachers in category III. Regarding the type of management most of the teachers are found in low performing category. Some extend the self finance college are found more in high performing group when compare to other teachers in category III performance assessment. There is a strong association between designation of the teachers and category III of performance assessment.

Distribution for Category IV Scores Vs Selected Job Related Factors

Chi square test for Job related factors and performance assessment category IV wise distribution is presented in the following table.

Table 6.8. Distribution for Category IV Scores Vs Selected Job Related Factors

	Category IV Score						Total	
	Low (≤147)		Moderate (148-211)		High (≥212)		No.	%
	No.	%	No.	%	No.	%		
Designation								
Professor	43	33.6	35	27.3	50	39.1	128	100.0
Associate Professor	51	49.0	22	21.2	31	29.8	104	100.0
Assistant Professor	80	47.6	44	26.2	44	26.2	168	100.0
Pay scale								
Up to Rs.20000	14	46.7	6	20.0	10	33.3	30	100.0
Rs.20001-40000	74	46.5	37	23.3	48	30.2	159	100.0
Rs.40001-60000	54	41.5	34	26.2	42	32.3	130	100.0
Rs.60001-80000	16	50.0	9	28.1	7	21.9	32	100.0
Rs.80001-100000	5	22.7	7	31.8	10	45.5	22	100.0
Above Rs.100000	11	40.7	8	29.6	8	29.6	27	100.0
Teaching Experience								
Up to 5 yrs	22	52.4	8	19.0	12	28.6	42	100.0
6-10 yrs	45	51.1	23	26.1	20	22.7	88	100.0
11-15 yrs	41	39.0	28	26.7	36	34.3	105	100.0
16-20 yrs	25	39.1	14	21.9	25	39.1	64	100.0
21-25 yrs	22	39.3	16	28.6	18	32.1	56	100.0
Above 25 yrs	19	42.2	12	26.7	14	31.1	45	100.0
Type of management								
Aided	28	42.4	19	28.8	19	28.8	66	100.0
Self-finance	130	42.8	75	24.7	99	32.6	304	100.0
Government	16	53.3	7	23.3	7	23.3	30	100.0
Total	174	43.5	101	25.3	125	31.3	400	100.0
(Ns-Not significant, * - Significant at 5% level, ** - Significant at 1% level)								

Source: Primary data

The table gives the distribution of category IV scores among selected job related factors. It is observed that among the respondents from 33.6 percent of the professors, 49 percent of the associate professors and 47.6 percent of the Assistant professors are found to be low performing category. 29.8 percent of the associate professors and 26.2 percent of the assistant professors are falling under low performing category.

In the case of Pay Scale, the teachers who are earning from Rs.80001-100000 are fall under high performing category. The teachers earning up to Rs.20000 and between Rs.20001-40000, Rs.40001-60000, Rs.60001-80000 and Above Rs.100000 are falling under low performing category

With respect to teaching experience the teachers having experience between 11-15 years; and 16-20 those having experience up to 5 years, 21-25 years, 6 - 10 years and above 25 years are fall under low performing category.

It is seen that among the respondents from aided colleges, 42.4 percent are low performers and 28.8 percent are high performers. Among self-finance institutions 42.8 percent and 32.6 percent belong to Low and High performance groups. However, in the case of Government colleges, percentage of low performers are high (53.3%) and only 23.3% of the respondents from government institutions are high performers

In order to find whether the category IV scores are significantly associated with job related factors, such as, designation, pay scale, teaching experience and type of management. The following hypothesis has been framed and tested.

Ho. There is no significant association between selected demographic variables and category IV score.

Table 6.8 (a). Performance Assessment Category IV Vs Selected Job Related Factors

	Chi-Square Test			
	Value	Table value	df	Sig.
Designation	9.194	9.488	4	Ns
Pay scale	6.853	18.307	10	Ns
Teaching Experience	7.991	18.307	10	Ns
Type of Management	2.032	9.488	4	Ns

Source: Primary Data

The chi-square test was conducted to verify the hypothesis. Since the calculated value is less than the table value it is inferred that there is no significant association between Designation, Pay scale, Teaching Experience and Type of management, with Category II at 5% significant level. Hence the hypothesis is accepted in this case.

The result reveals that the teachers who are associate professors are found to be more in high performing category pay scale is not an influencing factor. In case of experience the teachers who have experience between 11 to 25 years found to be in high performing category. The teachers who have less experience and who have more than 25 years are found to be in low performing category. With respect to type of management most of the teachers working in all these colleges are found in low performing category. The self financed colleges teachers are comparatively good regarding category IV of the performance assessment.

Overall Performance Assessment Vs Demographic/Job Related Factors

ANOVA has been applied to find the whether there is any significant difference in the mean scores of selected job related factors. The results are presented in the following table.

Ho: There is no significant difference between demographic factors and performance assessment.

Table 6.9. ANOVA for Demographic Variables Vs Selected Job Related Factors with performance assessment

Personal Factors		Performance Assessment			F/t Value	S/NS
		Mean	S.D	No.		
Gender	Male	622.50	210.62	295	1.577	NS
	Female	584.48	216.60	105		
Age	Up to 35 yrs	575.95	210.72	43	2.429	Ns
	36-45 yrs	601.86	205.19	153		
	46-55 yrs	606.29	206.89	137		
	56-65 yrs	673.06	234.24	67		
Designation	Professor	662.59	212.22	128	5.456	**
	Associate Professor	581.10	217.36	104		
	Assistant Professor	593.82	204.21	168		

Personal Factors		Performance Assessment			F/t Value	S/NS
		Mean	S.D	No.		
Pay Scale	Up to Rs.20000	610.37	242.14	30	.856	Ns
	Rs.20001-40000	600.71	212.96	159		
	Rs.40001-60000	619.98	212.50	130		
	Rs.60001-80000	589.34	187.43	32		
	Rs.80001-100000	694.18	201.47	22		
	Above Rs.100000	609.44	215.46	27		
Teaching Experience	Up to 5 yrs	583.12	228.05	42	1.005	Ns
	6-10 yrs	577.14	193.85	88		
	11-15 yrs	621.71	205.57	105		
	16-20 yrs	630.30	217.64	64		
	21-25 yrs	638.27	224.76	56		
	Above 25 yrs	630.36	225.96	45		
Experience under present HOD	1-3 yrs	618.01	224.84	69	1.080	Ns
	4-6 yrs	590.37	207.18	163		
	7-9 yrs	633.74	208.81	129		
	10 Yrs& above	625.13	224.44	39		
Type of Management	Aided	616.71	219.16	66	.914	Ns
	Self-finance	616.59	211.99	304		
	Government	562.03	204.32	30		
Members in department	Up to 10	587.39	200.80	62	2.593	*
	11-20	593.71	214.61	203		
	21-30	693.14	227.00	50		
	31-40	621.87	192.51	46		
	Above 40	635.97	206.18	39		
Hours of classes handled	10-15 hrs	625.46	197.95	93	.277	Ns
	16-20 hrs	611.61	215.99	183		
	21-25 hrs	608.30	218.71	107		
	26-30 hrs	578.06	227.63	17		
Work load in the college	Tight	579.29	225.60	45	.862	Ns
	Enjoyable	594.95	232.16	41		
	Manageable	619.57	208.14	314		

*Significant at 5% level (95% Possibility), **Significant at 1% level (99% Possibility), NS: Not significant

Source: Primary data.

The average performance assessment mean score has been found to be high (622.50) for female respondents. The high mean score has been found for the age group

between 56-65 years (673.06) and the mean score of professors is found to be higher (662.59). It has been observed that mean score is found to be higher for those receive a Pay Scale of Rs 80001 to Rs.100000 (694.18) and the mean score is found to be higher for those who have experience between 21-25 years (638.27). The scores are found to high for the teachers under present HOD for 7 to 9 years (633.74) and the teachers working in aided type of management (616.71). In case of members in the department the mean score is found to be higher for 21 to 30 members in the department (693.14), those who handle classes for 10 to 15 hours (625.46) and the teachers whose workload is manageable (619.57).

The result of t-test shows that the t-value 1.577 is less than the table value and so there is no significant relationship between gender and self-awareness. Hence the null hypothesis is accepted.

The ANOVA results states that there is a significant difference between demographic factors and performance assessment in respect of factors, namely Designation, Members in the department. Hence, the null hypotheses are rejected. The average score does not vary significantly in case of Age, Pay Scale, Teaching Experience, Experience under present HoD, Type of management, Hours of classes handled per week and Work load in college. Hence the null hypothesis is accepted.

The factors, namely, designation, Members in the department has played a vital role in the performance assessment of teachers working in engineering college. Hence, these factors have significantly differed in the performance assessment of teachers working in engineering colleges. The teachers who are professor designation and the department having 21-30 members in the department are found to be different when compare to other teachers. Hence, there is significant difference found with respect to designation and number of members in the department.