<center>**Chapter – 4**</center>

<center>**Data Analysis and Interpretation**</center>

The data is collected in the form of structured questionnaire. 2500 questionnaires were floated in soft/ hard copies per the convenience of the respondents and 2002 duly filled in questionnaires were received. The questionnaires were checked for any missing data. After data cleaning, the researcher was left with 1949 responses that were found to be valid and fit for further data analysis. The data was fed into a software known as Statistical Package for Social Sciences (SPSS) to be used for analysis.

Data analysis

The demographic composition of the data that was collected for 1949 respondents has been presented in the form of tables using descriptive statistics. Analysis of 1949 responses is done by using descriptive statistics, cross- tabulations, normality tests, and Cronbach's alpha for testing the reliability of the instrument, exploratory factor analysis, and chi-square test. The validity and reliability of the instrument (questionnaire) was checked before finalizing it. Pilot study was conducted on (n=60) to check whether the instrument is fit for further collection of data and analysis. The variables were tested at 5% (0.05 alpha level).

Descriptive statistics

This helps to explain the characteristics/ features of the sample. The study includes measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation, and standard error). The study also used the frequencies and percentages to analyze the data.

Normality of data

As the sample size is above (n> or equal to 30), the normality of data is assumed on the basis of the Central Limit Theorem (CLT). The sampling distribution is considered and treated normal. Therefore, the data is considered normal (LaMorte, 2016).

Validity and reliability of the instrument

The validity of a scale depicts whether the scale can measure the component/ construct effectively or not. The validity can be checked by expert opinion, or interviews of group of people. The study sought for expert opinion from various experts across various fields and their suggestions are incorporated in the study. The reliability of the instrument is checked using Cronbach's Alpha. The coefficient value ranges from 0-1. Cronbach's alpha is used to measure the internal consistency of the overall scale and sub-scales. The value is more than 0.7 which is highly acceptable (Peterson, 1994). The values of the component that is above 0.7 has been considered for further analysis.

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Parametric and non-parametric tests

Since the data is considered normal, so various parametric tests have been applied. Non- parametric tests have also been applied on the data gathered through 5-point scale.

Respondents' Demographic Profile

Table 8 comprises demographic profile of respondents. These include all independent variables that are covered in the study. Respondents' demographic profile is revealed in Table 8. The table reveals demographic features of respondents for (n=1949). This includes age, gender, medium of instruction, name of the faculty, program/ course of respondents, and awareness about rank and grade of The Maharaja Sayajirao university (MSU) of Baroda, Vadodara, Gujarat.

Table 8

Respondents' Demographic Profile

Respondents' Profile		Frequency	Percent
Age			
	Below 20	495	25.4
	20-less than 25	1296	66.5
	25 and above	158	8.11
	Total	1949	100
Gender			
	Male	823	42.23
	Female	1126	57.77
	Total	1949	100
Medium of Instruction			
	English	1029	52.8
	Gujarati	887	45.51
	Others	33	1.69
	Total	1949	100
Name of the faculty respondent belongs to			
	Arts	203	10.42
	Commerce	299	15.34
	Education and Psychology	168	8.62
	Engineering and Technology	292	14.98
	Faculty of Family and Community Science	127	6.52
	Faculty of Fine Arts	101	5.18
	Faculty of Journalism and Communication	52	2.67
	Faculty of Law	142	7.29
	Faculty of Management Studies	97	4.98
	Faculty of Performing Arts	105	5.39
	Faculty of Pharmacy	60	3.08
	Faculty of Science	203	10.42
	Faculty of Social Work	100	5.13
	Total	1949	100

Program/ course respondent is currently into

Certificate	28	1.43
Diploma	40	2.05
UG	1053	54.02
PG	828	42.48
Total	1949	100

Awareness about grade of the university

Table 9 shows the Awareness level of respondents about the grade of their university.

Table 9

Respondents' NAAC Rating Awareness

NAAC Rating Awareness	Freq	Percentage
A++	134	6.88
A+	285	14.62
A	844	43.30
B++	30	1.54
B+	57	2.92
B	44	2.26
C	21	1.08
D	18	0.92
Not Aware	516	26.48
Total	1949	100

It is observed that the majority of respondents 43.30% (n=844) are aware about the correct grade of the university. The second highest percentage includes respondents who are not aware of the grade of the university are 26.48% (n=516).

Awareness about rank of the university

Table 10 highlights the Awareness level of respondents about rank of their university.

Table 10

NIRF Ranking Awareness

NIRF Ranking	Frequency	Percentage
From 1 -50	350	17.96
51-100	411	21.09
101-150	368	18.88
151-200	53	2.72
201 and above	37	1.90
Not Aware	730	37.46
Total	1949	100

It is revealed that majority of respondents 37.46% (n=730) are not aware about the correct rank of the university. The second highest percentage includes respondents who believed that the rank of the university would be between 51-100 21.09% (n=411).

Total students per faculty per Annual Report 2019-2020

Total number of students per faculty per the 71st Annual Report of 2019-2020 is revealed in Table 11. All the 13 faculties that are shown in the table are included in the study.

Table 11

Total Students per faculty 2019-2020

Total students per faculty per the 71st Annual Report 2019-2020	
Arts	4036
Engineering and Technology	4572
Science	5178
Commerce	23,509
Performing Arts	432
Social Work	440
Journalism and Communication	151
Management Studies	118
Law	1645
Family and Community Science	1690
Education and Psychology	803
Pharmacy	188
Fine Arts	716
Total	43478

Table 11 reveals the number of students per faculty. The faculty with highest number of students is the faculty of 'Commerce', where the number of students is 23,509. The faculty with the least number of students is the faculty of 'Management Studies'.

Explanation of Demographic Profile of Respondents

Demographic profile of respondents is shown in Table 8. The profile of respondents is explained with numbers and percentages.

Age profile of respondents

Table 8 reveals that there are a total of 1949 respondents. Out of them, 25.4% (n=495) respondents are below the age of 20, 66.5% (n=1296) respondents are in the age group of 20 to less than 25 years, and 8.11% (n=158) respondents are in the age group of 25 years and above.

Gender profile of respondents

Out of the total 1949 respondents, there were 42.2% (n=823) males, and 57.7% (n=1126) females. As samples were collected on quota basis from each faculty, and

there was no purposive approach of the researcher to control sample on the basis of gender. Therefore, on the basis of representative sample, it can be inferred that male female ratio of students at M.S. University of Baroda is 2:3 approximately. The male to female ratio at the M.S. University is 40:60, so this study has sample of male: female ratio of 42: 58 which is a representative sample as far as gender is concerned.

Previous medium of instruction profile of respondents:

Out of the total respondents who belonged to the English medium background were 52.8% (n=1029), Gujarati medium 45.51% (n=887), and other languages 1.69% (n= 33) that included Hindi, Marathi, Oriya, Bengali, etc.

Name of the faculty to which respondents belong to

Respondents from the faculty of Arts were 10.42% (n=203), Commerce 15.34% (n=299), Education and Psychology 8.62% (n=168), Engineering and Technology 14.98% (n=292), Family and Community Science 6.52% (n=127), Fine Arts 5.18% (n=101), Journalism and Communication 2.67% (n=52), Law 7.29% (n=142), Management Studies 4.98% (n= 97), Performing Arts 5.39% (n=105), Pharmacy 3.08% (n=60), Science 10.42% (n=203), and Social work 5.13% (n=100).

Program/ course the respondents are currently pursuing

Out of the total respondents, 1.4% (n=28) were pursuing certificate courses, 2% (n= 40) diploma, UG respondents were 53.3% (n=1053), and PG respondents were 42.4% (n=828).

Awareness about grading

Out of total respondents, 6.88% (n=134) assumed the A++ rating was 14.62% (n=285), respondents assumed it to be A+. i.e. the total 21.5% of respondents presumed better grading than the actual grade of the university. The number of respondents who assumed correct grade of university were 43.30% (n=844). Respondents who presumed lesser grade than the actual one were 8.72% i.e., respondents who assumed B++ rating were 1.54% (n=30), 2.92% (n=57) assumed B+ rating, 2.26% (n=44) assumed B rating, 1.08% (n=21) assumed C grading, 0.92% (n=18) assumed D grading, respondents not aware about the grading were 26.48% (n=516).

Awareness level about grading of The M.S. University

Table 12 reveals awareness level of the respondents regarding the grading of The Maharaja Sayajirao university (MSU) of Baroda. The awareness level has been categorized as aware; respondents who are aware of the grade when the data was

collected (n=844), 'others' include respondents who claim to be aware of the actual grade (n=589).

'Not aware' include respondents who do not have any awareness about the grading of the university (n=516). It can be seen that majority of respondents are aware of the grade of the university.

Table 12

Awareness about grading of The M.S. University

Aware	844
Others	589
Not Aware	516
Total	1949

Table 13

Awareness about the ranking of The M.S. University

Aware	368
Others	851
Not Aware	730
Total	1949

Table 13 reports the number of respondents who are aware of the NIRF ranking of university i.e. 101-150 were 18.88% (n=368). Respondents who assume ranking between '151-200' are 2.72% (n=53), '201 and above' ranking were 1.90% (n=37), and respondents who are not aware were 37.46% (n=730).

Relationship between awareness of ranking/grading and various categories of respondents

Assumptions of Chi-square test

To find the association between categorical variables, and to know whether the observations are independent of each other is one of the assumptions of applying the chi-square test. Both the categorical variables can be measured at ordinal or nominal levels.

To know the strength of association between categorical variables, Cramer's V was applied.

Gender vs Awareness

Chi-square test of association was applied on Gender vs awareness about NIRF ranking among respondents.

Table 14

Gender vs awareness about ranking

Ranking	f	Male % category (n=823)	f	Female % category (n=1126)	Sig.
Aware	151	18.3	217	19.3	$\chi2\ (2) = .981$
Not aware	302	36.7	428	38	$p = .612$(ns)
Others	370	45	481	42.7	
Total	823	100	1126	100	

Table number 14 reveals that out of the total respondents, the number of males who were aware of the correct ranking of the university were 18.3% (n=151) while the number of females were 19.3% (n=217). 36.7% (n=302) males claimed that they were not aware of the ranking of the university against 38% (n=428) females who claimed that they were not aware of the ranking of the university. Similarly, 45% (n=370) males and 42.7% (n=481) females assumed the incorrect NIRF ranking.

The overall picture shows that number of females were more who were aware of the correct ranking than the number of male respondents. It was further seen that unawareness about ranking among number of females was more as compared to males. However, it was found that number of males who assumed wrong ranking were higher than number of female respondents.

H_0: Awareness about ranking is independent of gender.

Here, $\chi2\ _{(2,\ N = 1949)} = .981$, $p = .612$ (ns), fails to reject null hypothesis. Hence, it is inferred that awareness about ranking is independent of gender. That is, the difference was not significant.

Table 15 highlights the relationship between the age of the respondents with respect to the awareness of the ranking of the university.

Table 15

Awareness about Ranking vs Age

Awareness about ranking	f	Below 20 category (%) (n=495)	f	20-less than 25 category (%) (n=1296)	f	25 and above category (%) (n=158)	Sig.
Aware	100	20.2	248	19.1	20	12.7	$\chi2\ (4) = 18.903$
Not aware	210	42.4	470	36.3	50	31.6	$p = .001$**
Others	185	37.4	578	44.6	88	55.7	
Total	495	100	1296	100	158	100	

For the segment of below 20-year-olds, a total of 20.2% (n=100) students were aware of the correct rankings, while 42.4% (n=210) were not aware and 37.4% (n=185)

assumed the rank incorrectly. For students aged between 20-less than 25, 19.1% (n=248) showcased awareness of the ranking, while 36.3% (n=470) were not aware and the remaining 44.6% (n=578) held incorrect assumptions about the same. As far as the age-group of 25 and above is concerned, the split between 'aware', 'not aware' and 'others' (incorrect assumption) stood at 20 (12.7%), 50 (31.6%), and 88 (55.7%) respectively.

It is evident therefore, that in terms of percentage within the category, the age-group of below 20 make up the highest number of respondents who are not aware of the rankings – totaling up to 42.4% (n=210) of the total group. However, of the three age-groups, the under-20 set also shows the highest number of students (n=100) who were aware of the actual rank of the university, topping up at 20.0%. The age-group of 25 and over have the highest number of respondents (n=88) who assumed the incorrect rank making up 55.7% of the total set of respondents.

Also, the '*p*' value indicates that there is a significant association between age and awareness about ranking.

H_0: Awareness about ranking is independent of age.

Here, $\chi2_{(4, N = 1949)}$ = 18.90, $p < .01$**, rejects null hypothesis. Hence, it is inferred that awareness of ranking is not independent of age.

Table 16 below describes the relationship between the medium of instruction of the students vis-à-vis awareness of the university rank.

Table 16

Medium of instruction vs awareness about rank

Ranking	f	English % category (n=1029)	f	Gujarati % category (n=887)	f	Others % category (n=33)	Sig.
Aware	178	17.3	187	21.1	3	9.1	$\chi2(4) = 17.996$
Not aware	426	41.4	290	32.7	14	42.4	$p = .001$**
Others	425	41.3	410	46.2	16	48.5	
Total	1029	100	887	100	33	100	

It was evident that among the students from the English medium, 41.4% (n=426) were unaware or had assumed the incorrect rank and 41.3% (n=425) had assumed the incorrect rank. Only (17.3%) (n=178) of the students from the English medium were aware of the actual rank. Similarly, among the students from the Gujarati medium, 46.2% (n=410) assumed the incorrect rank, 32.7% (n=290) were unaware and 21.1% (n=187) were aware of the university NIRF ranking. From students who belonged to

other mediums of instruction, only 9.1% (n=3) were aware, 42.4% (n=14) were not aware, and 48.5% (n=16) assumed the incorrect rank.

H_0: There is no significant association between medium of instruction and awareness about ranking.

Here, $\chi^2_{(4, N = 1949)} = 17.99$, $p < .01^{**}$, reject null hypothesis.

Hence, it is inferred that awareness of ranking is not independent of medium of instruction. There is a significant association between awareness about ranking among respondents and medium of instruction of respondents.

In Table 17, which follows, the relationship between ranking and program/ course is clearly reflected.

Table 17

Ranking vs Program/ course

Program/ course of the respondent	F	Aware % within category (n=176)	f	Not aware % within category (n=287)	f	Others % within category (n=365)	Total f	% within category	Sig
Certificate	2	7.1	2	7.1	24	85.7	28	100	$\chi^2 (6) = 36.047$
Diploma	3	7.5	24	60	13	32.5	40	100	$p=.0001^{***}$
UG	187	17.8	417	39.6	449	42.6	1053	100	
PG	176	21.3	287	34.7	365	44.1	828	100	

In terms of the relationship between the course and awareness, it is evident at Table 17 that 85.7% (n=24) of total respondents of the Certificate program incorrectly assumed the ranking of the university, whereas only 7.1% (n=2) were aware and 7.1% (n=2) were unaware of the same. As for the Diploma program, 32.5% (n= 13) of the students wrongly assumed the rank, while 60% (n=24) were unaware, and only 7.5% (n=3) knew what the actual rank was.

This trend more-or-less continued in the UG group as well, where 42.6% (n=449) students wrongly guessed the rank, while 39.6% (n=417) of the students were unaware, leaving only 17.8% (n=187) students who knew the real rank of the university. The group of PG respondents too exhibited the same major pattern with 44.1% (n=365) students incorrectly guessing the rank, 34.7% (n=287) not aware of it, and only 21.3% (n=176) having a true idea about the same.

It is also important to note that the 'p' value indicates that there is a significant association between age and awareness about ranking.

H_0: There is no significant association between program/ course of the respondent and their awareness about ranking. Here, $\chi^2_{(6, N = 1949)} = 36.04$, $p < .001^{***}$, reject null

hypothesis. Hence, it is inferred that awareness of ranking is not independent of program/ course of respondents.

Table 18

Gender vs Awareness about grading

Grading	f	Male % category (n=823)	f	Female % category (n=1126)	Sig.
Aware	357	43.4	487	43.3	$\chi 2 (2) =13.067$
Not aware	188	22.8	328	29.1	$p= .001**$
Others	278	33.8	311	27.6	
Total	823	100	1126	100	

Table 18 highlights the connection between gender and grade awareness. It has been observed that 43.3% (n=487) of females were aware of the actual grade of the university, while 29.1% (n=328) were unaware, and 27.6 (n=311) wrongly guessed the grade of the university. On the other hand, 43.4% (n=357) of males were aware of the grade, while 22.8% (n=188) were unaware, and 33.8% (n=278) assumed an inaccurate grade.

Additionally, it is noted that the relationship between gender and grade awareness was significant per the '*p*' value obtained.

H_0: There is no significant association between gender and awareness about grading.

Here, $\chi 2_{(2, N = 1949)} = 13.06$, $p < .01**$, reject null hypothesis. Hence, it is inferred that awareness about grading is not independent of gender respondents.

It means that there is an association between gender and awareness about grading of the university.

Next, Table 19 reflects the connection between age and grade awareness.

For the segment of below 20-year-olds, a total of 38.4% (n=190) students were aware of the grade, while 31.7% (n=157) were not aware and 29.9% (n=148) assumed the grade incorrectly. For students aged between 20-less than 25, 44.7% (n=579) showcased awareness of the actual grade, while 25.5% (n=331) were not aware, and the remaining 29.8% (n=386) held incorrect assumptions about the same.

Table 19

Awareness about grading vs age

Awareness about grading	f	Below 20% category (n=368)	f	20-less than 25% category (n=851)	f	25 and above % category (n=730)	Sig.
Aware	190	38.4	579	44.7	75	47.5	$\chi 2=15.302$
Not aware	157	31.7	331	25.5	28	17.7	
Others	148	29.9	386	29.8	55	34.8	$p=.004**$
Total	495	100	1296	100	158	100	

As far as the age-group of 25 and over is concerned, the split between aware, not aware and others stood at 47.5% (n=75), 17.7% (n=28) and 34.8% (n=55) respectively.

Also, the 'p' value indicates that there is a significant association between age and awareness about grading.

H_0: There is no significant association between age and awareness about grading.

Here, $\chi2_{(6, N = 1949)} = 36.04$, $p < .01**$, reject null hypothesis.

Hence, it is inferred that awareness of ranking is not independent of age of respondents.

Table 20

Grading vs Medium of Instruction

Grading	f	English % category (n=1029)	within f	Gujarati % category (n=887)	within f	Others (n=33)	Sig.
Aware	485	47.1	348	39.2	11	33.3	$\chi2(4) =49.825$
Not aware	303	29.4	202	22.8	11	33.3	$p=.000***$
Others	241	23.4	337	38	11	33.3	
Total	1029	100	887	100	33	100	

Table 20 establishes the relationship between the medium of instruction of the students vis-à-vis awareness of the university grade.

Data from the English medium respondents reflects that a vast number of them were aware of the grade, with 47.1% (n=485) respondents getting it right. Whereas 29.4% (n=303) of the students from the English medium were not aware of the actual grade, and 23.4% (n=241) assumed the same incorrectly. Similarly, among the students from the Gujarati medium, 39.2% (n=348) knew the grade, 22.8% (n=202) were unaware and 38% (n=337) guessed the wrong grade. From students who belonged to other mediums of instruction, the response was split evenly among the three categories of aware, not aware, and other – all reporting 33.3% (n=11) for each.

In addition to this, the 'p' value indicates that there is a significant association between medium of instruction and awareness about grade.

H_0: Awareness about grading is independent of medium of instruction.

Here, $\chi2_{(4, N = 1949)} = 49.82$, $p< .001***$, reject null hypothesis. Hence, it is inferred that awareness about grading is not independent of medium of instruction of respondents.

Table 21

Program/course the respondent vs grading

Program/ course of the respondent	Aware f	% within category	f	Not aware % within category	f	Others % within category	Total f	% within category	Sig
Certificate	5	17.85	2	7.1	21	75	28	100	χ2(6) =63.449
Diploma	8	20	17	42.5	15	37.5	40	100	
UG	412	39.1	313	29.7	328	31.1	1053	100	
PG	419	50.6	184	22.2	225	27.2	828	100	p=.000***
Total	844	100	516	100	589	100	1949	100	

The data from Table 21 elicits the relationship between awareness of grading with respect to program or course that the respondent is pursuing.

In terms of the relationship between the course and awareness, it is evident that 85.7% (n=24) of total respondents of the Certificate program assumed the ranking of the university incorrectly, whereas only 7.1% (n=2) were aware and 7.1% (n=2) were unaware of the same. As for the Diploma program, 32.5% (n=13) of the students wrongly assumed the rank, while 60% (n=24) were unaware, and only 7.5% (n=3) knew what the actual rank was. This trend more-or-less continued in the UG group as well, where 42.6% (n=449) students wrongly guessed the rank, while 39.6% (n=417) of the students were unaware, leaving only 17.8% (n=187) students who actually knew the real rank of the university. The group of PG respondents too exhibited the same major pattern with 27.2% (n=225) students incorrectly guessing the rank, 22.2% (n=184) not aware of it, and 50.6% (n=419) actually having a true idea about the same.

H_0: Awareness about grading is independent of program/ course of respondents.

Here, $\chi2_{(6, N = 1949)} = 63.44$, $p < .001$***, reject null hypothesis. Hence, it is inferred that awareness about grading is not independent of program/ course of respondents.

In other words, it means that there is a significant association between program/ course of the respondent and their awareness about grading of the university.

Q8. of the questionnaire explores perception of students towards 'Curriculum' and 'Teachers'. There are a total of 14 statements; 11 statements explore perception towards 'Curriculum' and 'Teachers' and 3 statements are regarding opinions that are sought from students. To further explore and test hypotheses that have been framed in Chapter 1, Exploratory Factor Analysis (EFA) and Principal Component Analysis (PCA), one-sample test, two independent sample t test, ANOVA, (Tukey HSD) and Welch (Games-Howell) have been used for further analysis of data.

Perception of students towards 'Teachers' and 'Curriculum'

Table 22

Mean and SD for 'CA' and 'TPT'

Items	Mean	Std. Deviation (SD)
1. Our course content is clearly defined	3.95	.973
2. Our curriculum is interesting	3.95	.975
3. Our curriculum is relevant for employability	3.69	1.063
4. Our curriculum is regularly updated to align with the latest knowledge requirements	3.75	1.113
5. Teachers are well-prepared for their sessions	4.10	1.006
6. I feel that teachers use fresh and updated notes to teach	3.90	1.072
7. Teachers are comfortable using smart boards in offline sessions	3.89	1.118
8. Teachers are comfortable using digital pads in online sessions	3.78	1.125
9. Self-learning or learning through online courses are highly encouraged by my teachers	3.55	1.154
10. Teachers use technology-aided instruction method in the classrooms	3.71	1.040
11. Teachers provide me with bridge courses for the subject which are difficult to understand	3.50	1.160

Table 22 gives the descriptive statistics (mean and standard deviation) for all variables in a sample size of (n=1949). Our course content is clearly defined (M=3.95, S.D= .973), Our curriculum is interesting (M=3.95, S.D= .975), Our curriculum is relevant for employability (M= 3.69, S.D= 1.063), Our curriculum is regularly updated to align with the latest knowledge requirements (M= 3.75, S.D= 1.113), Teachers are well-prepared for their sessions (M= 4.10, S.D= 1.006), I feel that teachers use fresh and updated notes to teach (M= 3.90, S.D= 1.072), Teachers are comfortable using smart boards in offline sessions (M= 3.89, S.D= 1.118), Teachers are comfortable using digital pads in online sessions (M= 3.78, S.D= 1.125), Self-learning or learning through online courses are highly encouraged by my teachers (M= 3.55, S.D= 1.154), Teachers use technology-aided instruction method in the classrooms (3.71, S.D= 1.040), Teachers provide me with bridge courses for the subjects which are difficult to understand (M= 3.50, S.D= 1.160).

It is found that the variable with the highest mean and standard deviation (M=4.10, SD=1.006) is - Teachers are well-prepared for their sessions. However, other

variable with the lowest mean and standard deviation (M=3.50, SD=1.160) is - Teachers provide me with bridge courses for the subject which are difficult to understand.

Factor Analysis for 2 components: 'CA' and 'TPT'

Factorability is checked on all 11 items mentioned above. Principal component analysis (PCA) is conducted on 'Perception of students towards 'CA' and 'TPT' with a varimax rotation.

KMO and Bartlett's test of sphericity

Kaiser Meyer Olkin measure of sampling adequacy (KMO) measures the sampling adequacy and the value that is acceptable should be more than 0.5. The study has the KMO value 0.91 which is greater than 0.5. This means that the study is fit for conducting factor analysis.

Bartlett's test of sphericity checks whether the variables are highly correlated with each other, and the value is significant enough to justify its usage in the study. If the value is less than 0.05, it is highly significant. The study showed the value to be highly significant as it is $\chi2$ (55) =7118.3, p= 0.000.

Anti-image matrix and communalities table

Here, the values that are observed diagonally and only those value are found to be significant that are greater than 0.6 (Field, 2009). All the values are above 0.9 diagonally which are accepted and considered for further study as they are above 0.6. These values show the variance of the extracted factor. The values may range from 0 to 1. Any value which is found to be more than 0.5 is acceptable (Pallant, 2016). All the variables except three show values more than 0.5. The first value is 0.476- Teachers are comfortable using smart boards in offline sessions, second being 0.480- Self-learning or learning through online courses are highly encouraged by my teachers, and the value of the third variable is 0.453- Teachers provide me with bridge courses for the subject which are difficult to understand. However, these variables are not dropped due to the fact that their values in the anti-image correlation matrix is higher than 0.9 i.e., 0.927, 0.911, 0.931 are the values that are characterized by "a". It has been further said that if the values in anti-image correlation matrix and communalities are less than 0.5, only then they are supposed to be discarded otherwise accept the variables (Field, 2000). Communalities in large data (if the n> 1000) can be accepted even if they are less than 0.5 (Field, 2000p- 644).

Components extracted based on Factor Analysis

Two components have been extracted on the basis of Factor Analysis. The first component is 'Tech-Pro Teachers' that includes first 7 items. The second component is 'Curriculum Appropriateness' which includes last 4 items/ statements.

Rotated component matrix table

Table 23

Factor Loadings from Principal Component Analysis with Varimax Rotation for Factors considered regarding perception of students (n = 1949)

Items	Factor Loadings 1	2	Communalities
1.Teachers are comfortable using digital pads in online sessions	.737		.556
2.Teachers use technology-aided instruction method in the classrooms	.724		.600
3.Self-learning or learning through online courses are highly encouraged by my teachers	.683		.512
4.Teachers are comfortable using smart boards in offline sessions	.647		.597
5.Teachers provide me with bridge courses for the subjects that are difficult to understand	.596		.590
6.I feel that teachers use fresh and updated notes to teach	.510	.500	.510
7.Teachers are well-prepared for their sessions	.503	.502	.504
8.Our curriculum is relevant for employability		.754	.594
9.Our curriculum is regularly updated to align with the latest knowledge requirements		.711	.596
10.Our course content is clearly defined		.719	.605
11.Our curriculum is interesting		.768	.622
Eigen values	4.8	1.1	
% of variances	27.10	26.94	

Note: The factor loadings that are less than 0.4 have been suppressed by the software.

All the factor loadings must be more than or equal to 0.5. There are cross loadings on two factors and factors with more value of factor loading are considered. It is seen that no factor is dropped in the study. This matrix shows factor loadings for every variable for each component. The factor loading that are less than 0.4 are suppressed by the software. Variables are listed in order of their size of factor loadings.

From table 23, only those components are retained with an eigen value more than 1. In this case, two components are retained. The first component i.e. 'Tech-Pro Teachers' has strong factor loadings on first 7 items. However, there is a cross loading

of .503 and .502 on 'teachers are well-prepared for their sessions'. Out of these cross loadings, the higher is .503, which is considered. Another factor that has cross loadings on the factor is: 'I feel that teachers use fresh and updated notes to teach' i.e. .510 and .500. Out of these, the higher is .510 and is considered for further analysis. The second component 'Curriculum Appropriateness' has strong loadings on all 4 items which is greater than 0.5.

Total variance explained

Table 24

Extraction Method: Principal Component Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.785	43.501	43.501	4.785	43.501	43.501	2.982	27.108	27.108
2	1.16	10.549	54.05	1.16	10.549	54.05	2.964	26.942	54.05
3	0.77	6.999	61.049						
4	0.715	6.497	67.547						
5	0.619	5.63	73.176						
6	0.571	5.19	78.367						
7	0.53	4.821	83.187						
8	0.5	4.546	87.733						
9	0.475	4.32	92.054						
10	0.447	4.067	96.12						
11	0.427	3.88	100						

Total variance is explained by the eigen values in Table 24. All factors with eigen values more than 1 are extracted. This is explained under the extraction sums of squared loadings. Factor 1 shows more variance 43.501% as compared to factor 2 which shows variance of 10.549%. After rotation also the first component shows variance 27.108% and the second component shows variance 26.942% respectively. The cumulative variance explained is 54.050%.

Table 25

Descriptive Statistics for 2 components: 'TPT and CA'

	No. of items	M	SD	Skewness	Kurtosis	Cronbach α
Tech-pro teachers (TPT)	7	3.82	0.77	-.407	-.184	.827
Curriculum Appropriateness (CA)	4	3.83	0.80	-.710	.399	.786

Table 25 shows that components 'tech-pro teachers' (TPT) and 'curriculum appropriateness' (CA) are considered on a reflective scale. No items are dropped. All the items have been covered in both the above-mentioned components for further analysis. Mean and Standard Deviation (SD) for the first component, 'TPT', (M=3.82, SD=.77) and for the second component 'CA', (M=3.83, SD=.80). Reliability test shows that both components are reliable as the value is >.70, which is acceptable (Drost, 1970).

'Analysis of Tech-pro teachers' and 'Curriculum appropriateness'

One sample t test is conducted at 5% α level of significance to know the perception of students towards 'tech-pro teachers' and curriculum appropriateness'.

$H_0: \bar{x} = \mu$ $H_a: \bar{x} \neq \mu$

Where, μ is population mean or the test value (neutral value of 5-point Likert scale) and $\bar{x}$ is the sample mean.

Table 26

One-Sample Test of Curriculum Appropriateness (CA) and Tech Pro Teachers (TPT)

					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
TPT	47.034	1948	0.000***	0.82076	0.7865	0.8550
CA	45.924	1948	0.000***	0.83799	0.8022	0.8738

*** p < 0.001

Based on Table 25 and 26, the values for the component 'tech-pro teachers' are (M= 3.82, S.D. = .77); t (1948) = 47.034, $p < .001$. Hence, null hypothesis is rejected. It infers that perception of students towards 'tech pro teachers' is above average. It means that perception of students is close to agreement for 'tech-pro teachers.'

Table 25 and 26 report values for the second component, 'curriculum appropriateness', (M=3.83, S.D. =.80); t (1948) = 45.924, $p<.001$. Hence, null hypothesis is rejected. It infers that perception of students towards 'curriculum appropriateness' is above average. It infers that perception of students is close to agreement for 'curriculum appropriateness'. However, it can be inferred that perception towards 'curriculum appropriateness' is better than 'tech-pro teachers.'

Based on Gender

An independent-samples t-test at 5% α level is conducted to compare the perception of 'tech-pro teachers' and 'curriculum appropriateness' among males and females of the M. S. university. Levene's Test for Equality of Variances is shown at table 20 for 'tech-pro teachers'. $p = .129$ (ns) which is $>.05$, and 'curriculum appropriateness' $p= .558$ (ns) which is $> .05$. Thus, there is a homogeneity of variance for both the components.

H0: μ Male = μ Female   Ha: μ Male ≠ μ Female

Table 27

Descriptive Statistics for 'TPT' and 'CA'

	Gender of the respondent	N	Mean	Std. Deviation	Std. Error Mean
TPT	Male	823	3.5900	.85119	.02967
	Female	1126	3.7254	.79927	.02382
CA	Male	823	3.8429	.75317	.02625
	Female	1126	3.9173	.77293	.02303

Table 27 explains values of Mean and SD for males and females. For the component, 'TPT', mean and SD for males (M=3.59, SD=.85), females (M=3.72, SD=.79). For the second component 'CA', mean and SD values for males (M=3.84, SD=.75), for females (M=3.91, SD=.77).

Table 27 and table 28 report values for 'tech-pro teachers' male (M = 3.59, SD = .85) and female (M= 3.72, SD = .79); t (1947) = 3.593, $p= .000^{***} < .05$, hence, rejects null hypothesis. It infers that there is a significant difference between males and females in perception towards 'tech-pro teachers.' It is inferred that perception of females towards teachers being 'tech-pro' is significantly better than males.

However, values for 'curriculum appropriateness' male (M = 3.84, SD = .753) and female (M= 3.91, SD = .77); t (1948) = 2.122, $p = .034^* < .05$, hence, rejects null hypothesis.

Table 28

Independent Sample t-test for Tech-pro teachers and curriculum appropriateness: Gender

| | | Tech pro teachers | | Curriculum Appropriateness | |
| | | Equal Variances | | | |
		Assumed	Not Assumed	Assumed	Not Assumed
Levene's Test for equality of variances	F	2.303		.344	
	Sig.	.129 (ns)		.558 (ns)	
	T	-3.593	-3.558	-2.122	-2.130
	Df	1947	1705.375	1947	1796.690
	Sig. (2-tailed)	.000***	.000***	.034*	.033*
t-test for equality of Means	MD	-.13536	-.13536	-.07441	-.07441
	S.E Difference	0.03768	0.03805	0.03507	0.03493
	95% CI of the difference lower Upper	-0.20926 -0.20999	-0.06147 -0.06074	-0.14318 -0.00563	-0.14291 -0.00591

*** p < 0.001, *p<.05

It infers that there is a significant difference among males and females with regards to their perception about 'curriculum appropriateness.' It can be inferred that females have a significantly better perception towards 'curriculum appropriateness' than males. It is seen that females have a better perception for both components: 'tech-pro teachers' and 'curriculum appropriateness'.

Table 29 reports results of 'Levene's test for equality of variances' for 'tech-pro teachers', *p*=.41 >.05, and 'curriculum appropriateness' where *p*= .23>.05. It infers that there is a homogeneity of variances for both the components.

Based on Age

Table 29

Test of homogeneity of variance for 'tech-pro teachers' and 'curriculum appropriateness': Age

	Levene Statistic	df1	df2	Sig.
Tech-pro teachers	.881	2	1946	.415 (ns)
Curriculum Appropriateness	1.445	2	1946	.236 (ns)

ns: not significant

As there is a homogeneity of variance for both components, One-way ANOVA is conducted to compare the perception of students for 'tech-pro teachers' and 'curriculum appropriateness' with respect to their age groups.

H0: μ below 20 = μ 20-less than 25= μ 25 and above

Ha: at least one of the μ differs significantly.

Table 30

Descriptive Statistics based on Age Groups

		Mean	Std. Deviation
TPT	Below 20	3.6267	.82478
	20-less than 25	3.6586	.82510
	25 and above	3.8772	.78772
CA	Below 20	3.9199	.74262
	20-less than 25	3.8543	.77726
	25 and above	4.0380	.71702

Table 30 reveals descriptive statistics for age groups. For the component, 'TPT', mean and SD values for 'below 20' age group (M=3.62, SD=.82), '20-less than 25', (M=3.65, SD=.82), and '25 and above', (M=3.87, SD=.78). The highest mean is reported by '25 and above' age group. For the component, 'CA', mean and SD values for age groups: 'below 20', (M=3.91, SD=.74), '20-less than 25', (M=3.85, SD=.77), and '25 and above', (M=4.03, SD=.71). The highest mean is reported by the age group, '25 and above'.

Table 31 reports values for 'tech-pro teachers', F (2, 1946) = 5.826, *p*= .003 < .05. As *p* value is less than .05, null hypothesis is rejected. It infers that at least one

group differs significantly. Similarly, considering values for the component 'curriculum appropriateness', F (2, 1946) = 4.370, *p*=.009 < .05. It infers that null hypothesis is rejected. At least one of the groups differs significantly.

Table 31

ANOVA Test for Tech-pro teachers and Curriculum appropriateness

		SS	df	MS	F	Sig.
	Between Groups	7.875	2	3.937	5.826	.003 *
TPT	Within Groups	1315.089	1946	.676		
	Total	1322.964	1946			
	Between Groups	5.520	2	2.760	4.730	.009 *
CA	Within Groups	1135.496	1946	.584		
	Total	1141.016	1948			

 * *p*< .05

Table 32

Post-Hoc Tukey HSD based on Age

Dependent Variable	(I) Age of the respondent	(J) Age of the respondent	Std. Error	Sig.
CA	Below 20	20-less than 25	.04250	.496(ns)
		25 and above	.07349	.138(ns)
	20-less than 25	Below 20	.04250	.496(ns)
		25 and above	.06778	.016*
	25 and above	Below 20	.07349	.138(ns)
		20-less than 25	.06778	.016*
TPT	Below 20	20-less than 25	.04064	.990(ns)
		25 and above	.07028	.018*
	20-less than 25	Below 20	.04064	.990(ns)
		25 and above	.06481	.012*
	25 and above	Below 20	.07028	.018*
		20-less than 25	.06481	.012*

Table 32 shows results of Post hoc Tukey HSD. To know which group differs significantly, Post-Hoc Tukey HSD is conducted. It reveals that there is a significant difference in perception of students between age group 'below 20 and (M=3.62, S.D= .824), '20-less than 25', (M=3.65, S.D= .825) and '25 and above' (M=3.87, S.D= .787) age groups regarding their perception about 'tech-pro teachers', *p*< .05. There is a significant difference between age groups '20-less than 25'and '25 and above' in perception towards 'tech-pro teachers'. It infers that the age group '25 and above' have a significantly better perception towards 'tech-pro teachers' as compared to other groups.

Similarly, for 'curriculum appropriateness', there is a significant difference between students of age group 'below 20', (M=3.91, SD=.74), '20-less than 25', (M= 3.85, S.D.=.77) and '25 and above' (M=4.03, S.D.= .71) age groups regarding their perception towards 'curriculum appropriateness', $p<.05$. It infers that age group '25 and above' have a significantly better perception towards 'curriculum appropriateness' as compared to other groups.

Based on Medium of instruction

Table 33

Test of homogeneity of variance for 'tech-pro teachers' and 'curriculum appropriateness': Medium of instruction

	Levene Statistic	df1	df2	Sig.
Tech-pro teachers	.189	2	1946	.828 (ns)
Curriculum Appropriateness	2.445	2	1946	.086 (ns)

ns: not significant

Table 33 reports results of 'Levene's test for equality of variances' for 'tech-pro teachers', $p=.82 >.05$, and 'curriculum appropriateness' where $p= .08> .05$. It infers that there is a homogeneity of variances for both the components. As there is a homogeneity of variance so, One-way ANOVA is conducted for 'tech-pro teachers' and 'curriculum appropriateness' with respect to their medium of instruction.

H0: μ English = μ Gujarati= μ others

Ha: at least one of the μ differs significantly.

Table 34

Descriptive Statistics for CA and TPT: MOI

		Mean	Std. Deviation
TPT	English	3.5817	.80290
	Gujarati	3.7617	.83721
	Others	3.8545	.84154
	Total	3.6682	.82410
CA	English	3.8442	.75534
	Gujarati	3.9305	.77916
	Others	3.9848	.63103
	Total	3.8858	.76533

Table 34 reports descriptive statistics for TPT: 'English' (M= 3.58, S.D= .802), 'Gujarati' (M=3.76, S.D= .837), 'others' (M=3.85, S.D= .841). For the component,

'CA', 'English (M=3.84, S.D= .755), 'Gujarati' (M=3.93, S.D=.779), 'others', (M= 3.98, S.D= .63).

Table 35

ANOVA Test for Tech-pro teachers and Curriculum appropriateness

		SS	df	MS	F	Sig.
TPT	Between Groups	16.589	2	8.294	12.356	.000 *
	Within Groups	1306.375	1946	.671		
	Total	1322.964	1948			
CA	Between Groups	3.876	2	1.938	3.317	.036 *
	Within Groups	1137.140	1946	.584		
	Total	1141.016	1948			

* p< .05

Table 35 reports ANOVA values for 'tech-pro teachers', F (2, 1946) = 12.356, p= .000 < .05. As p value is less than .05, null hypothesis is rejected. It infers that at least one group differs significantly. Similarly, considering values for the component 'curriculum appropriateness', F (2, 1946) = 3.317, p=.036 < .05. It infers that null hypothesis is rejected. At least one of the groups differs significantly. To know which group differs significantly, Post hoc Tukey HSD test is conducted.

Table 36

Post Hoc Test Tukey HSD: MOI

Dependent Variable	Medium of instruction of the respondent	Medium of instruction of the respondent	Sig.
TPT	English	Gujarati	.000***
		Others	.144(ns)
	Gujarati	English	.000***
		Others	.798(ns)
	Others	English	.144(ns)
		Gujarati	.798(ns)
CA	English	Gujarati	.037*
		Others	.551(ns)
	Gujarati	English	.037*
		Others	.915(ns)
	Others	English	.551(ns)
		Gujarati	.915(ns)

Table 36 reveals that there is a significant difference between English and Gujarati as medium of instruction among respondents for 'tech-pro teachers' as

p=.000<.05. It infers that there is a significant difference among students who belong to English and Gujarati as their medium of instruction towards their perception for tech-pro teachers. Table 36 reveals descriptive statistics for 'English (M=3.58, S.D.= .802), 'Gujarati', (M=3.76, S.D.= .837), 'others' (M=3.85, S.D.= .841) medium of instructions that includes Oriya, Bengali etc. regarding their perception about 'tech-pro teachers'. It can be inferred that students with 'others' background have a better perception towards tech pro teachers as compared to students with an English and Gujarati background. However, there is a significant difference in perception towards 'TPT' between students with 'English' and 'Gujarati' background. Students with 'Gujarati' background have a significantly better perception towards 'TPT' as compared to students with 'English 'background. Similarly, for 'curriculum appropriateness', there is a significant difference between students of English and Gujarati as their medium of instructions, as p=.037 <.05. 'English', (M= 3.84, S.D.=.755) and 'Gujarati' (M=3.93, S. D. = .779), 'others' (M= 3.98, S.D. = .631) regarding their perception towards 'curriculum appropriateness'. It can be inferred that students with 'others' background have a better perception towards 'CA' as compared to students with an English and Gujarati background. However, there is a significant difference in perception towards 'CA' between students with 'English' and 'Gujarati' background. Students with 'Gujarati' background have a significantly better perception towards 'CA' as compared to students with 'English 'background.

Based on program/ course

Table 37

Test of homogeneity of variance *for 'tech-pro teachers': Program/course*

	Levene Statistic	df1	df2	Sig.
Tech-pro teachers	3.322	3	1945	.019*
Curriculum Appropriateness	1.740	3	1945	.157 (ns)

* p< .05, ns-not significant

Table 37 reports results of 'Levene's test for equality of variances' for 'tech-pro teachers', p=.019 <.05, it infers that there is no homogeneity of variances for 'tech-pro teachers.' Since there is no homogeneity of variance, Welch test is used for further analysis for perception towards 'TPT' w.r.t. program/ course of respondents. However, results of 'Levene's test for equality of variances' for the component, 'CA', show that

since *p*=.15>.05, One-way ANOVA is used for further analysis. Analysis of 'TPT' is shown first and analysis of the component 'CA' is shown later.

Table 38

Descriptive Statistics of program/ course for 'TPT'

	Mean	Std. Deviation
Certificate	3.5643	.70143
Diploma	3.7300	.90605
Undergraduate (UG)	3.6329	.82556
Post-graduate (PG)	3.7612	.77565
Total	3.6848	.80647

Table 38 reports descriptive statistics for the component 'TPT'. For the 'Certificate', (M=3.56, SD=.70), 'Diploma', (M=3.73, SD=.90), 'UG, (M=3.63, SD=.82), 'PG', (M=3.76, SD=.77).

Table 39

Welch test for Tech-pro teachers

Robust Tests of Equality of Means				
TPT	Statistic	df1	df2	Sig.
Welch	3.712	3	81.877	.015*

*p<. 05

Table 39 reports results of Welch test that is conducted for TPT and as *p*= .015< .05, it is inferred that one of the groups differs significantly. Table 31 reports values for Certificate (M=3.56, S.D.=.701), Diploma (M=3.73, S.D =.906), undergraduate (M=3.63, S. D. =.825), postgraduate (M=3.76, S.D.= .775). To know which group differs significantly, Games Howell post hoc test is used. It is inferred that UG students differ significantly from PG students towards perception for 'tech-pro teachers.' PG students have a significantly better perception towards 'tech-pro teachers' as compared to UG students.

Table 40 reveals results for Games-Howell post hoc test. It has been found that there is a significant difference between UG and PG students as *p* value is .008< .05. It infers that there is a significant difference between UG and PG students in their perception towards 'TPT'.

Table 40

Games- Howell Post Hoc Test for TPT

(I) Program/ course which the respondent is into	(J) Program/ course which the respondent is into	Sig.
Certificate	Diploma	.748(ns)
	Undergraduate	.957(ns)
	Post-graduate	.520(ns)
Diploma	Certificate	.748(ns)
	Undergraduate	.818(ns)
	Post-graduate	1.000(ns)
Undergraduate	Certificate	.957(ns)
	Diploma	.818(ns)
	Post-graduate	.008**
Post-graduate	Certificate	.520(ns)
	Diploma	1.000(ns)
	Undergraduate	.008**

Table 41 reveals descriptive statistics for the component 'CA' w.r.t 'Certificate', (M=3.73, SD=.72), 'Diploma', (M=3.93, SD=.85), 'UG', (M=3.85, SD.76), 'PG', (M=3.99, SD=.73).

Table 41

Descriptive Statistics for CA: Program/Course

Program/ course which the respondent is into	Mean	Std. Deviation
Certificate	3.7321	.72626
Diploma	3.9317	.85979
Undergraduate (UG)	3.8590	.76970
Post-graduate (PG)	3.9932	.73740
Total	3.8914	.75815

One-way ANOVA is conducted to know the perception of students for 'curriculum appropriateness' with respect to their program/ course and to know if any group differs significantly.

H0: μ Certificate = μ Diploma= μ UG= μ PG

Ha: at least one of the μ differs significantly.

One-way ANOVA for 'Curriculum Appropriateness'

Table 42 reports values for the component CA-'curriculum appropriateness', F (3, 1945) = 2.129, *p*=.095 > .05. As *p* value > .05, hence fails to reject null hypothesis.

Table 42

ANOVA Test for Curriculum appropriateness

		SS	df	MS	F	Sig.
CA	Between Groups	3.664	3	1.221	2.129	.095(ns)
	Within Groups	1116.015	1945	.574		
	Total	1119.679	1948			

ns – not significant

It infers that there is no significant difference among the groups. Table 34 reports descriptive statistics for certificate (M=3.73, SD=.727), Diploma (M=3.93, SD= .859), UG (M=3.85, SD= .769), PG (M=3.99, SD= .737).

Table 43

Post-Hoc Tukey HSD test for CA

(I) Program/ course which the respondent is into	(J) Program/ course which the respondent is into	Sig.
Certificate	Diploma	.919(ns)
	UG	.998(ns)
	PG	.951(ns)
Diploma	Certificate	.919(ns)
	UG	.868(ns)
	PG	.987(ns)
UG	Certificate	.998(ns)
	Diploma	.868(ns)
	PG	.445(ns)
PG	Certificate	.951(ns)
	Diploma	.987(ns)
	UG	.445(ns)

Table 43 reveals *p* values for all programs/ courses. As *p* >.05, it means that there is no significant difference between various programs/ courses for 'CA' as the p value is >0.05.

Based on Name of Faculty

Table 44

Test of homogeneity of Variance: 'CA' and 'TPT'

	Levene Statistic	df1	df2	Sig.
Tech-pro teachers	1.265	12	1936	.233 (ns)
Curriculum Appropriateness	.825	12	1936	.625 (ns)

ns: not significant

Table 44 reports results of 'Levene's test for equality of variances' for 'tech-pro teachers', $p=.233 >.05$, it infers that there is a homogeneity of variances for 'tech-pro teachers.' For the component, 'curriculum appropriateness', $p=.625>.05$, which infers that there is a homogeneity of variance. So, One-way ANOVA is used for further analysis.

H0: μ Arts = μ Commerce= μ Education and Psychology= μ Engineering and Technology= μ Family and Community Science= μ Fine Arts= μ Journalism and Communication= μ Law= μ Management Studies= μ Performing Arts= μ Pharmacy= μ Science= μ Social Work

Ha: at least one of the μ differs significantly. One-way ANOVA is conducted to compare the perception of students for 'tech-pro teachers' and 'curriculum appropriateness' with respect to the faculty they belong to.

Table 45

Faculty-wise Descriptive Statistics for CA and TPT

Name of the faculty		Mean	Std. Deviation	Std. Error
CA	Arts (FoA)	3.7229	.81819	.05743
	Commerce (FoC)	3.8545	.82621	.04778
	Education and Psychology (FoE&P)	4.0938	.75159	.05799
	Engineering and Technology (E&T)	3.7372	.81310	.04758
	Family and Community Science (F&CS)	3.9862	.79639	.07067
	Fine Arts (FoFA)	3.7005	.72286	.07193
	Journalism and Communication (FoJ&C)	4.0240	.73807	.10235
	Law (FoL)	3.6567	.81084	.06804
	Management Studies (FoMS)	3.6546	.83420	.08470
	Performing Arts (PA)	4.0119	.85301	.08324
	Pharmacy (FoP)	4.1375	.67871	.08762
	Science (FoSc)	3.7956	.76678	.05382
	Social Work (FoSW)	3.9000	.76045	.07604
	Total	3.8380	.80558	.01825
TPT	Arts	3.7447	.78529	.05512
	Commerce	3.9175	.77447	.04479
	Education and Psychology (E&P)	4.0000	.75180	.05800
	Engineering and Technology (E&T)	3.7295	.73611	.04308
	Family and Community Science (F&CS)	4.1063	.71383	.06334
	Fine Arts (FA)	3.6733	.79089	.07870
	Journalism and Communication (J&C)	3.9679	.67401	.09347
	Law	3.5986	.77976	.06544
	Management Studies (MS)	3.7595	.71967	.07307
	Performing Arts (PA)	3.8000	.87382	.08528
	Pharmacy	4.0222	.75693	.09772
	Science	3.7496	.75477	.05297
	Social Work	3.7817	.71488	.07149
	Total	3.8208	.77040	.01745

Table 45 reveals descriptive statistics on 'CA' that there is a difference in perception of students towards 'CA' among various faculties, 'Arts (M=3.72, S.D.= .818), and 'Commerce', (M=3.85, S.D.= .826), 'Education and Psychology' (M=4.09, S.D.= .751), 'E&T' (M=3.73, S.D=.813), 'F&CS' (M=3.98, S.D= .796), 'Fine Arts' (M=3.70, S.D=.722), 'Journalism and Communication' (M=4.02, S.D=.737), 'Law' (M= 3.65, S.D= .810), 'Management Studies' (M=3.65, S.D= .834), 'Performing Arts' (M=4.01, S.D= .853), 'Pharmacy' (M=4.13, S.D= .678), 'Science' (M=3.79, S.D=.766), 'Social Work' (M=3.90, S.D=.760). The highest reported mean is shown by the faculty of 'Pharmacy' (M=4.13). It shows that perception of students towards 'curriculum appropriateness' is above agreement in 'Pharmacy'. The lowest mean is reported by the faculty of 'Management Studies' (M=3.65). This shows that perception of students is above neutral level.

For the component, 'TPT', table 38 on Descriptive Statistics reveals that there is a difference in perception of students towards 'TPT' among various faculties, 'Arts (M=3.74, S.D.= .785), and 'Commerce', (M=3.91, S.D.= .774), 'Education and Psychology' (M=4.00, S.D.= .751), 'E&T' (M=3.72, S.D=.736), 'F&CS' (M=4.10, S.D= .713), 'Fine Arts' (M=3.67, S.D=.790), 'Journalism and Communication' (M=3.96, S.D=.674), 'Law' (M= 3.59, S.D= .779), 'Management Studies' (M=3.75, S.D= .719), 'Performing Arts' (M=3.80, S.D=.873), 'Pharmacy' (M=4.02, S.D= .756), 'Science' (M=3.74, S.D=.754), 'Social Work' (M=3.78, S.D=.714). The highest reported mean is shown by the faculty of 'Family and Community Science'. It shows that perception of students towards 'tech-pro teachers' is above agreement. The lowest mean is reported by the faculty of 'Law'. This shows that the perception of students is above neutral level with respect to all faculties.

Table 46

Results of ANOVA Test for Tech-pro teachers and Curriculum appropriateness: Faculty wise

		SS	df	MS	F	Sig.
TPT	Between Groups	36.519	12	3.043	5.262	.000***
	Within Groups	1119.645	1936	.578		
	Total	1156.164	1948			
CA	Between Groups	40.465	12	3.372	5.335	.000***
	Within Groups	1223.694	1936	.632		
	Total	1264.159	1948			

* $p< .05$

Table 46 reports ANOVA values for 'tech-pro teachers', $F_{(12, 1936)} = 5.262$, $p= .000 < .05$. As p value is less than .05, null hypothesis is rejected. It infers that at least one group differs significantly. Similarly, considering values for the component 'curriculum appropriateness', $F_{(12, 1936)} = 5.335$, $p=.000 < .05$. It infers that null hypothesis is rejected. At least one of the groups differs significantly. However, to know which of the groups differ significantly, Tukey test is applied for 'CA' and 'TPT'.

Table 47

Post-Hoc Tukey HSD for CA and TPT: Faculty wise

Dependent Variable	(I) Name of the faculty to which the respondent belongs to	(J) Name of the faculty to which the respondent belongs to	Mean Difference (I-J)	Std. Error	Sig.
CA	Arts	Commerce	-0.13161	0.0723	.840(ns)
		Education and Psychology	-.37084*	0.08292	.001**
		Engineering and Technology	-0.01425	0.07265	1.000(ns)
		Family and Community Science	-0.26331	0.08995	.149(ns)
		Fine Arts	0.02241	0.09681	1.000(ns)
		Journalism and Communication	-0.30113	0.12357	.418(ns)
		Law	0.06622	0.08698	1.000(ns)
		Management Studies	0.06827	0.09813	1.000(ns)
		Performing Arts	-0.289	0.09557	.116(ns)
		Pharmacy	-.41459*	0.11683	.023*
		Science	-0.07266	0.07891	.999(ns)
		Social Work	-0.17709	0.09713	.838(ns)
	Commerce	Arts	0.13161	0.0723	.840(ns)
		Education and Psychology	-0.23923	0.07666	.089(ns)
		Engineering and Technology	0.11736	0.06541	.853(ns)
		Family and Community Science	-0.13171	0.08421	.941(ns)
		Fine Arts	0.15402	0.0915	.901(ns)
		Journalism and Communication	-0.16952	0.11945	.972(ns)

	Law	0.19782	0.08103	.415(ns)
	Management Studies	0.19988	0.0929	.627(ns)
	Performing Arts	-0.15739	0.09019	.876(ns)
	Pharmacy	-0.28298	0.11247	.364(ns)
	Science	0.05895	0.0723	1.000(ns)
	Social Work	-0.04548	0.09184	1.000(ns)
Education and Psychology	Arts	.37084*	0.08292	0.001**
	Commerce	0.23923	0.07666	.089(ns)
	Engineering and Technology	.35659*	0.07699	0.000***
	Family and Community Science	0.10753	0.09348	.995(ns)
	Fine Arts	.39325*	0.1001	0.006**
	Journalism and Communication	0.06971	0.12616	1.000(ns)
	Law	.43706*	0.09063	0.000***
	Management Studies	.43911*	0.10138	0.001**
	Performing Arts	0.08185	0.0989	1.000(ns)
	Pharmacy	-0.04375	0.11957	1.000(ns)
	Science	.29818*	0.08292	0.02*
	Social Work	0.19375	0.10041	.778(ns)
Engineering and Technology	Arts	0.01425	0.07265	1.000(ns)
	Commerce	-0.11736	0.06541	.853(ns)
	Education and Psychology	-.35659*	0.07699	0.000***
	Family and Community Science	-0.24906	0.08451	.142(ns)
	Fine Arts	0.03666	0.09178	1.000(ns)
	Journalism and Communication	-0.28688	0.11967	.446(ns)
	Law	0.08047	0.08134	.999(ns)
	Management Studies	0.08252	0.09317	1.000(ns)
	Performing Arts	-0.27475	0.09047	.112(ns)
	Pharmacy	-.40034*	0.11269	0.023*
	Science	-0.05841	0.07265	1.000(ns)
	Social Work	-0.16284	0.09212	.865(ns)
	Arts	0.26331	0.08995	.149(ns)
	Commerce	0.13171	0.08421	.941(ns)

Family and Community Science	Education and Psychology	-0.10753	0.09348	.995(ns)
	Engineering and Technology	0.24906	0.08451	.142(ns)
	Fine Arts	0.28573	0.106	.256(ns)
	Journalism and Communication	-0.03782	0.13089	1.000(ns)
	Law	.32953*	0.0971	0.039*
	Management Studies	0.33158	0.10721	.096(ns)
	Performing Arts	-0.02568	0.10487	1.000(ns)
	Pharmacy	-0.15128	0.12455	.992(ns)
	Science	0.19065	0.08995	.650(ns)
	Social Work	0.08622	0.10629	1.000(ns)
Fine Arts	Arts	-0.02241	0.09681	1.000(ns)
	Commerce	-0.15402	0.0915	.901(ns)
	Education and Psychology	-.39325*	0.1001	0.006**
	Engineering and Technology	-0.03666	0.09178	1.000(ns)
	Family and Community Science	-0.28573	0.106	.256(ns)
	Journalism and Communication	-0.32354	0.1357	.456(ns)
	Law	0.0438	0.10349	1.000(ns)
	Management Studies	0.04586	0.11302	1.000(ns)
	Performing Arts	-0.31141	0.11081	.198(ns)
	Pharmacy	-.43700*	0.12959	0.042*
	Science	-0.09507	0.09681	.999(ns)
	Social Work	-0.1995	0.11216	.860(ns)
Journalism and Communication	Arts	0.30113	0.12357	.418(ns)
	Commerce	0.16952	0.11945	.972(ns)
	Education and Psychology	-0.06971	0.12616	1.000(ns)
	Engineering and Technology	0.28688	0.11967	.446(ns)
	Family and Community Science	0.03782	0.13089	1.000(ns)
	Fine Arts	0.32354	0.1357	.456(ns)
	Law	0.36735	0.12887	.180(ns)

	Management Studies	0.3694	0.13664	.251(ns)
	Performing Arts	0.01213	0.13481	1.000(ns)
	Pharmacy	-0.11346	0.15063	1.000(ns)
	Science	0.22847	0.12357	.824(ns)
	Social Work	0.12404	0.13593	1.000(ns)
Law	Arts	-0.06622	0.08698	1.000(ns)
	Commerce	-0.19782	0.08103	.415(ns)
	Education and Psychology	-.43706*	0.09063	0.000***
	Engineering and Technology	-0.08047	0.08134	.999(ns)
	Family and Community Science	-.32953*	0.0971	0.039*
	Fine Arts	-0.0438	0.10349	1.000(ns)
	Journalism and Communication	-0.36735	0.12887	.180(ns)
	Management Studies	0.00205	0.10473	1.000(ns)
	Performing Arts	-.35521*	0.10233	0.03*
	Pharmacy	-.48081*	0.12242	0.006**
	Science	-0.13888	0.08698	.931(ns)
	Social Work	-0.24331	0.10379	.485(ns)
Management Studies	Arts	-0.06827	0.09813	1.000(ns)
	Commerce	-0.19988	0.0929	.627(ns)
	Education and Psychology	-.43911*	0.10138	0.001**
	Engineering and Technology	-0.08252	0.09317	1.000(ns)
	Family and Community Science	-0.33158	0.10721	.096(ns)
	Fine Arts	-0.04586	0.11302	1.000(ns)
	Journalism and Communication	-0.3694	0.13664	.251(ns)
	Law	-0.00205	0.10473	1.000(ns)
	Performing Arts	-0.35727	0.11196	.073(ns)
	Pharmacy	-.48286*	0.13058	0.014*
	Science	-0.14093	0.09813	.969(ns)
	Social Work	-0.24536	0.1133	.617(ns)
Performing Arts	Arts	0.289	0.09557	.116(ns)
	Commerce	0.15739	0.09019	.876(ns)

	Education and Psychology	-0.08185	0.0989	1.000(ns)
	Engineering and Technology	0.27475	0.09047	.112(ns)
	Family and Community Science	0.02568	0.10487	1.000(ns)
	Fine Arts	0.31141	0.11081	.198(ns)
	Journalism and Communication	-0.01213	0.13481	1.000(ns)
	Law	.35521*	0.10233	0.03*
	Management Studies	0.35727	0.11196	.073(ns)
	Pharmacy	-0.1256	0.12866	.999(ns)
	Science	0.21634	0.09557	.544(ns)
	Social Work	0.1119	0.11109	.999(ns)
Pharmacy	Arts	.41459*	0.11683	0.023*
	Commerce	0.28298	0.11247	.364(ns)
	Education and Psychology	0.04375	0.11957	1.000(ns)
	Engineering and Technology	.40034*	0.11269	0.023*
	Family and Community Science	0.15128	0.12455	.992(ns)
	Fine Arts	.43700*	0.12959	0.042*
	Journalism and Communication	0.11346	0.15063	1.000(ns)
	Law	.48081*	0.12242	0.006**
	Management Studies	.48286*	0.13058	.014(ns)
	Performing Arts	0.1256	0.12866	.999(ns)
	Science	0.34193	0.11683	.149(ns)
	Social Work	0.2375	0.12983	.835(ns)
Science	Arts	0.07266	0.07891	.999(ns)
	Commerce	-0.05895	0.0723	1.000(ns)
	Education and Psychology	-.29818*	0.08292	0.02*
	Engineering and Technology	0.05841	0.07265	1.000(ns)
	Family and Community Science	-0.19065	0.08995	.650(ns)

		Fine Arts	0.09507	0.09681	.999(ns)
		Journalism and Communication	-0.22847	0.12357	.824(ns)
		Law	0.13888	0.08698	.931(ns)
		Management Studies	0.14093	0.09813	.969(ns)
		Performing Arts	-0.21634	0.09557	.544(ns)
		Pharmacy	-0.34193	0.11683	.149(ns)
		Social Work	-0.10443	0.09713	.998(ns)
	Social Work	Arts	0.17709	0.09713	.838(ns)
		Commerce	0.04548	0.09184	1.000(ns)
		Education and Psychology	-0.19375	0.10041	.778(ns)
		Engineering and Technology	0.16284	0.09212	.865(ns)
		Family and Community Science	-0.08622	0.10629	1.000(ns)
		Fine Arts	0.1995	0.11216	.860(ns)
		Journalism and Communication	-0.12404	0.13593	1.000(ns)
		Law	0.24331	0.10379	.485(ns)
		Management Studies	0.24536	0.1133	.617(ns)
		Performing Arts	-0.1119	0.11109	.999(ns)
		Pharmacy	-0.2375	0.12983	.835(ns)
		Science	0.10443	0.09713	.998(ns)
TPT	Arts	Commerce	-0.17284	0.06916	.375(ns)
		Education and Psychology	-0.25534	0.07932	.067(ns)
		Engineering and Technology	0.01521	0.06949	1.000(ns)
		Family and Community Science	-.36164[*]	0.08604	0.002**
		Fine Arts	0.0714	0.0926	1.000(ns)
		Journalism and Communication	-0.22329	0.1182	.802(ns)
		Law	0.14607	0.0832	.871(ns)
		Management Studies	-0.01479	0.09387	1.000(ns)
		Performing Arts	-0.05534	0.09142	1.000(ns)
		Pharmacy	-0.27756	0.11175	.386(ns)

	Science	-0.00493	0.07548	1.000(ns)
	Social Work	-0.037	0.09291	1.000(ns)
Commerce	Arts	0.17284	0.06916	.375(ns)
	Education and Psychology	-0.0825	0.07333	.996(ns)
	Engineering and Technology	0.18805	0.06257	.122(ns)
	Family and Community Science	-0.1888	0.08055	.485(ns)
	Fine Arts	0.24424	0.08752	.207(ns)
	Journalism and Communication	-0.05045	0.11426	1.000(ns)
	Law	.31891*	0.0775	0.003**
	Management Studies	0.15805	0.08886	.860(ns)
	Performing Arts	0.1175	0.08627	.980(ns)
	Pharmacy	-0.10472	0.10758	.999(ns)
	Science	0.16791	0.06916	.424(ns)
	Social Work	0.13584	0.08785	.945(ns)
Education and Psychology	Arts	0.25534	0.07932	.067(ns)
	Commerce	0.0825	0.07333	.996(ns)
	Engineering and Technology	.27055*	0.07364	0.015*
	Family and Community Science	-0.1063	0.08942	.994(ns)
	Fine Arts	.32673*	0.09575	0.037*
	Journalism and Communication	0.03205	0.12068	1.000(ns)
	Law	.40141*	0.08669	0.000***
	Management Studies	0.24055	0.09698	.388(ns)
	Performing Arts	0.2	0.09461	.654(ns)
	Pharmacy	-0.02222	0.11437	1.000(ns)
	Science	0.25041	0.07932	.081(ns)
	Social Work	0.21833	0.09605	.537(ns)
Engineering and Technology	Arts	-0.01521	0.06949	1.000(ns)
	Commerce	-0.18805	0.06257	.122(ns)
	Education and Psychology	-.27055*	0.07364	0.015*

	Family and Community Science	-.37685*	0.08084	0.000***
	Fine Arts	0.05618	0.08779	1.000(ns)
	Journalism and Communication	-0.2385	0.11447	.676(ns)
	Law	0.13086	0.0778	.902(ns)
	Management Studies	-0.03	0.08912	1.000(ns)
	Performing Arts	-0.07055	0.08654	1.000(ns)
	Pharmacy	-0.29277	0.10779	.245(ns)
	Science	-0.02014	0.06949	1.000(ns)
	Social Work	-0.05221	0.08811	1.000(ns)
Family and Community Science	Arts	.36164*	0.08604	0.002**
	Commerce	0.1888	0.08055	.485(ns)
	Education and Psychology	0.1063	0.08942	.994(ns)
	Engineering and Technology	.37685*	0.08084	0.000***
	Fine Arts	.43303*	0.10139	0.001**
	Journalism and Communication	0.13835	0.1252	.997(ns)
	Law	.50771*	0.09288	0.000***
	Management Studies	.34685*	0.10255	0.041*
	Performing Arts	0.3063	0.10031	.107(ns)
	Pharmacy	0.08408	0.11913	1.000(ns)
	Science	.35671*	0.08604	0.002*
	Social Work	0.32463	0.10167	.073(ns)
Fine Arts	Arts	-0.0714	0.0926	1.000(ns)
	Commerce	-0.24424	0.08752	.207(ns)
	Education and Psychology	-.32673*	0.09575	0.037*
	Engineering and Technology	-0.05618	0.08779	1.000(ns)
	Family and Community Science	-.43303*	0.10139	0.001**
	Journalism and Communication	-0.29468	0.1298	.539(ns)
	Law	0.07468	0.09899	1.000(ns)
	Management Studies	-0.08618	0.10811	1.000(ns)

	Performing Arts	-0.12673	0.10599	.993(ns)
	Pharmacy	-0.34895	0.12396	.196(ns)
	Science	-0.07632	0.0926	1.000(ns)
	Social Work	-0.1084	0.10728	.999(ns)
Journalism and Communication	Arts	0.22329	0.1182	.802(ns)
	Commerce	0.05045	0.11426	1.000(ns)
	Education and Psychology	-0.03205	0.12068	1.000(ns)
	Engineering and Technology	0.2385	0.11447	.676(ns)
	Family and Community Science	-0.13835	0.1252	.997(ns)
	Fine Arts	0.29468	0.1298	.539(ns)
	Law	0.36936	0.12327	.125(ns)
	Management Studies	0.2085	0.13071	.932(ns)
	Performing Arts	0.16795	0.12896	.986(ns)
	Pharmacy	-0.05427	0.14409	1.000(ns)
	Science	0.21836	0.1182	.825(ns)
	Social Work	0.18628	0.13002	.969(ns)
Law	Arts	-0.14607	0.0832	.871(ns)
	Commerce	-.31891*	0.0775	0.003*
	Education and Psychology	-.40141*	0.08669	0.000***
	Engineering and Technology	-0.13086	0.0778	.902(ns)
	Family and Community Science	-.50771*	0.09288	0.000***
	Fine Arts	-0.07468	0.09899	1.000(ns)
	Journalism and Communication	-0.36936	0.12327	.125(ns)
	Management Studies	-0.16086	0.10017	.928(ns)
	Performing Arts	-0.20141	0.09788	.694(ns)
	Pharmacy	-.42363*	0.1171	0.019*
	Science	-0.151	0.0832	.842(ns)
	Social Work	-0.18308	0.09928	.827(ns)
Management Studies	Arts	0.01479	0.09387	1.000(ns)
	Commerce	-0.15805	0.08886	.860(ns)
	Education and Psychology	-0.24055	0.09698	.388(ns)

	Engineering and Technology	0.03	0.08912	1.000(ns)
	Family and Community Science	-.34685*	0.10255	0.041*
	Fine Arts	0.08618	0.10811	1.000(ns)
	Journalism and Communication	-0.2085	0.13071	.932(ns)
	Law	0.16086	0.10017	.928(ns)
	Performing Arts	-0.04055	0.1071	1.000(ns)
	Pharmacy	-0.26277	0.1249	.661(ns)
	Science	0.00986	0.09387	1.000(ns)
	Social Work	-0.02222	0.10838	1.000(ns)
Performing Arts	Arts	0.05534	0.09142	1.000(ns)
	Commerce	-0.1175	0.08627	.980(ns)
	Education and Psychology	-0.2	0.09461	.654(ns)
	Engineering and Technology	0.07055	0.08654	1.000(ns)
	Family and Community Science	-0.3063	0.10031	.107(ns)
	Fine Arts	0.12673	0.10599	.993(ns)
	Journalism and Communication	-0.16795	0.12896	.986(ns)
	Law	0.20141	0.09788	.694(ns)
	Management Studies	0.04055	0.1071	1.000(ns)
	Pharmacy	-0.22222	0.12307	.847(ns)
	Science	0.05041	0.09142	1.000(ns)
	Social Work	0.01833	0.10626	1.000(ns)
Pharmacy	Arts	0.27756	0.11175	.386(ns)
	Commerce	0.10472	0.10758	.999(ns)
	Education and Psychology	0.02222	0.11437	1.000(ns)
	Engineering and Technology	0.29277	0.10779	.245(ns)
	Family and Community Science	-0.08408	0.11913	1.000(ns)
	Fine Arts	0.34895	0.12396	.196(ns)
	Journalism and Communication	0.05427	0.14409	1.000(ns)

	Law	.42363[*]	0.1171	0.019*
	Management Studies	0.26277	0.1249	.661(ns)
	Performing Arts	0.22222	0.12307	.847(ns)
	Science	0.27263	0.11175	.416(ns)
	Social Work	0.24056	0.12419	.773(ns)
Science	Arts	0.00493	0.07548	1.000(ns)
	Commerce	-0.16791	0.06916	.424(ns)
	Education and Psychology	-0.25041	0.07932	.081(ns)
	Engineering and Technology	0.02014	0.06949	1.000(ns)
	Family and Community Science	-.35671[*]	0.08604	0.002*
	Fine Arts	0.07632	0.0926	1.000(ns)
	Journalism and Communication	-0.21836	0.1182	.825(ns)
	Law	0.151	0.0832	.842(ns)
	Management Studies	-0.00986	0.09387	1.000(ns)
	Performing Arts	-0.05041	0.09142	1.000(ns)
	Pharmacy	-0.27263	0.11175	.416(ns)
	Social Work	-0.03208	0.09291	1.000(ns)
Social Work	Arts	0.037	0.09291	1.000(ns)
	Commerce	-0.13584	0.08785	.945(ns)
	Education and Psychology	-0.21833	0.09605	.537(ns)
	Engineering and Technology	0.05221	0.08811	1.000(ns)
	Family and Community Science	-0.32463	0.10167	.073(ns)
	Fine Arts	0.1084	0.10728	.999(ns)
	Journalism and Communication	-0.18628	0.13002	.969(ns)
	Law	0.18308	0.09928	.827(ns)
	Management Studies	0.02222	0.10838	1.000(ns)
	Performing Arts	-0.01833	0.10626	1.000(ns)
	Pharmacy	-0.24056	0.12419	.773(ns)
	Science	0.03208	0.09291	1.000(ns)

Table 47 reports multiple comparisons in the Post-Hoc Tukey HSD. It infers that there is a significant difference between various faculties in perception of students towards 'curriculum appropriateness'.

Perception towards 'CA' among various faculties in Post-Hoc Tukey HSD

'Arts': Table 47 reports that there is significant difference between 'Arts' and 'Education and Psychology'. Faculties of 'Pharmacy'(M=4.13) and 'Arts'(M=3.72) differ significantly w.r.t. perception towards 'CA'. It infers that the faculty of 'Arts' differ significantly with the faculty of 'Pharmacy' and 'Education and Psychology' (M=4.09). However, respondents from 'Pharmacy' report significantly higher perception towards 'CA' as compared to 'Education and Psychology' and 'Arts'. The perception reported by 'Pharmacy' is above agreement as reported in Table 44. Perception reported by 'E&P' is better and above agreement (M=.4.09) and 'Arts' is above neutral level.

'Commerce': Faculty of 'Commerce' does not differ significantly with any other faculty in perception towards 'CA'.

'Education and Psychology' (E&P): 'Faculty of 'Education and Psychology' differs significantly with 'Arts', 'E&T', 'Fine Arts', 'Law', 'Management Studies' and 'Science'. Table 44 and Table 47 report that perception towards 'CA' is significantly better and close to agreement in 'E&P'(M=4.09) as compared to 'Science' (M=3.79), 'Fine Arts'(M=3.70), 'Law' (3.65), 'Management Studies'(M=3.65), and 'Arts' (3.72) as shown in Table 47.

'Engineering and Technology' (E&T): Table 47 reports that there is a significant difference between faculties 'E&T' and 'E&P'. Faculty of 'E&T' differs significantly with 'Pharmacy'. Table 44 reports that perception towards 'CA' is significantly better and above agreement in 'Pharmacy'(M=4.13) as compared to 'E&T'(M=3.73) and 'E&P'(M=.4.09).

'Family and Community Science' (F&CS): Table 47 reports that there is a significant difference between 'F&CS' and 'Law'. Table 44 reports that perception towards 'CA' is significantly better and close to agreement in 'F&CS'(M=3.98) as compared to 'Law'(M=3.65).

'Fine Arts': Table 47 reports that 'Fine Arts' differs significantly with 'E&P'. There is a significant difference between 'Pharmacy' and 'Fine Arts'. Table 44 reports that perception towards 'CA' is significantly better and above agreement in 'Pharmacy'(M=4.13) as compared to 'Fine Arts' (M=3.70) and 'E&P' (M=4.09).

'Journalism and Communication': Table 47 reports that there is no significant difference in perception towards 'CA' among various faculties.

'Law': Table 47 reports that there is a significant difference between 'Law' and 'E&P'. 'Law' and 'F&CS' differ significantly. 'Law' differs significantly with 'Performing Arts', 'Pharmacy' and 'F&CS'. Table 44 reports that perception of 'E&P'(M=4.09) towards 'CA' is significantly better and above agreement as compared to 'PA'(M=4.01) and 'Law' (M=3.65).

'Management Studies': Table 47 reports that 'Management Studies' differ significantly with 'Pharmacy' and 'E&P'. Table 44 reports that perception of 'Pharmacy'(M=4.13) towards 'CA' is significantly better and above agreement as compared to 'Management Studies'(M=3.65) and 'E&P' (M=4.09).

'Performing Arts (PA)': There is a significant difference found between 'PA' and 'Law'. Table 44 reports that perception towards 'CA' is significantly better and above agreement in 'PA' (M=4.01) as compared to 'Law' (M=3.65).

'Pharmacy': Table 47 reveals that there is a significant difference between 'Pharmacy' and Arts, E&T, Fine arts, Law, and Management Studies. It infers that 'Pharmacy' differs significantly with 'Arts', 'E&T', 'Fine Arts', 'Law', and 'Management Studies'. Table 44 reports that perception towards 'CA' is significantly better and above agreement in 'Pharmacy'(M=4.13) as compared to 'Arts'(M=3.72), 'Fine Arts'(M=3.70), 'Law'(M=3.65), 'E&T'(M=3.73), and 'Management Studies' (M=3.65).

'Science': There is a significant difference between 'Science' and 'E&P'. Table 44 reports that perception towards 'CA' is significantly better and above agreement in 'E&P'(M=4.09) as compared to 'Science'(M=3.79).

'Social Work': Table 47 reports no significant difference in perception of respondents of social work and other faculties towards 'CA'.

Perception towards 'TPT' among various faculties in Post-Hoc Tukey HSD

'Arts': There is a significant difference between 'Arts' and 'Family and Community Science' and 'Education and Psychology' towards the perception for 'tech-pro teachers.' However, Table 47 reports that perception for 'TPT' is significantly better and above agreement in 'Family and Community Science' (M=4.10) as compared to 'Arts' (M=3.74) and 'E&P' (M=4.00).

'Commerce': There is a significant difference between 'Commerce' and 'Law' towards the perception for 'TPT'. Table 47 reports that perception towards 'TPT' is

significantly better and close to agreement in 'Commerce' (M=3.91) as compared to 'Law'(M=3.59).

'Education and Psychology': Table 47 reports that faculty of 'E&P' differs significantly with 'Arts', 'E&T', 'Fine Arts', and 'Law'. Table 40 reports that 'E&P'(M=4.00) differs significantly with other groups.

'E&T': Table 47 reports that there is a significant difference in the perception towards 'TPT' between 'E&T' and 'E&P', 'F&CS'. Table 47 reports that 'F&CS'(M=4.10) reports better perception and above neutral level towards 'TPT' as compared to 'E&T'(M=3.72) and 'E&P'(M=4.00).

'F&CS': Table 47 reports that there is a significant difference in the perception towards 'TPT' between 'F&CS' (M=4.10) and E&T (M=3.72), Arts (M=3.74), Fine Arts (M=3.67), Law (3.59), Management Studies (3.75), and Science (M=3.74). However, 'F&CS' reports a better perception and above neutral level as compared to above mentioned faculties.

'Fine Arts': Table 47 reports that there is a significant difference in perception towards 'TPT' between 'FA' (M=3.67) and 'F&CS' (M=4.10) and 'E&P' (M=4.00). Perception towards 'TPT' is significantly better and above agreement in 'F&CS' as compared to 'E&P', 'Fine Arts'.

Journalism and Communication: Table 47 reports that there is no significant difference in perception towards 'TPT' among various faculties.

'Law': Table 47 reports that there is a significant difference in the perception towards 'TPT' between 'Law' (M= 3.59) and 'Commerce' (M=3.91), E&P (M=4.00) F&CS (M= (4.10) and Pharmacy. However, Table 44 reports that perception towards 'TPT' is significantly better and above agreement in 'F&CS' as compared to other groups.

Management Studies: Table 47 reports that there is a significant difference in perception towards 'TPT' between Management Studies (M=3.75) and 'F&CS' (M=4.10). Table 44 reports that 'F&CS' reports significantly better perception which is, above agreement, towards 'TPT' as compared to MS.

Performing Arts: Table 47 reports that there is no significant difference in perception towards 'TPT' between 'PA' and other faculties.

Pharmacy: Table 47 reports that there is a significant difference between 'Pharmacy' and 'Law'. Table 44 reports that perception of 'Law'(M=3.59) towards

'TPT' is significantly better and above agreement as compared to 'Pharmacy' (M=4.02).

Science: Table 47 reports that there is a significant difference in perception towards 'TPT' between 'Science' (M=3.74) and 'F&CS' (M=4.10). However, Table 44 reports that perception towards 'TPT' is significantly better and above agreement in 'F&CS' as compared to 'Science'.

Social work: Table 47 reports that there is no significant difference in perception towards 'TPT' between Social Work and all other faculties.

Opinions for improvement

Opinions of respondents to improve either TPT or CA were sought. The weighted score of the suggestions on five- point scale show that students want the faculty to 'keep improving on their digital skills (3.98), teachers should adjust to new methods of teaching (3.99), faculty should 'encourage innovation among students' (4.01).

Table 48

Opinions for improvement

Statements on opinions for teachers	Weighted mean score
Teachers should keep on improving their digital skills	3.98
Teachers should adjust to new methods of teaching	3.99
Teachers should encourage innovation among students	4.01

Table 48 reveals that the highest weighted mean score is given to the 'teachers should encourage innovation among students' (M=4.01), and the lowest score is given to 'teachers should keep on improving their digital skills' (M=3.98).

Perception of students towards Teachers' Various Traits

Q9. in the questionnaire tries to explore perception of students towards Teachers 'various traits. After the perception of 'TPT' and 'CA', an attempt is made to explore perception of students towards the various traits of teachers, as exhibited in the Table 49 below. To further explore and test hypotheses that have been framed in Chapter 1, one-sample test, two independent sample t test, ANOVA, (Tukey HSD) and Welch (Games-Howell) have been used for further analysis of data.

In the next table, Table 49, descriptive statistics (Mean and Standard deviation) for all variables related to perception of students with respect to various traits of teachers are reflected.

Table 49

Descriptive Statistics (Composite) for 'SS' and 'TS'

Teachers' Traits	Mean	Std. Deviation
Teachers are energetic	4.04	1.017
Teachers are well qualified	4.46	0.854
Teachers are motivated	4.1	1.002
Teachers are capable of conducting classes	3.87	1.084
Teachers respect our opinions	3.41	1.363
Teachers are professional	4.3	0.924
Teachers have an understanding nature for their students	3.93	1.109
Teachers ensure discipline in the class	2.74	1.312
Teachers are masters of their subjects	4.27	0.928
Teachers provide reading material	3.95	1.087
Teachers inspire students	4.00	1.068
Teachers dress up nicely for their sessions	4.17	1.003
Teachers use understandable language	4.16	0.993
Teachers are punctual to class	3.89	1.123
Teachers are committed to complete the course in the stipulated timeframe.	3.93	1.094
Teachers are open to suggestions	4.11	1.001
Teachers make learning a joyful activity	3.72	1.133
Teachers encourage queries by students	4.11	0.985
Teachers are open to change	3.94	1.082
Teachers encourage participation among students	4.06	1.014
Teachers engage us well in ONLINE sessions	3.64	1.2
Teachers engage us well in OFFLINE sessions	4.15	1.001
Teachers encourage open discussion in ONLINE classes	3.83	1.134
Teachers encourage open discussion in OFFLINE classes	4.18	0.974
Teachers engage us in virtual exercises that help in retaining the knowledge	3.68	1.126
Teachers help us in finding ways of overcoming stress	3.82	1.126
Teachers help us with time management	3.96	1.088

The highest reported mean with S.D. is: Teachers are well qualified ($\bar{x}$= 4.46, SD= 0.854). The second highest variable that reports mean and SD ($\bar{x}$=4.30, SD= 0.924), Teachers are professional. Teachers are masters of their own subjects reports values of mean and SD as ($\bar{x}$=4.27, SD= 0.928). Teachers dress up nicely for their sessions which reports values of Mean and SD as ($\bar{x}$= 4.17, SD= 1.003), Teachers encourage queries by students ($\bar{x}$= 4.11, SD= 0.985), Teachers are open to suggestions ($\bar{x}$=4.11, SD= 1.000), Teachers are motivated ($\bar{x}$=4.10, SD= 1.002), Teachers encourage participation among students ($\bar{x}$=4.06, SD= 1.014), Teachers are energetic ($\bar{x}$= 4.04,

SD= 1.017), Teachers inspire students (x̄= 4.00, SD= 1.068), Teachers help us with time management (x̄= 3.96, SD= 1.088), Teachers provide reading material (x̄= 3.95, SD= 1.087), Teachers are open to change (x̄= 3.94, SD= 1.082), Teachers have an understanding nature for their students (x̄= 3.93, SD=1.109), Teachers are committed to complete the course in the stipulated time frame (x̄=3.93, SD=1.094), Teachers are punctual to class (x̄= 3.89, SD=1.123), Teachers are capable of conducting classes (x̄= 3.87, SD= 1.084), Teachers help us in finding ways of overcoming stress (x̄= 3.82, SD=1.126), Teachers make learning a joyful activity (x̄=3.72, SD= 1.133), Teachers engage us in virtual exercises that help in retaining the knowledge (x̄= 3.68, SD= 1.126), Teachers respect our opinions (x̄= 3.41, SD=1.363), Teachers use understandable language (x̄= 4.16, SD=0.993), Teachers ensure discipline in the class (x̄= 2.74, SD= 1.312). Teachers encourage open discussion in OFFLINE classes report values of mean and SD (x̄= 4.18, SD= 0.974). Teachers engage us well in OFFLINE sessions (x̄= 4.15, SD=1.001), Teachers encourage open discussion in ONLINE classes (x̄= 3.83, SD= 1.134), Teachers engage us well in ONLINE sessions (x̄= 3.64, SD= 1.200). It is seen that teachers have been found to engage students in offline sessions more as compared to online sessions and encourage open discussion more in offline sessions as seen from the mean scores.

Components of Teachers' Traits

As statements are on a formative scale, and factorization could not be conducted. Two components are formed based on the review of literature. Two components formed are 'Soft skills of teachers' and 'Technical skills of teachers'. Composite mean scores are obtained to measure perception towards, 'Soft skills of teachers' (TS) and 'Technical skills of teachers' (SS). As shown in Table 49, initial traits ranging from (1-12) constitute 'Soft skills of teachers' and traits ranging from (1-15) constitute 'Technical skills of teachers'.

Students Perception about Traits of Teachers Based on Components – 'Soft Skills' and 'Technical Skills'

The reliability of 'SS' is (α= .901), which means that scale is highly reliable and shows 90% internal consistency among items. The reliability of the other component 'TS' is (α= .906), which means the scale is highly reliable and shows 90% internal consistency among items which is shown at table 50.

Table 50

Soft skills and Technical Skills of Teachers

S.No	Component	Variables	Cronbach's Alpha (α)
1	Soft skills	Teachers are professional	0.901
2	of teachers	Teachers are well qualified	
3		Teachers are motivated	
4		Teachers have an understanding nature for their students	
5		Teachers inspire students	
6		Teachers dress up nicely for their sessions	
7		Teachers use understandable language	
8		Teachers are punctual to class	
9		Teachers help us in finding ways of overcoming stress	
10		Teachers help us with time management	
11		Teachers are energetic	
12		Teachers respect our opinions	
1	Technical	Teachers are capable of conducting classes	0.906
2	skills of teachers	Teachers are committed to complete the course in the stipulated time frame.	
3		Teachers are open to suggestions	
4		Teachers make learning a joyful activity	
5		Teachers encourage queries by students	
6		Teachers are open to change	
7		Teachers encourage participation among students	
8		Teachers engage us well in ONLINE sessions	
9		Teachers engage us well in OFFLINE sessions	
10		Teachers encourage open discussion in ONLINE classes	
11		Teachers encourage open discussion in OFFLINE classes	
12		Teachers engage us in virtual exercises that help in retaining the knowledge	
13		Teachers ensure discipline in the class	
14		Teachers are masters of their subjects	
15		Teachers provide reading material	

To know whether there is any significant difference between independent and dependent variables for 'SS' and 'TS' of teachers, one sample test is conducted. Table 51 shows descriptive statistics of both components.

Table 51

Descriptive Statistics of 'SS' and 'TS'

	N	Mean	Std. Deviation	Std. Error Mean
SS	1949	4.0190	.73523	.01665
TS	1949	3.8778	.71103	.01611

The descriptive analysis in Table 51 is given to know the difference in the mean scores of 'SS' and 'TS'. Mean and SD for 'SS', (M=4.01, SD=.735) and 'TS', (M=3.87, SD=.711).

To know whether there is any significant difference in the mean scores, one sample t test is conducted which is shown in table 52.

Analysis of 'Soft Skills' and 'Technical Skills' of teachers

Table 52

One-Sample test of Soft-skills (SS) and Technical skills of teachers (TE)

Test Value = 3

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
SS	61.18	1948	0.000***	1.01903	0.986	1.052
TS	54.50	1948	0.000***	0.87782	0.846	0.909

*** p < 0.001

Based on Table 52, the descriptive values for the component 'soft skills of teachers' (M= 4.01, S.D. = .73); t (1948) = 61.18, $p < .001$. Hence, null hypothesis is rejected. It infers that perception of students towards 'soft skills of teachers' is above agreement. For another component, 'technical skills of teachers', (M=3.87, S.D. =.71); t (1948) = 54.50, $p<.001$. Hence, null hypothesis is rejected. It infers that perception of students for 'technical skills of teachers' is towards agreement. However, it is seen that students are in more agreement towards soft skills of teachers as compared to technical skills of teachers. It infers that students have a better perception towards 'soft skills of teachers' as compared to the perception regarding 'technical skills of teachers.'

Based on Gender

An independent-sample t-test at 5% α level is conducted to compare the perception of 'soft skills of teachers' and 'technical skills of teachers' among males and females of the M. S. university. Levene's Test for Equality of Variances is shown at

table 46 for 'soft skills of teachers', p = .565 (ns) which is >.05, and 'technical skills of teachers' p= .481 (ns) which is > .05. Thus, there is a homogeneity of variance for both the components.

H_0: µ Male = µ Female   Ha: µ Male ≠ µ Female

Table 53

Descriptive Statistics for SS and TS

	Gender of the respondent	N	Mean	Std. Deviation	Std. Error Mean
SS	Male	823	3.9601	.73602	.02566
	Female	1126	4.0621	.73198	.02181
TS	Male	823	3.8301	.71366	.02488
	Female	1126	3.9127	.70740	.02108

Table 53 reveals descriptive statistics for the component, 'SS', for male (M=3.96, SD=.73) and females (M=4.06, SD=.731). For the second component, 'TS', mean and SD values for males (M=3.83, SD=.713) and females (M=3.91, SD=.707).

Table 54

Independent Sample t-test for soft skills of teachers and technical skills of teachers: Gender

		SS		TS	
		Equal variances assumed	Equal variances not assumed	Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	0.331		0.497	
	Sig.	.565 (ns)		.481 (ns)	
t-test for Equality of Means	T	-3.031	-3.028	-2.535	-2.531
	Df	1947	1765.78	1947	1762.429
	Sig. (2-tailed)	.002*	0.002	.011*	0.011
	Mean Difference	-0.10199	-0.10199	-0.08254	-0.08254
	Std. Error Difference	0.03365	0.03368	0.03256	0.03261
	95% Confidence Interval of the Difference Lower	-0.16798	-0.16804	-0.1464	-0.14649
	Upper	-0.036	-0.03594	-0.01867	-0.01858

*$p < .05$, **$p<.01$

Table 53 and table 54 report values for 'soft skills of teachers' male (M = 3.96, SD = .73) and female (M= 4.06, SD = .73); t (1947) = 3.031, p= .002** < .05, hence, rejects null hypothesis. It infers that there is a significant difference between males and females in perception towards 'soft skills of teachers.' It is inferred that females have a better perception towards 'soft skills' of teachers than males. However, values for 'technical skills of teachers' male (M = 3.83, SD = .713) and female (M= 3.91, SD = .70); t (1947) = 2.535, p = .011* < .05, hence, rejects null hypothesis. It infers that there is a significant difference among males and females with regards to their perception about 'technical skills of teachers'. It can be inferred that females have a better perception towards 'technical skills of teachers' than males. Thus, it can be inferred that females have a significantly better perception towards both the components as compared to males.

Based on Age

Table 55

Descriptive Statistics of 'SS' and 'TS' with age

		Mean	Std. Deviation
SS	'Below 20'	3.9710	.73219
	'20-less than 25'	4.0161	.74110
	'25 and above'	4.1936	.67237
	Total	4.0190	.73523
TS	'Below 20'	3.8337	.73213
	'20-less than 25'	3.8780	.70556
	'25 and above'	4.0143	.67474
	Total	3.8778	.71103

Table 55 reports descriptive statistics for 'SS', for various age groups, 'below 20', (M=3.97, SD=.73), '20-less than 25', (M=4.01, SD=.74), and '25 and above',(M=4.19, SD=.67). For another component, 'TS', 'below 20', (M=3.83, SD=.73), '20-less than 25' (M=3.87, SD=.70) and '25 and above' (M=4.01, SD=.67).

Table 56

Test of homogeneity of variance for 'soft skills of teachers' and 'technical skills of teachers': Age

	Levene Statistic	df1	df2	Sig.
Soft skills of teachers	3.272	2	1946	.038*
Technical skills of teachers	1.746	2	1946	.175 (ns)

p<.05, ns: not significant

Table 56 reports results of 'Levene's test for equality of variances' for 'soft skills of teachers', $p=.03 <.05$, which infers that there is no homogeneity of variance. However, for 'technical skills of teachers' where $p= .17>.05$, there is a homogeneity of variance for 'technical skills of teachers'. So, One-way ANOVA is used for 'TS'. Since there is no homogeneity of variance for 'SS', Welch test is conducted at Table 57.

Table 57

Welch test for Equality of Means

Robust Tests of Equality of Means				
SS				
	Statistic[a]	df1	df2	Sig.
Welch	6.373	2	415.140	.002**

For the component, 'soft skills of teachers', Welch test is conducted. Table 50 shows that since the *p* value is less than .05, $p=.002$, reject null hypothesis. It infers that one of the groups differ significantly. To know which group differs significantly, post hoc test, Games-Howell has been conducted at table 58.

Table 58

Post Hoc test: Games-Howell

(I) Age	(J) Age	Sig.
'Below 20'	'20-less than 25'	.477(ns)
	'25 and above'	.001**
'20-less than 25'	'Below 20'	.477(ns)
	'25 and above'	.006*
'25 and above'	'Below 20'	.001**
	'20-less than 25'	.006*

ns- not significant, **$p < .01$

Table 51 reports that there is a significant difference between age groups: '20-less than 25' and '25 and above'. Table 48 shows that for component, 'soft skills of teachers', reported values of mean and S.D for 'below 20' (M=3.97, S.D .732), '20-less than 25' (M= 4.01, S.D= .741), '25 and above' (M=4.19, S.D= .672). Table 51 reports that age group '25 and above' is significantly different from other age groups. As the *p* value<.05, it infers that the age group '25 and above' has a better perception towards 'soft skills of teachers' as compared to '20-less than 25' and 'below 20' age groups.

H_0: μ below 20 = μ 20-less than 25= μ 25 and above

Ha: at least one of the μ differs significantly

Table 59

One-way ANOVA for technical skills of teachers: Age

Technical skills of teachers	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.910	2	1.955	3.878	.021*
Within Groups	980.941	1946	.504		
Total	984.851	1948			

*p<.05**

Table 59 reveals One-way ANOVA for the component 'technical skills of teachers', F (2, 1946) = 3.878, p= .021* < .05. As *p* value is less than .05, null hypothesis is rejected. It infers that at least one group differs significantly. It infers that null hypothesis is rejected. At least one of the groups differs significantly. However, to know which of the groups differ significantly, Tukey test is applied for 'TS' in Table 60.

Table 60

Post-Hoc Tukey HSD test

(I) Age	Age	Mean Difference	Sig.
'Below 20'	'20-less than 25'	-.04436	.464(ns)
	'25 and above'	-.18068*	.015*
'20-less than 25'	'Below 20'	.04436	.464(ns)
	'25 and above'	-.13631	.059(ns)
'25 and above'	'Below 20'	.18068*	.015*
	'20-less than 25'	.13631	.059(ns)

ns- not significant, **- *p* < .01, ***- *p*< .001, *p*<.05*

Table 53 reveals results of Post-Hoc Tukey test which shows that there is a significant difference among age groups. Table 49 shows that for component, 'technical skills of teachers', reported values of mean and S.D for 'below 20' (M=3.83, S.D .732), '20-less than 25' (M= 3.87, S.D= .705), '25 and above' (M=4.01, S.D= .674). Table 53 reports that there is a significant difference between age groups: 'Below 20' and '25 and above'. As *p*<.05, reject null hypothesis. It infers there is a significant difference between two groups. Table 60 reports that age group '25 and above' is significantly better than 'below 20 age group'. As the *p* value<.05, it infers that the age group '25 and above' has a significantly better perception towards 'technical skills of teachers' than 'below 20' age group.

Based on the Medium of Instruction

Table 61

Descriptive Statistics for 'SS' and 'TS' components for Medium of instruction (MOI)

		N	Mean	Std. Deviation	Std. Error
SS	English	1029	4.0099	.72957	.02274
	Gujarati	887	4.0271	.74663	.02507
	Others	33	4.0884	.60307	.10498
	Total	1949	4.0190	.73523	.01665
TS	English	1029	3.8496	.69421	.02164
	Gujarati	887	3.9076	.73364	.02463
	Others	33	3.9596	.57926	.10084
	Total	1949	3.8778	.71103	.01611

Descriptive statistics for Mean and SD for the medium of instruction for the component, 'SS'. The highest reported mean is others which includes languages other than English and Gujarati, 'others', (M=4.08, SD=.603) and lowest mean reported is 'English', (M=4.00, SD=.729). For the second component 'TS', the highest mean reported belongs to other languages other than English and Gujarati 'others', (M=3.95, SD=.579) and lowest mean belongs to 'English', (M=3.84, SD=.694).

Table 62 shows whether there is any homogeneity of variance between two components. If there is a homogeneity of variance, One -Way ANOVA is used. If there is no homogeneity of variance, Welch test is used for further analysis

Table 62

Test of homogeneity of variance for 'soft skills of teachers' and 'technical skills of teachers': MOI

	Levene Statistic	df1	df2	Sig.
Soft skills of teachers	1.050	2	1946	.350(ns)
Technical skills of teachers	3.055	2	1946	.087(ns)

p<.05*, ns: not significant

Table 62 reports results of 'Levene's test for equality of variances' for 'soft skills of teachers', *p*=.35 >.05, which infers that there is a homogeneity of variance. However, for 'technical skills of teachers' where *p*= .08>.05, there is a homogeneity of variance for 'technical skills of teachers'. Hence, One-way ANOVA is used for further analysis for both components.

H_0: μ English = μ Gujarati= μ others

Ha: at least one of the μ differs significantly.

One-way ANOVA is conducted to compare the perception of students for 'soft skills of teachers' and 'technical skills of teachers' with respect to their medium of instruction.

ANOVA based on MOI

Table 63

ANOVA for soft skills and technical skills of teachers

		SS	df	MS	F	Sig.
SS	Between Groups	.302	2	.151	.279	.756(ns)
	Within Groups	1052.722	1946	.541		
	Total	1053.024	1948			
TS	Between Groups	1.826	2	.913	1.808	.164(ns)
	Within Groups	983.024	1946	.505		
	Total	984.851	1948			

* p< .05, ns- not significant

Table 63 reports ANOVA values for 'soft skills of teachers', F (2, 1946) = .279, p= .756 > .05. As p value is more than .05, fails to reject null hypothesis. It infers that there is no significant difference among the groups for 'soft skills of teachers.' Similarly, considering values for the component 'technical skills of teachers', F (2, 1946) = 1.808, p=.164 > .05, fails to reject null hypothesis. It infers that there is no significant difference among the groups for 'technical skills of teachers'.

Post hoc Tukey HSD revealed by Table 64 shows that there is no significant difference in perception of students between medium of instruction, 'English (M=4.00, S.D.= .729), and 'Gujarati', (M=4.02, S.D.= .746), 'others' (M=4.08, S.D.= .603) medium of instructions that includes Oriya, Bengali etc. regarding their perception about 'soft skills of teachers'. It can be inferred that there is no significant difference in the groups on the basis of MOI.

Similarly, Post-Hoc Tukey test at Table 64 reveals values for 'technical skills of teachers'. There is no significant difference between students of medium of instructions, 'English', (M= 3.84, S.D.=.694) and 'Gujarati' (M=3.90, S. D. = .733), 'others' (M=3.95, S.D.=.579) regarding their perception towards 'technical skills of teachers'. It can be inferred that there is no significant difference among groups based on MOI.

Table 64 reveals that there is no significant difference among groups as p value is more than 0.5 for both components: 'soft skills of teachers' and 'technical skills of teachers'. Since the p value is more than 0.5, it can be inferred that there is no significant difference among groups for both components for MOI.

Table 64

Post-Hoc Tukey HSD test for 'soft skills of teachers' and 'technical skills of teachers' based on MOI

Dependent Variable	Medium of instruction	Medium of instruction (Comparisons)	Sig.
SS	English	Gujarati	.867 (ns)
		Others	.818 (ns)
	Gujarati	English	.867(ns)
		Others	.885(ns)
	Others	English	.818(ns)
		Gujarati	.885(ns)
TS	English	Gujarati	.176(ns)
		Others	.656(ns)
	Gujarati	English	.176(ns)
		Others	.910(ns)
	Others	English	.656(ns)
		Gujarati	.910(ns)

Based on program/ course

Table 65

Descriptive Statistics for 'soft skills of teachers' and 'technical skills of teachers': Program/ Course

		N	Mean	Std. Deviation	Std. Error
SS	Certificate	28	3.4970	.68324	.12912
	Diploma	40	4.2437	.65464	.10351
	UG	1053	3.9793	.74879	.02308
	PG	828	4.0764	.71250	.02476
	Total	1949	4.0190	.73523	.01665
TS	Certificate	28	3.4500	.73917	.13969
	Diploma	40	3.9967	.69724	.11024
	UG	1053	3.8427	.72879	.02246
	PG	828	3.9312	.68057	.02365
	Total	1949	3.8778	.71103	.01611

Table 65 reveals descriptive statistics for both components. For the component, 'SS', the highest mean reported belongs to 'Diploma' course, (M=4.24, SD=.654) and lowest mean belongs to 'Certificate', (M=3.49, SD= .683). For the component, 'SS', the highest mean reported belongs to 'Diploma', (M=3.99, SD= .697) and lowest mean belongs to 'Certificate', (M=3.45, SD= .739).

Table 66

Test of homogeneity of variance for 'Soft skills of teachers' and 'Technical skills of teachers': program/ course

	Levene Statistic	df1	df2	Sig.
Soft skills of teachers	2.666	3	1945	.046*
Technical skills of teachers	2.507	3	1945	.057(ns)

p<.05, ns-not significant*

Table 66 shows test for homogeneity of variance for 'SS' and 'TS' of teachers towards program/ course of respondents. For the component, 'SS', $p<.05$, since there is no homogeneity of variance, Welch test is used for further analysis at Table 67.

Table 67

Welch test for soft skills of teachers

SS	Statistic	df1	df2	Sig.
Welch	9.635	3	82.261	.000***

p<.01***

Table 67 shows since $p < 0.5=.000$, there is a significant difference among groups. It infers that at least one of the groups differs significantly. To know which group differs significantly, post hoc test (Games-Howell) is applied at Table 68.

Perception towards 'SS': Program/ course

Table 68

Games- Howell Post-Hoc Test for 'soft skills of teachers (SS)'

Program/ course which the respondent is into	Multiple comparisons	Sig.
Certificate	Diploma	.000***
	UG	.005*
	PG	.001*
Diploma	Certificate	.000***
	UG	.075(ns)
	PG	.405(ns)
UG	Certificate	.005*
	Diploma	.075(ns)
	PG	.022*
PG	Certificate	.001*
	Diploma	.405(ns)
	UG	.022*

Table 68 reports values for Post Hoc test, Games-Howell. After multiple comparisons between various courses/ programs, it has been found that there is a

significant difference between students of Certificate and Diploma since *p* value=.000<.05. The descriptive statistics have been reported reveals mean and SD values for Certificate (M=3.49, S. D=.683), Diploma (M=4.24, S. D=.654). It infers that students in Diploma program have a significantly better perception towards 'soft skills of teachers' as compared to the students in the Certificate program since *p*<.05. It means there is a significant difference between Certificate and UG students. The mean and SD of UG is reported as UG (M=3.97, S.D= .748). It is inferred that the perception of UG students is significantly better than Certificate program towards 'soft skills of teachers' as *p*<.05. It is also found that PG (M=4.07, S.D= .712) students have a significantly better perception towards 'SS' as compared to Certificate program as *p*<.05. However, there is no significant difference found between UG and Diploma students in their perception towards 'soft skills of teachers' as *p*>.05. It is seen that there is no significant difference found between Diploma and PG students in perception towards soft skills of teachers as *p*>.05. There is significant difference found in the perception of 'UG' and 'PG' students and 'UG' and 'Certificate' towards 'SS' of teachers since *p*<.05. However, table 68 reveals that 'PG' students have a significantly better perception for 'soft skills of teachers' as compared to 'UG' and 'Certificate' students. The mean value reports that their perception is more than agreement as compared to 'UG' students, who perception is towards agreement. There is a significant difference between 'Certificate' and 'PG' students. It is inferred that 'PG' students have a better perception towards 'soft skills of teachers' as compared to 'Certificate' students. Table 68 reveals that perception of 'PG' students is more than agreement and 'Certificate' students is above neutral level. There is no significant difference between perception of students in 'PG' and 'Diploma'. Perception of students in Diploma have a significantly better perception and above agreement towards 'SS' of teachers as compared to other groups.

Table 69

ANOVA for technical skills of teachers: Program/ course

		SS	df	MS	F	Sig.
TS	Between Groups	9.342	3	3.114	6.209	.000***
	Within Groups	975.509	1945	.502		
	Total	984.851	1948			

* *p*< .05

Table 69 reports ANOVA values for 'technical skills of teachers', $F_{(3, 1945)} = 6.209$, $p = .000 < .05$. As p value is less than .05, hence, rejects null hypothesis. It infers that there is a significant difference among the groups for 'technical skills of teachers.'

Post hoc Tukey HSD test reveals mean and SD values for the component 'technical skills of teachers'. Table 58 reports Mean and SD values for all programs/ courses. Certificate (M=3.45, S.D= .739), Diploma (M=3.99, S.D= .697), UG (M=3.84, S.D= .728), PG (M=3.93, S.D= .680).

Table 70

Post Hoc Tukey HSD test for 'Technical skills of teachers': program/ course

	(I) Program/ course which the respondent is into	(J) Program/ course which the respondent is into	Mean Difference	Sig.
Tukey HSD	Certificate	Diploma	-.54667*	.010*
		UG	-.39274*	.020*
		PG	-.48116*	.002*
	Diploma	Certificate	.54667*	.010*
		UG	.15393	.532(ns)
		PG	.06551	.941(ns)
	UG	Certificate	.39274*	.020*
		Diploma	-.15393	.532(ns)
		PG	-.08842*	.036*
	PG	Certificate	.48116*	.002*
		Diploma	-.06551	.941(ns)
		UG	.08842*	.036*

Table 70 reports values for Tukey HSD. The table reveals that there is a significant difference between Certificate (M=3.45, S.D= .739) and Diploma (M=3.99, S.D= .697), as $p = .010 < .05$, which infers that there is a significant difference between these two programs/ courses: 'Certificate' and 'Diploma'. However, it is seen that perception towards 'technical skills of teachers' is significantly better in Diploma course as $p < .05$. Mean values reported for 'Diploma' which is above neutral level and is almost near to agreement. On the other hand, perception for 'technical skills of teachers' in certificate course is above the neutral level. Table 70 reveals that there is a significant difference between Certificate and UG as $p = .020 < .05$. Reported values of Certificate (M=3.45, S.D= .739), UG (M=3.84, S.D= .728). It can be inferred that perception of students towards 'technical skills of teachers is significantly higher in UG students than Certificate. The perception is towards agreement in case of 'UG'

students and above neutral level in 'Certificate'. There is a significant difference between Certificate (M=3.45, S.D= .739) and PG (M=3.93, S.D= .680) students towards perception of 'technical skills of teachers'. Perception towards 'technical skills of teachers' is significantly better among PG students, which is towards agreement than 'Certificate', which is above neutral level. It is seen that there is no significant difference between Diploma and UG as p=.532>.05. There is no significant difference between PG and Diploma as p=.941 >.05. There is no significant difference between UG and Diploma as p=.532>.05. There is a significant difference between UG (M=3.84, S.D= .728) and PG. (M=3.93, S.D= .680). Perception towards 'technical skills of teachers' is significantly higher in PG students, which is higher than neutral level and near to agreement. On the other hand, p=.036<.05 for UG students, perception is above neutral level. Perception towards 'TS' of teachers is significantly higher and close to agreement for 'Diploma' course as compared to other groups.

Based on name of faculty

Table 71 reveals descriptive statistics (Mean and SD values) for both components 'SS' and 'TS'. For the component, 'SS', 'Arts (M=3.99, S.D.= .763), and 'Commerce', (M=4.10, S.D.= .740), 'Education and Psychology' (M=4.19, S.D.= .681), 'E&T' (M=3.88, S.D=.731), 'F&CS' (M=4.15, S.D= .789), 'Fine Arts' (M=4.04, S.D=.664), 'Journalism and Communication' (M=4.28, S.D=.519), 'Law' (M= 3.65, S.D= .754), 'Management Studies' (M=3.94, S.D= .728), 'Performing Arts' (M=4.26, S.D= .655), 'Pharmacy' (M=4.21, S.D= .609), 'Science' (M=3.86, S.D=.740), 'Social Work' (M=4.09, S.D=.653). The highest reported mean is shown by the faculty of 'Journalism and Communication'(M=4.28). It shows that perception of students towards 'soft skills of teachers' is above agreement. The lowest mean is reported by the faculty of 'Law'(M=3.65). This shows that perception of students is above neutral level.

Table 71 reveals Descriptive Statistics for the component 'TS' 'Arts' (M=3.89, S.D.= .746), and 'Commerce', (M=3.92, S.D.= .712), 'Education and Psychology' (M=4.09, S.D.= .616), 'E&T' (M=3.75, S.D=.716), 'F&CS' (M=4.03, S.D= .787), 'Fine Arts' (M=3.87, S.D=.656), 'Journalism and Communication' (M=4.04, S.D=.525), 'Law' (M= 3.62, S.D= .755), 'Management Studies' (M=3.84, S.D= .661), 'Performing Arts' (M=4.09, S.D= .639), 'Pharmacy' (M=4.01, S.D= .624), 'Science' (M=3.71, S.D=.706), 'Social Work' (M=3.84, S.D=.669).

Table 71

Descriptive Statistics for SS and TS: Name of the faculty

Variables		Mean	Std. Deviation	Std. Error
SS	Arts	3.9922	.76352	.05359
	Commerce	4.1003	.74000	.04280
	Education and Psychology (E&P)	4.1900	.68196	.05261
	Engineering and Technology (E&T)	3.8881	.73152	.04281
	Family and Community Science (F&CS)	4.1562	.78980	.07008
	Fine Arts (FA)	4.0487	.66471	.06614
	Journalism and Communication (J&C)	4.2821	.51954	.07205
	Law	3.6596	.75484	.06335
	Management Studies (MS)	3.9467	.72849	.07397
	Performing Arts (PA)	4.2675	.65573	.06399
	Pharmacy	4.2194	.60986	.07873
	Science	3.8678	.74099	.05201
	Social Work	4.0908	.65350	.06535
	Total	4.0190	.73523	.01665
TS	Arts	3.8985	.74634	.05238
	Commerce	3.9217	.71299	.04123
	Education and Psychology	4.0988	.61695	.04760
	Engineering and Technology(E&T)	3.7516	.71660	.04194
	Family and Community Science (F&CS)	4.0373	.78732	.06986
	Fine Arts (FA)	3.8700	.65621	.06530
	Journalism and Communication (J&C)	4.0449	.52522	.07283
	Law	3.6216	.75506	.06336
	Management Studies (MS)	3.8412	.66182	.06720
	Performing Arts (PA)	4.0946	.63950	.06241
	Pharmacy	4.0156	.62423	.08059
	Science	3.7136	.70694	.04962
	Social Work (SW)	3.8427	.66952	.06695
	Total	3.8778	.71103	.01611

The highest mean reported is by the faculty of 'Education and Psychology'(M=4.09). It shows that perception of students towards 'technical skills of teachers' is above agreement.

The lowest mean is reported by the faculty of 'Law'(M=3.62). This shows that perception of students is above neutral level.

Table 72

Test of homogeneity of variance for 'soft skills of teachers' and 'technical skills of teachers': Name of faculty

	Levene Statistic	df1	df2	Sig.
Soft skills of teachers	1.628	12	1936	.077(ns)
Technical skills of teachers	1.933	12	1936	.027*

p<.05*, ns: not significant

Table 72 reports results of 'Levene's test for equality of variances' for 'soft skills of teachers', $p=.07 >.05$, which infers that there is a homogeneity of variance. However, for 'technical skills of teachers' where $p= .02<.05$, there is no homogeneity of variance for 'technical skills of teachers'.

Hence, One-way ANOVA is used for further analysis for 'SS' and Welch test is used for 'TS'.

Analysis of first component 'SS' is done first and analysis of the second component, 'TS' is done later.

H$_0$: μ Arts = μ Commerce= μ Education and Psychology= μ Engineering and Technology= μ Family and Community Science= μ Fine Arts= μ Journalism and Communication= μ Law = μ Management Studies= μ Performing Arts= μ Pharmacy= μ Science= μ Social Work

Ha: at least one of the μ differs significantly.

ANOVA based on name of faculty

One-way ANOVA is conducted to compare the perception of students for 'soft skills of teachers.'

Table 73

ANOVA for soft skills of teachers: Name of faculty

		SS	df	MS	F	Sig.
	Between Groups	51.007	12	4.251	8.213	.000***
SS	Within Groups	1002.016	1936	.518		
	Total	1053.024	1948			

***p<.001

Table 73 reports ANOVA values for 'soft skills of teachers', F (12, 1936) = .213, p= .000 < .05. As p value is less than .05, rejects null hypothesis. It infers that there is a significant difference among the groups in perception for 'soft skills of teachers.' Post-Hoc Tukey HSD is conducted to know which groups differ significantly. Post-Hoc Tukey at shown in Table 74.

Table 74

Post-Hoc Tukey HSD for SS: Name of faculty

Dependent Variable: SS (I) Name of the faculty you belong to			Mean Difference	Sig.
Tukey HSD	Arts	Commerce	-0.10813	0.913(ns)
		Education and Psychology	-0.19778	0.289(ns)
		Engineering and Technology	0.10407	0.935(ns)
		Family and Community Science	-0.16397	0.723(ns)
		Fine Arts	-0.05648	1.000(ns)
		Journalism and Communication	-0.28985	0.316(ns)
		Law	.33258*	0.002**
		Management Studies	0.04546	1.000(ns)
		Performing Arts	-0.27526	0.075(ns)
		Pharmacy	-0.22724	0.628(ns)
		Science	0.12438	0.877(ns)
		Social Work	-0.09863	0.996(ns)
	Commerce	Arts	0.10813	0.913(ns)
		Education and Psychology	-0.08965	0.987(ns)
		Engineering and Technology	.21221*	0.021*
		Family and Community Science	-0.05583	1.000(ns)
		Fine Arts	0.05165	1.000(ns)
		Journalism and Communication	-0.18172	0.902(ns)
		Law	.44071*	0.000***
		Management Studies	0.1536	0.836(ns)
		Performing Arts	-0.16713	0.701(ns)
		Pharmacy	-0.11911	0.994(ns)
		Science	.23252*	0.023*
		Social Work	0.0095	1.000(ns)
	Education and Psychology	Arts	0.19778	0.289(ns)
		Commerce	0.08965	0.987(ns)
		Engineering and Technology	.30185*	0.001**

	Family and Community Science	0.03381	1.000(ns)
	Fine Arts	0.1413	0.942(ns)
	Journalism and Communication	-0.09207	1.000(ns)
	Law	.53036[*]	0.000***
	Management Studies	0.24324	0.280(ns)
	Performing Arts	-0.07748	1.000(ns)
	Pharmacy	-0.02946	1.000(ns)
	Science	.32216[*]	0.001**
	Social Work	0.09915	0.997(ns)
Engineering and Technology	Arts	-0.10407	0.935(ns)
	Commerce	-.21221[*]	0.021*
	Education and Psychology	-.30185[*]	0.001**
	Family and Community Science	-.26804[*]	0.027*
	Fine Arts	-0.16055	0.776(ns)
	Journalism and Communication	-.39392[*]	0.017*
	Law	0.2285	0.093(ns)
	Management Studies	-0.05861	1.000(ns)
	Performing Arts	-.37933[*]	0.000***
	Pharmacy	-0.33132	0.061(ns)
	Science	0.02031	1.000(ns)
	Social Work	-0.20271	0.422(ns)
Family and Community Science	Arts	0.16397	0.723(ns)
	Commerce	0.05583	1.000(ns)
	Education and Psychology	-0.03381	1.000(ns)
	Engineering and Technology	.26804[*]	0.027*
	Fine Arts	0.10749	0.996(ns)
	Journalism and Communication	-0.12588	0.998(ns)
	Law	.49654[*]	0.000***
	Management Studies	0.20943	0.622(ns)
	Performing Arts	-0.11129	0.994(ns)
	Pharmacy	-0.06328	1.000(ns)
	Science	.28835[*]	0.024*
	Social Work	0.06533	1.000(ns)
Fine Arts	Arts	0.05648	1.000(ns)
	Commerce	-0.05165	1.000(ns)
	Education and Psychology	-0.1413	0.942(ns)
	Engineering and Technology	0.16055	0.776(ns)

	Family and Community Science	-0.10749	0.996(ns)
	Journalism and Communication	-0.23337	0.795(ns)
	Law	.38906*	0.002**
	Management Studies	0.10194	0.999(ns)
	Performing Arts	-0.21878	0.605(ns)
	Pharmacy	-0.17076	0.965(ns)
	Science	0.18086	0.689(ns)
	Social Work	-0.04215	1.000(ns)
Journalism and Communication	Arts	0.28985	0.316(ns)
	Commerce	0.18172	0.902(ns)
	Education and Psychology	0.09207	1.000(ns)
	Engineering and Technology	.39392*	0.017*
	Family and Community Science	0.12588	0.998(ns)
	Fine Arts	0.23337	0.795(ns)
	Law	.62243*	0.000***
	Management Studies	0.33532	0.247(ns)
	Performing Arts	0.01459	1.000(ns)
	Pharmacy	0.06261	1.000(ns)
	Science	.41424*	0.014*
	Social Work	0.19122	0.943(ns)
Law	Arts	-.33258*	0.002**
	Commerce	-.44071*	0.000***
	Education and Psychology	-.53036*	0.000***
	Engineering and Technology	-0.2285	0.093(ns)
	Family and Community Science	-.49654*	0.000***
	Fine Arts	-.38906*	0.002**
	Journalism and Communication	-.62243*	0.000***
	Management Studies	-0.28711	0.115(ns)
	Performing Arts	-.60784*	0.000***
	Pharmacy	-.55982*	0.000***
	Science	-0.20819	0.284(ns)
	Social Work	-.43121*	0.000***
Management Studies	Arts	-0.04546	1.000(ns)
	Commerce	-0.1536	0.836(ns)
	Education and Psychology	-0.24324	0.280(ns)
	Engineering and Technology	0.05861	1.000(ns)

	Family and Community Science	-0.20943	0.622(ns)
	Fine Arts	-0.10194	0.999(ns)
	Journalism and Communication	-0.33532	0.247(ns)
	Law	0.28711	0.115(ns)
	Performing Arts	-0.32072	0.079(ns)
	Pharmacy	-0.27271	0.511(ns)
	Science	0.07892	1.000(ns)
	Social Work	-0.1441	0.974(ns)
Performing Arts	Arts	0.27526	0.075(ns)
	Commerce	0.16713	0.701(ns)
	Education and Psychology	0.07748	1.000(ns)
	Engineering and Technology	.37933*	0.000***
	Family and Community Science	0.11129	0.994(ns)
	Fine Arts	0.21878	0.605(ns)
	Journalism and Communication	-0.01459	1.000(ns)
	Law	.60784*	0.000***
	Management Studies	0.32072	0.079(ns)
	Pharmacy	0.04802	1.000(ns)
	Science	.39964*	0.000***
	Social Work	0.17663	0.870(ns)
Pharmacy	Arts	0.22724	0.628(ns)
	Commerce	0.11911	0.994(ns)
	Education and Psychology	0.02946	1.000(ns)
	Engineering and Technology	0.33132	0.061(ns)
	Family and Community Science	0.06328	1.000(ns)
	Fine Arts	0.17076	0.965(ns)
	Journalism and Communication	-0.06261	1.000(ns)
	Law	.55982*	0.000***
	Management Studies	0.27271	0.511(ns)
	Performing Arts	-0.04802	1.000(ns)
	Science	.35163*	0.049*
	Social Work	0.12861	0.997(ns)
Science	Arts	-0.12438	0.877(ns)
	Commerce	-.23252*	0.023*
	Education and Psychology	-.32216*	0.001**
	Engineering and Technology	-0.02031	1.000(ns)

	Family and Community Science	-.28835*	0.024*
	Fine Arts	-0.18086	0.689(ns)
	Journalism and Communication	-.41424*	0.014*
	Law	0.20819	0.284(ns)
	Management Studies	-0.07892	1.000(ns)
	Performing Arts	-.39964*	0.000***
	Pharmacy	-.35163*	0.049*
	Social Work	-0.22302	0.350(ns)
Social Work	Arts	0.09863	0.996(ns)
	Commerce	-0.0095	1.000(ns)
	Education and Psychology	-0.09915	0.997(ns)
	Engineering and Technology	0.20271	0.422(ns)
	Family and Community Science	-0.06533	1.000(ns)
	Fine Arts	0.04215	1.000(ns)
	Journalism and Communication	-0.19122	0.943(ns)
	Law	.43121*	0.000***
	Management Studies	0.1441	0.974(ns)
	Performing Arts	-0.17663	0.870(ns)
	Pharmacy	-0.12861	0.997(ns)
	Science	0.22302	0.350(ns)

Table 74 reports multiple comparisons in the Post-Hoc Tukey HSD. It infers that there is a significant difference between various faculties in perception of students towards 'soft skills of teachers.'

Perception towards 'SS' among various faculties in Post-Hoc Tukey HSD

'Arts': Table 74 reports that there is significant difference between 'Arts' and 'Law'. Faculties of 'Law' and 'Arts' differ significantly in their perception towards 'soft skills of teachers'. Perception towards 'SS' of teachers is significantly better and close to agreement in 'Arts'(M=3.99) as compared to 'Law' (M= 3.65)

'Commerce': Table 74 reveals that faculty of 'Commerce' differ significantly with 'E&T' in perception towards 'SS' of teachers. There is a significant difference between 'Commerce' and 'Law' w.r.t perception towards 'SS' of teachers. There is a significant difference in perception towards 'SS' of teachers between 'Commerce' and 'Science'. 'Commerce' (M= 4.10) reports significantly better perception, which is above agreement towards 'SS' of teachers as compared to 'Law' (M=3.65), 'E&T' (M= 3.88), and 'Science' (M= 3.86).

'Education and Psychology' (E&P): Table 74 reports that 'Faculty of 'Education and Psychology' differs significantly with 'E&T'. There is a significant difference between 'E&P' and 'Law'. Faculty of 'E&P' differ significantly with 'Science' in perception towards 'SS' of teachers. Table 71 & 74 reports that perception towards 'SS' of teachers is significantly better and above agreement in 'E&P' (M=4.19) as compared to 'Science' (M=3.86), 'E&T'(M=3.88), and 'Law'(M=3.65).

'Engineering and Technology' (E&T): Table 74 reports that there is a significant difference between 'E&T' with 'E&P, Commerce, 'F&CS', 'J&C' and 'Performing Arts'. Perception towards 'SS' of teachers is significantly better and above agreement in 'J&C' (M=4.28) as compared to 'E&T' (M=3.88), 'E&P' (M=4.19), Commerce, (M=4.10) and 'PA' (M= 4.26).

'Family and Community Science' (F&CS): Table 74 reports that there is a significant difference between 'F&CS'(M=4.15) and 'Law' (M=3.65), 'E&T' (M=3.88), and 'Science' (M=3.86). However, Table 71 & 74 reports that perception towards 'SS' of teachers is significantly better and above agreement in 'F&CS' as compared to other groups.

'Fine Arts': Table 74 reports that 'Fine Arts' differs significantly with 'Law' in perception towards 'SS' of teachers. Perception towards 'SS' of teachers is significantly better and above agreement in 'Fine Arts' (M=4.04) as compared to 'Law' (M= 3.65).

'Journalism and Communication': Table 74 reports that 'J&C' significantly differs in perception towards 'SS' of teachers with 'E&T' (M=3.88), 'Law' (M=3.65), and 'Science' (M=3.86). However, Table 71 & 74 reports that perception of 'J&C' (M=4.28) towards 'SS' of teachers is significantly higher and above agreement as compared to other groups.

'Law': Table 74 reports that 'Law' differs significantly with 'Arts' (M=3.99) and 'Commerce' (M=4.10), 'E&P' (M=4.19), 'F&CS' (M=4.15), 'Fine Arts' (M=4.04), 'J&C' (M=4.28), 'PA' (M=4.26), 'Pharmacy' (M=4.21), and 'Social Work' (M=4.09). Table 71 & 74 reports that perception of 'J&C' towards 'SS' of teachers is significantly better and above agreement as compared to other groups.

'Management Studies': Table 74 reports that there is no significant difference in the perception towards 'SS' of teachers among various faculties.

'Performing Arts (PA)': Table 74 reports that 'PA' differs significantly in the perception towards 'SS' of teachers with 'E&T'(M=3.88), 'Law'(M=3.65), and 'Science'(M=3.86). However, Table 71 & 74 reports that perception towards 'SS' of

teachers is significantly better and above agreement in 'PA' as compared to other groups.

'Pharmacy': Table 74 reveals faculty of 'Pharmacy' differs significantly in their perception towards 'SS' of teachers with 'Law' and 'Science'. Perception towards 'SS' of teachers is significantly better and above agreement in 'Pharmacy'(M=4.21) as compared to 'Law' (M=3.65), and 'Science' (M=3.86).

'Science': Table 74 reveals that 'Science' differs significantly in their perception towards 'SS' of teachers with 'Commerce' (M= 4.10), 'E&P' (M=4.19), 'F&CS'(M=4.15), 'J&C'(M=4.28), 'PA'(M=4.26) and 'Pharmacy' (M=4.21). However, Table 71 & 74 reports that perception towards 'SS' of teachers is significantly better and above agreement in 'Pharmacy' as compared to other groups.

'Social Work': Table 74 that 'Social Work' differs significantly in their perception towards 'SS' of teachers with 'Law'. Table 71 & 74 reports that perception of faculty of 'Social Work' (4.09) is significantly better and above agreement towards 'SS' of teachers as compared to 'Law' (M=3.65).

Perception towards 'Technical Skills of Teachers'

Table 75

Welch test for technical skills (TS) of teachers: Name of faculty

SS	Statistic	df1	df2	Sig.
Welch	9.635	3	82.261	.000

$p<.01$***

Table 75 shows that for the component, 'technical skills of teachers', since *p* value < 0.5=.000, there is a significant difference among groups. It infers that at least one of the groups differs significantly.

Table 76

Games-Howell for 'TS' of teachers: Name of faculty

Name of the faculty you belong to		Mean Difference	Std. Error	Sig.
Arts	Commerce	-0.02322	0.06666	1.000(ns)
	Education and Psychology	-0.20029	0.07078	0.193(ns)
	Engineering and Technology	0.14692	0.0671	0.599(ns)
	Family and Community Science	-0.13875	0.08732	0.932(ns)
	Fine Arts	0.02856	0.08371	1.000(ns)

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	Journalism and Communication	-0.14635	0.08972	0.916(ns)
	Law	.27693*	0.08221	0.046*
	Management Studies	0.05729	0.0852	1.000(ns)
	Performing Arts	-0.19608	0.08148	0.443(ns)
	Pharmacy	-0.11703	0.09612	0.991(ns)
	Science	0.18489	0.07215	0.337(ns)
	Social Work	0.05586	0.08501	1.000(ns)
Commerce	Arts	0.02322	0.06666	1.000(ns)
	Education and Psychology	-0.17707	0.06297	0.201(ns)
	Engineering and Technology	0.17014	0.05881	0.165(ns)
	Family and Community Science	-0.11553	0.08112	0.970(ns)
	Fine Arts	0.05177	0.07722	1.000(ns)
	Journalism and Communication	-0.12313	0.0837	0.959(ns)
	Law	.30014*	0.0756	0.006**
	Management Studies	0.0805	0.07884	0.998(ns)
	Performing Arts	-0.17286	0.0748	0.512(ns)
	Pharmacy	-0.09382	0.09052	0.998(ns)
	Science	0.20811	0.06451	0.068(ns)
	Social Work	0.07907	0.07863	0.999(ns)
Education and Psychology	Arts	0.20029	0.07078	0.193(ns)
	Commerce	0.17707	0.06297	0.201(ns)
	Engineering and Technology	.34721*	0.06344	0.000***
	Family and Community Science	0.06154	0.08454	1.000(ns)
	Fine Arts	0.22884	0.0808	0.196(ns)
	Journalism and Communication	0.05394	0.08701	1.000(ns)
	Law	.47721*	0.07925	0.000***
	Management Studies	0.25757	0.08235	0.095(ns)
	Performing Arts	0.00421	0.07849	1.000(ns)
	Pharmacy	0.08325	0.09359	1.000(ns)
	Science	.38518*	0.06876	0.000***
	Social Work	0.25614	0.08215	0.097(ns)
Engineering and Technology	Arts	-0.14692	0.0671	0.599(ns)
	Commerce	-0.17014	0.05881	0.165(ns)

	Education and Psychology	-.34721*	0.06344	0.000***
	Family and Community Science	-.28567*	0.08148	0.031*
	Fine Arts	-0.11837	0.0776	0.949(ns)
	Journalism and Communication	-.29327*	0.08404	0.039*
	Law	0.13	0.07598	0.889(ns)
	Management Studies	-0.08964	0.07921	0.996(ns)
	Performing Arts	-.34301*	0.07519	0.001**
	Pharmacy	-0.26396	0.09085	0.175(ns)
	Science	0.03797	0.06497	1.000(ns)
	Social Work	-0.09107	0.079	0.995(ns)
Family and Community Science	Arts	0.13875	0.08732	0.932(ns)
	Commerce	0.11553	0.08112	0.970(ns)
	Education and Psychology	-0.06154	0.08454	1.000(ns)
	Engineering and Technology	.28567*	0.08148	0.031*
	Fine Arts	0.1673	0.09563	0.872(ns)
	Journalism and Communication	-0.0076	0.10092	1.000(ns)
	Law	.41567*	0.09432	0.001**
	Management Studies	0.19603	0.09693	0.717(ns)
	Performing Arts	-0.05733	0.09368	1.000(ns)
	Pharmacy	0.02171	0.10665	1.000(ns)
	Science	.32364*	0.08569	0.012*
	Social Work	0.1946	0.09677	0.725(ns)
Fine Arts	Arts	-0.02856	0.08371	1.000(ns)
	Commerce	-0.05177	0.07722	1.000(ns)
	Education and Psychology	-0.22884	0.0808	0.196(ns)
	Engineering and Technology	0.11837	0.0776	0.949(ns)
	Family and Community Science	-0.1673	0.09563	0.872(ns)
	Journalism and Communication	-0.1749	0.09782	0.852(ns)
	Law	0.24837	0.09099	0.244(ns)
	Management Studies	0.02873	0.0937	1.000(ns)
	Performing Arts	-0.22464	0.09032	0.389(ns)
	Pharmacy	-0.14559	0.10372	0.972(ns)

	Science	0.15634	0.08201	0.790(ns)
	Social Work	0.0273	0.09352	1.000(ns)
Journalism and Communication	Arts	0.14635	0.08972	0.916(ns)
	Commerce	0.12313	0.0837	0.959(ns)
	Education and Psychology	-0.05394	0.08701	1.000(ns)
	Engineering and Technology	.29327*	0.08404	0.039*
	Family and Community Science	0.0076	0.10092	1.000(ns)
	Fine Arts	0.1749	0.09782	0.852(ns)
	Law	.42328*	0.09654	0.002**
	Management Studies	0.20363	0.0991	0.695(ns)
	Performing Arts	-0.04973	0.09592	1.000(ns)
	Pharmacy	0.02932	0.10862	1.000(ns)
	Science	.33124*	0.08813	0.016*
	Social Work	0.20221	0.09893	0.702(ns)
Law	Arts	-.27693*	0.08221	0.046*
	Commerce	-.30014*	0.0756	0.006**
	Education and Psychology	-.47721*	0.07925	0.000***
	Engineering and Technology	-0.13	0.07598	0.889(ns)
	Family and Community Science	-.41567*	0.09432	0.001**
	Fine Arts	-0.24837	0.09099	0.244(ns)
	Journalism and Communication	-.42328*	0.09654	0.002**
	Management Studies	-0.21964	0.09236	0.463(ns)
	Performing Arts	-.47301*	0.08894	0.000***
	Pharmacy	-.39396*	0.10251	0.011*
	Science	-0.09203	0.08048	0.995(ns)
	Social Work	-0.22107	0.09218	0.449(ns)
Management Studies	Arts	-0.05729	0.0852	1.000(ns)
	Commerce	-0.0805	0.07884	0.998(ns)
	Education and Psychology	-0.25757	0.08235	0.095(ns)
	Engineering and Technology	0.08964	0.07921	0.996(ns)
	Family and Community Science	-0.19603	0.09693	0.717(ns)
	Fine Arts	-0.02873	0.0937	1.000(ns)

	Journalism and Communication	-0.20363	0.0991	0.695(ns)
	Law	0.21964	0.09236	0.463(ns)
	Performing Arts	-0.25337	0.09171	0.229(ns)
	Pharmacy	-0.17432	0.10493	0.906(ns)
	Science	0.12761	0.08353	0.948(ns)
	Social Work	-0.00143	0.09486	1.000(ns)
Performing Arts	Arts	0.19608	0.08148	0.443(ns)
	Commerce	0.17286	0.0748	0.512(ns)
	Education and Psychology	-0.00421	0.07849	1.000(ns)
	Engineering and Technology	.34301*	0.07519	0.001**
	Family and Community Science	0.05733	0.09368	1.000(ns)
	Fine Arts	0.22464	0.09032	0.389(ns)
	Journalism and Communication	0.04973	0.09592	1.000(ns)
	Law	.47301*	0.08894	0.000***
	Management Studies	0.25337	0.09171	0.229(ns)
	Pharmacy	0.07905	0.10193	1.000(ns)
	Science	.38097*	0.07973	0.000***
	Social Work	0.25194	0.09153	0.233(ns)
Pharmacy	Arts	0.11703	0.09612	0.991(ns)
	Commerce	0.09382	0.09052	0.998(ns)
	Education and Psychology	-0.08325	0.09359	1.000(ns)
	Engineering and Technology	0.26396	0.09085	0.175(ns)
	Family and Community Science	-0.02171	0.10665	1.000(ns)
	Fine Arts	0.14559	0.10372	0.972(ns)
	Journalism and Communication	-0.02932	0.10862	1.000(ns)
	Law	.39396*	0.10251	0.011*
	Management Studies	0.17432	0.10493	0.906(ns)
	Performing Arts	-0.07905	0.10193	1.000(ns)
	Science	0.30193	0.09464	0.086(ns)
	Social Work	0.17289	0.10477	0.910(ns)
Science	Arts	-0.18489	0.07215	0.337(ns)
	Commerce	-0.20811	0.06451	0.068(ns)

	Education and Psychology	-.38518*	0.06876	0.000***
	Engineering and Technology	-0.03797	0.06497	1.000(ns)
	Family and Community Science	-.32364*	0.08569	0.012*
	Fine Arts	-0.15634	0.08201	0.790(ns)
	Journalism and Communication	-.33124*	0.08813	0.016*
	Law	0.09203	0.08048	0.995(ns)
	Management Studies	-0.12761	0.08353	0.948(ns)
	Performing Arts	-.38097*	0.07973	0.000***
	Pharmacy	-0.30193	0.09464	0.086(ns)
	Social Work	-0.12904	0.08333	0.943(ns)
Social Work	Arts	-0.05586	0.08501	1.000(ns)
	Commerce	-0.07907	0.07863	0.999(ns)
	Education and Psychology	-0.25614	0.08215	0.097(ns)
	Engineering and Technology	0.09107	0.079	0.995(ns)
	Family and Community Science	-0.1946	0.09677	0.725(ns)
	Fine Arts	-0.0273	0.09352	1.000(ns)
	Journalism and Communication	-0.20221	0.09893	0.702(ns)
	Law	0.22107	0.09218	0.449(ns)
	Management Studies	0.00143	0.09486	1.000(ns)
	Performing Arts	-0.25194	0.09153	0.233(ns)
	Pharmacy	-0.17289	0.10477	0.910(ns)
	Science	0.12904	0.08333	0.943(ns)

To know which group differs significantly, post-hoc test (Games-Howell) is applied. Table 76 reports multiple comparisons in post-hoc Games-Howell test. It infers that there is a significant difference between various faculties in perception of students towards 'technical skills of teachers'.

Perception towards 'TS' among various faculties in Games-Howell Test

'Arts': Table 76 reveals that Faculty of 'Arts' differs significantly in perception towards 'TS' of teachers, with 'Law'. However, Table 76 reports that 'Arts' (M=3.89) reports a significantly better and above agreement perception towards 'TS' of teachers as compared to 'Law' (M=3.62).

'Commerce': Table 76 reveals that 'Commerce' differs significantly in perception towards 'TS' of teachers with 'Law' (M=3.62). Table 76 reports that 'Commerce' (M=3.92) shows a significantly better perception which is close to agreement towards 'TS' of teachers.

'Education and Psychology': Table 76 reveals that 'Education and Psychology' differs in perception towards 'TS' of teachers with 'E&T' (M=3.75), 'Law'(M=3.62), 'Science' (M= 3.71). Table 76 reports that 'E&P'(M=4.09) shows a significantly better perception towards 'TS' of teachers as compared to other groups.

'Engineering and Technology': Annexure 76 reveals that 'E&T'(M=3.75) differs significantly towards perception of 'TS' of teachers with 'E&P' (M=4.09), 'F&CS' (M=4.03), and 'J&C' (M=4.04). However, Table 76 reports that 'E&P' reports a significantly better and above agreement perception towards 'TS' of teachers.

'Family and Community Science': Table 76 reveals that 'F&CS'(M=4.03) differs significantly in the perception towards 'TS' of teachers with 'E&T'(M=3.75), 'Law' (M=3.62) and 'Science'(M=3.71). However, Table 76 reveals that 'F&CS' reports a significantly better perception which is above agreement as compared to other groups.

'Fine Arts': Table 76 reveals that 'FA' differs significantly in the perception towards 'TS' of teachers with 'PA' (M= 4.09) and 'Law' (M=3.62). However, Table 71 reveals that 'PA' reports a significantly better perception which is above agreement as compared to other groups.

'Journalism and Communication': Table 76 reveals that 'J&C'(M=4.04) differs significantly in the perception towards 'TS' of teachers with 'E&T'(M=3.75) and 'Law' (M=3.62). However, 'PA' reports a significantly better perception which is above agreement as compared to other groups.

'Law': Table 76 reveals that 'J&C'(M=4.04) differs significantly in the perception towards 'TS' of teachers with 'Arts' (M=3.89), 'E&T' (M=3.75), 'Commerce' (M=3.92), 'F&CS' (M=4.03). 'PA' reports a significantly better perception which is above agreement as compared to other groups.

'Management Studies': Table 76 reveals that there is no significant difference in perception towards 'TS' of teachers of 'Management Studies' with other groups.

'Performing Arts': Table 76 reveals that 'PA' differs significantly in perception towards 'TS' of teachers with E&T (M=3.75), 'Law' (M=3.62) and 'Science'

(M=3.71). However, Table 71 reports that 'PA'(M=4.09) reports a significantly better perception which is above agreement as compared to other groups.

'Pharmacy': Table 76 reveals that Faculty of 'Pharmacy' differs significantly in perception towards 'TS' of teachers, with 'Law'. Faculty of 'Pharmacy' (M=4.01) reports a significantly better and above agreement perception towards 'TS' of teachers as compared to 'Law'(M=3.62).

'Science': Table 76 reveals that Faculty of 'Science' differs significantly in perception towards 'TS' of teachers, with 'E&P'(M=4.09), 'F&CS'(M=4.03), 'PA'(M=4.09), 'J&C' (M=4.04). Faculty of 'E&P' reports a significantly better and above agreement perception towards 'TS' of teachers as compared to other groups.

'Social Work': Table 76 reveals that there is no significant difference in perception towards 'TS' of teachers of 'SW' with other groups.

Opinions from respondents and corresponding weighted mean calculation

Table 77

Weighted mean scores

Statements In your opinion, teachers involve student participation through	Weighted mean score
Field work	3.49
Case studies	3.57
Internships	3.34
Seminars	3.69
Arranging for faculty events	3.66

Opinions are sought from respondents to suggest how teachers can increase students' participation. Opinion statements are calculated to know which suggestion has received maximum score. Here, the highest mean score recorded is 'Seminars'. It means that students want more seminars to be held at their faculties. The lowest mean score recorded for 'internships.'

Perception of students towards 'Pedagogy' of teachers and 'Teacher engagement with students'.

Q10. of the questionnaire explores Perception of students towards Pedagogy (P) and Teacher Engagement with students (TE). After the perception of 'SS' and 'TS', an attempt is made to explore perception of students towards the 'Pedagogy' and 'Teacher engagement' with students which is shown in Table 78. To further explore and test hypotheses that have been framed in Chapter 1, one-sample test, two

independent sample t test, ANOVA, (Tukey HSD) and Welch (Games-Howell) have been used for further analysis of data.

Perception of Students towards 'Pedagogy' of teachers and 'Teacher Engagement' with students

Table 78

Mean and SD for variables of 'Pedagogy' and 'Teacher Engagement'

	Variables	Mean	Std. Deviation
P	Teaching techniques enable us to recall the concepts	3.69	1.106
	Teaching techniques help us to understand the concepts	3.95	.994
	Teachers discuss students' performance in mid-semester/ internal exam with students	3.42	1.254
	Teachers maintain good eye contact with us during our sessions	3.72	1.163
TE	It is easy to approach teachers as our mentors for any guidance	3.99	1.032
	Teachers help us in clarifying our occupational choices through placement/ counselling assistance	3.76	1.091
	Teachers have the knowledge of industry's demands of talent	3.93	1.043
	Teachers have a rich research experience in their respective subjects	3.65	1.156
	Teachers support us and provide guidance in overcoming our weaknesses	3.82	1.117

The variables are reported with a mean and standard deviation at table 78. Teaching techniques enable us to recall the concepts (M=3.69, SD= 1.106), Teaching techniques help us to understand the concepts (M=3.95, SD=0.994), Teachers discuss students' performance in mid-semester/ internal exam with students (M=3.42, SD= 1.254), Teachers maintain good eye contact with us during our sessions (M=3.72, SD=1.163), It is easy to approach teachers as our mentors for any guidance (M= 3.99, SD=1.032), Teachers help us in clarifying our occupational choices through placement/ counselling assistance (M=3.76, SD=1.091), Teachers have the knowledge of industry's demands of talent (M= 3.93, SD= 1.043), Teachers have a rich research experience in their respective subjects (M= 3.65, SD= 1.156), Teachers support us and provide guidance in overcoming our weaknesses (M=3.83, SD= 1.117). The overall highest agreement is found in: 'It is easy to approach teachers as our mentors for any guidance' (M= 3.99) and lowest agreement with 'Teachers discuss mid-semester internal exam performance with students (M= 3.42). Though the overall means for agreements are within the range of 3.42 to 3.99 i.e. more than neutral, but less than absolute agreements.

Components formed based on the Review of Literature: 'Pedagogy' of teachers and 'Teacher Engagement' with students.

As statements are on a formative scale, factorization could not be conducted. Two components are formed based on the review of literature. Two components formed are 'Pedagogy' and 'Teacher engagement' with students. Composite mean scores are obtained to measure perception towards, 'Pedagogy' of teachers (P) and 'Teacher engagement' with students (TE). As shown in Table 78, initial statements ranging from (1-4) items constitute 'Pedagogy' of teachers and statements ranging from (5-9) items constitute 'Teacher engagement' with students. The reliability of 'P' of teachers is (α= .748), which means that scale is reliable and shows 74.8% internal consistency among items. The reliability of the other component 'TE' with students is (α= .872), which means the scale is highly reliable and shows 87.2% internal consistency among items.

Table 79

Descriptive Statistics for 2 components (n=1949)

	No. of items	M	SD	Skewness	Kurtosis	Cronbach α
P	4	3.69	0.855	-.453	-.041	.748
TE	5	3.83	0.886	-.677	.144	.872

Table 79 shows descriptive statistics (Mean and standard deviation) for two components: 'P' and 'TE'. The table reports values for mean and S.D. as ($\bar{x}$= 3.69, SD= 0.85) for the first component: TP, and the second component 'TE' reports values for Mean and SD as ($\bar{x}$=3.83, SD=0.88).

Composite mean scores are obtained to measure perception towards, 'Pedagogy' (P) and 'Teacher engagement with students' (TE). Table 79 reveals that the reliability of 'P' is (α= .748), which means that scale is reliable and shows 74.8 % internal consistency among items. The reliability of the other component 'TE' is (α= .872), which means the scale is highly reliable and shows 87.2 % internal consistency among items.

Analysis of 'Pedagogy' of teachers and 'Teacher engagement' with students

One sample t test is conducted at 5% α level of significance to know the perception of students regarding 'teaching pedagogy' and 'teacher engagement with students'.

H_0: $\bar{x} = \mu$

H_a: $\bar{x} \neq \mu$, where, μ is population mean or the test value (neutral value of 5-point Likert scale) and $\bar{x}$ is the sample mean.

Table 80

One-Sample Test of Pedagogy (P) and Teacher engagement with students (TE)

	Test Value = 3				95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
P	35.8	1948	0.000***	0.693	0.655	0.731
TE	41.36	1948	0.000***	0.83	0.794	0.876

*** p < 0.001

Table 79 and 80 report values for the component 'pedagogy' (M= 3.69, S.D. = .85); t (1948) = 35.80, $p < .001$. Hence, null hypothesis is rejected. It infers that perception of students towards 'pedagogy' is above the neutral level. It means that students have a perception which is above neutral level towards 'pedagogy' of teachers. For another component, 'teacher engagement with students', (M=3.83, S.D. =.88); t (1948) = 41.36, $p<.001$. Hence, null hypothesis is rejected. It infers that perception of students towards 'teacher engagement with students' is above the neutral level. It means that students have a significantly better perception which is close to agreement towards 'teacher engagement with students.' It can be inferred that perception towards 'TE' among students is better than 'P' of teachers.

Based on Gender

An independent-samples t-test at 5% α level is conducted to compare the perception of 'pedagogy' and 'teacher engagement with students ' among males and females of the M. S. university. Levene's Test for Equality of Variances is shown at Table 82 'Pedagogy' of teachers, $p = .065$ which is >.05, and 'teacher engagement with students' $p= .051$ which is > .05. Thus, there is a homogeneity of variance for both the components.

H_0: μ Male = μ Female   Ha: μ Male ≠ μ Female

Table 81

Descriptive Statistics for P and TE

	Gender of the respondent	Mean	Std. Deviation	Std. Error Mean
P	Male	3.70	.846	.029
	Female	3.69	.862	.026
TE	Male	3.78	.848	.030
	Female	3.86	.911	.027

Table 81 reports descriptive statistics for 'P' Male (M=3.70, SD= .846) and female (M=3.69, SD=.862). For second component, 'TE', Male (M=3.78, SD=.848) and female (M=3.86, SD= .911).

Table 82

Independent Sample t-test for Pedagogy and Teacher engagement: Gender

		Pedagogy		Teacher engagement	
		Equal variances assumed	Equal variances not assumed	Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	0.198		3.817	
	Sig.	0.657(ns)		0.051(ns)	
t-test for Equality of Means	t	0.164	0.164	-1.935	-1.956
	df	1947	1789.722	1947	1838.097
	Sig. (2-tailed)	0.870(ns)	0.870	0.053(ns)	0.051
	Mean Difference	0.006	0.006	-0.079	-0.079
	Std. Error Difference	0.039	0.039	0.041	0.040
	95% Confidence Interval of the Difference Lower	-0.071	-0.070	-0.158	-0.157
	Upper	0.083	0.083	0.001	0.000

ns: not significant

Table 81 and 82 report values for 'Pedagogy' of teachers' male (M = 3.70, SD = .84) and female (M= 3.69, SD = .86); t (1947) = 0.164, *p*= 0.87(ns) > .05, hence, fail to reject null hypothesis. It infers that there is no significant difference between males and females in perception towards 'Pedagogy' of teachers. However, values for 'Teacher engagement with students' male (M = 3.78, SD = .84) and female (M= 3.86, SD = .91); t (1948) = 1.935, *p* = .053 > .05, hence, fail to reject null hypothesis. It infers that there

is no significant difference among males and females with regards to their perception about 'teacher engagement with students'.

Based on Age

Table 83

Descriptive Statistics of 2 Components

Variables		N	Mean	Std. Deviation	Std. Error
Pedagogy	'Below 20'	495	3.72	.837	.038
	'20-less than 25'	1296	3.67	.868	.024
	'25 and above'	158	3.83	.793	.063
	Total	1949	3.69	.855	.019
Teacher engagement	'Below 20'	495	3.84	.867	.039
	'20-less than 25'	1296	3.81	.900	.025
	'25 and above'	158	4.00	.811	.065
	Total	1949	3.83	.886	.020

Table 83 reports descriptive statistics for 'P' and 'TE' w.r.t. age. The highest reported mean for 'P' of teachers lies in the age group '25 and above' (M=3.83, SD=.793), which is close to agreement. The lowest mean belongs to the age group '20-less than 25' (M=3.67, SD= .868), which is above agreement. For the component, 'TE' with students, the highest mean belongs to the age group '25 and above' (M=4.00, SD=.811). The lowest mean belongs to the age group '20-less than 25' (M=3.81, SD= .900). This means that the age group '25 and above' reports the highest mean for both the components, 'P' of teachers and 'TE' with students.

Table 84

Test of homogeneity of variance for 'Pedagogy 'of Teachers and 'Teacher Engagement with students': Age

	Levene Statistic	df1	df2	Sig.
Pedagogy	1.390	2	1946	.249 (ns)
Teacher engagement with students	1.614	2	1946	.199 (ns)

ns: not significant

Table 84 reports results of 'Levene's test for equality of variances' for 'pedagogy', p=.24 >.05, and 'teacher engagement with students' where p= .19>.05. It infers that there is a homogeneity of variances for both the components. Results of Levene's test of homogeneity of variance shows that components have a homogeneity of variance, so One-way ANOVA is conducted to compare the perception of students

for 'pedagogy' of teachers and 'teacher engagement' with students with respect to their age groups.

H_0: μ below 20 = μ 20-less than 25= μ 25 and above

Ha: at least one of the μ differs significantly.

Table 85

ANOVA for Pedagogy and Teacher engagement with students

		SS	df	MS	F	Sig.
P	Between Groups	4.303	2	2.151	2.948	.053(ns)
	Within Groups	1420.148	1946	.730		
	Total	1424.451	1948			
TE	Between Groups	5.133	2	2.566	3.278	.038*
	Within Groups	1523.546	1946	.783		
	Total	1528.678	1948			

* p< .05, ns- not significant

Table 85 reports values for 'pedagogy', F (2, 1946) = 2.948, *p*= .053 > .05. As *p* value is more than .05, fails to reject null hypothesis. The mean and SD for all age groups of students are 'below 20' (M=3.72, S.D= .837), '20-less than 25', (M=3.67, S.D= .868) and '25 and above' (M=3.83, S.D= .793) as revealed by Table 84 regarding their perception about 'pedagogy'. It infers that there is no significant difference among different age groups regarding their perception about 'pedagogy' of teachers.

Similarly, considering values for the component 'teacher engagement with students', F (2, 1946) = 3.278, *p*=.038* < .05. It infers that null hypothesis is rejected. At least one of the groups differs significantly. Mean and SD for age groups are 'below 20' (M=3.84, S. D= .867), '20-less than 25', (M=3.81, S. D= .900) and '25 and above' (M=4.00, S. D= .811) as revealed by Table 85. The significant difference between age groups is revealed at Table 85 as revealed by Post-Hoc Tukey HSD.

Table 86

Post-Hoc Tukey HSD for 'Teacher engagement' with students

Tukey HSD	Age of the respondent	Age of the respondent	Sig.
	'Below 20'	'20-less than 25'	.762(ns)
		'25 and above'	.127(ns)
	'20-less than 25'	'Below 20'	.762(ns)
		'25 and above'	.029*
	'25 and above'	'Below 20'	.127(ns)
		'20-less than 25'	.029*

p<.05*

Table 86 reveals that there is a significant difference between '25-less than 25' and '25 and above' age groups in their perception towards 'Teacher engagement' with students. As $p=.029*<.05$, '25 and above' have a significantly better perception towards 'TE' with students as compared to the other age group, '20-less than 25'.

Based on Medium of Instruction

Table 87

Descriptive Statistics for 'P' and 'TE'

Variables		Mean	Std. Deviation
Pedagogy	English	3.67	.841
	Gujarati	3.72	.876
	Others	3.60	.721
	Total	3.69	.855
Teacher engagement with students	English	3.835	.922
	Gujarati	3.834	.848
	Others	3.79	.731

Table 87 reports descriptive statistics for both the components for MOI. For the component, 'P' of teachers the highest reported mean is 'Gujarati' as MOI, (M=3.72, SD= .876), which is above agreement. The lowest mean is reported by 'others', (M= 3.60, SD= .721). For the component, 'TE, with students the highest reported mean is shown by students with 'English' as MOI, (M= 3.83, SD= .922). The lowest mean reported is shown by 'others', (M=3.79, SD= .731).

Table 88

Test of homogeneity of variance for 'Pedagogy' and 'Teacher engagement with students': Medium of instruction (MOI)

	Levene Statistic	df1	df2	Sig.
Pedagogy	3.409	2	1946	.033*
Teacher engagement with students	3.077	2	1946	.046*

* $p< .05$

Levene's test is conducted to compare the perception of students for 'Pedagogy' of teachers and 'Teacher engagement with students' with respect to their medium of instruction.

Table 88 reports results of 'Levene's test for equality of variances' for 'pedagogy', $p=.03 <.05$, and 'teacher engagement with students' where $p= .04< .05$.

It infers that there is no homogeneity of variances for both the components. Since there is no homogeneity of variances, so Welch test is used.

H_0: μ English = μ Gujarati= μ others

Ha: at least one of the μ differs significantly.

Table 89

Welch Test for Equality of Means for 'P' and 'TE': MOI

Robust Tests of Equality of Means					
		Statistic[a]	df1	df2	Sig.
Pedagogy	Welch	1.074	2	87.865	.346(ns)
Teacher engagement	Welch	.042	2	88.075	.958(ns)

ns- not significant

Table 89 reports Welch values for 'Pedagogy', $p= .34 > .05$. As *p* value is more than .05, fail to reject null hypothesis. Table 86 reports values for mean and SD for both components. Mean and SD for 'English' (M=3.67, S.D=.841), 'Gujarati' (M=3.72, S.D=.876), and 'others' (M= 3.60, S.D= .721) for 'pedagogy'.

It infers that there is no significant difference between students from various mediums of instruction towards 'Pedagogy' of teachers. Similarly, considering values for the component 'teacher engagement with students', $p=.95 > .05$, fails to reject null hypothesis. Table 88 reports values for mean and SD for 'English' (M=3.83, S.D= .922), 'Gujarati' (M= 3.83, S.D= .848), and 'others' (M= 3.79, S.D= .731) for 'teacher engagement' with students.

It infers that there is no significant difference between students from various mediums of instruction towards 'teacher engagement with students'.

Table 90 reveals values for components, teaching pedagogy, and teacher engagement with students. As *p* values are more than .05 for both components, it shows that there is no significant difference between various mediums of instructions for both the components.

Table 90

Games-Howell Post Hoc Test for 'P' and 'TE': MOI

Dependent Variable	(I) Medium of instruction	(J) Medium of instruction	Sig.
Pedagogy	English	Gujarati	.416(ns)
		Others	.835(ns)
	Gujarati	English	.416(ns)
		Others	.608(ns)
	Others	English	.835(ns)
		Gujarati	.608(ns)
Teacher engagement with students	English	Gujarati	.998(ns)
		Others	.960(ns)
	Gujarati	English	.998(ns)
		Others	.954(ns)
	Others	English	.960(ns)
		Gujarati	.954(ns)

Based on program/ course

Table 91

Descriptive Statistics for 'P' and 'TE'

	Program of the respondent	N	Mean	Std. Deviation	Std. Error Mean
P	Certificate	28	3.47	.759	.143
	Diploma	40	3.76	.812	.128
	UG	1053	3.67	.871	.027
	PG	828	3.73	.839	.029
TE	Certificate	28	3.44	.808	.153
	Diploma	40	3.90	.797	.126
	UG	1053	3.82	.873	.027
	PG	828	3.86	.906	.031

Table 91 reports values of descriptive statistics. For the component, 'P' of teachers, the highest reported mean and SD belongs to 'Diploma' program/ course (M=3.76, SD=.812), and lowest mean is reported by 'Certificate' (M=3.47, SD= .759). For the component, 'TE', the highest reported mean belongs to 'Diploma' program/ course (M=3.90, SD=.797). The lowest mean is (M=3.44, SD= .808) reported by 'Certificate' course/ program.

Table 92

Test of homogeneity of variance for 'Pedagogy' and 'Teacher engagement with students': Program/ course

	Levene Statistic	df1	df2	Sig.
Pedagogy	1.137	3	1945	.333 (ns)
Teacher engagement with students	.865	3	1945	.458 (ns)

ns: not significant

Table 92 reports results of 'Levene's test for equality of variances' for 'pedagogy', p=.33 >.05, and 'teacher engagement with students' where p= .45>.05. It infers that there is a homogeneity of variances for both the components. As there is a homogeneity of variance for both the components, ANOVA is used for further analysis. One-way ANOVA was conducted to compare the perception of students for 'pedagogy' and 'teacher engagement with students' with respect to their programs/ courses.

H_0: µ Certificate = µ Diploma= µ UG= µ PG

Ha: at least one of the µ differs significantly.

Table 93

ANOVA for Pedagogy of teachers: Program/ Course

		SS	df	MS	F	Sig.
'P'	Between Groups	3.052	3	1.017	1.392	.243(ns)
	Within Groups	1421.399	1945	.731		
	Total	1424.451	1948			

ns- not significant

Table 94

ANOVA for Teacher Engagement with students: Program/ Course

		SS	df	MS	F	Sig.
'TE'	Between Groups	5.077	3	1.692	2.160	.091(ns)
	Within Groups	1523.601	1945	.783		
	Total	1528.678	1948			

Table 93 and 94 reports values for 'pedagogy', F (3, 1945) = 1.393, p= .243 > .05. As p value is more than .05, fails to reject null hypothesis. The mean and SD for all groups of students are 'Certificate' (M=3.47, S. D= .759), 'Diploma' (M=3.76, S. D= .812), 'UG' (M=3.67, S. D= .871) and 'PG' (M=3.73, S. D= .839) regarding their perception about 'pedagogy' of teachers. It infers that there is no significant difference among different programs/ courses of respondents in their perception towards

'pedagogy' of teachers. Table 93 reports values for 'teacher engagement with students', $F(3, 1945) = 2.160$, $p= .091 > .05$. As p value is more than .05, fails to reject null hypothesis. The mean and SD for all groups of students are: 'Certificate' (M=3.44, S.D = .808), 'Diploma' (M=3.90, S.D = .797), 'UG' (M=3.82, S.D = .873) and 'PG' (M=3.86, S. D= .906) regarding their perception about 'teacher engagement with students'. It infers that there is no significant difference among respondents of different courses/programs in their perception towards 'TE' with students. To know which groups differ significantly, Post-Hoc Tukey test is conducted at Table 95.

Table 95

Post Hoc Tukey HSD

Variables			p values
Pedagogy	Certificate	Diploma	.516(ns)
		UG	.625(ns)
		PG	.411(ns)
	Diploma	Certificate	.516(ns)
		UG	.908(ns)
		PG	.994(ns)
	UG	Certificate	.625(ns)
		Diploma	.908(ns)
		PG	.480(ns)
	PG	Certificate	.411(ns)
		Diploma	.994(ns)
		UG	.480(ns)
Teacher engagement with students	Certificate	Diploma	.162(ns)
		UG	.120(ns)
		PG	.072(ns)
	Diploma	Certificate	.162(ns)
		UG	.949(ns)
		PG	.993(ns)
	UG	Certificate	.120(ns)
		Diploma	.949(ns)
		PG	.790(ns)
	PG	Certificate	.072(ns)
		Diploma	.993(ns)
		UG	.790(ns)

Table 95 reveals values for both components with respect to program/ course of respondents. As *p* values are more than .05, it infers that there is no significant difference between various courses/ programs for both components.

Based on Name of Faculty

Table 96

Descriptive Statistics for 'Pedagogy' and 'Teacher' engagement' with students: Name of faculty

		Mean	Std. Deviation	Std. Error
Pedagogy (P)	Arts	3.67	.922	.065
	Commerce	3.72	.880	.051
	Education and Psychology	3.87	.779	.060
	Engineering and Technology	3.49	.825	.048
	Family and Community Science	3.81	.983	.087
	Fine Arts	3.66	.792	.079
	Journalism and Communication	3.69	.764	.106
	Law	3.59	.838	.070
	Management Studies	3.68	.808	.082
	Performing Arts	4.12	.764	.075
	Pharmacy	4.01	.810	.105
	Science	3.53	.824	.058
	Social Work	3.68	.766	.077
	Total	3.69	.855	.019
Teacher engagement with students (TE)	Arts	3.72	.906	.064
	Commerce	3.85	.918	.053
	Education and Psychology (E&P)	4.19	.803	.062
	Engineering and Technology (E&T)	3.62	.839	.049
	Family and Community Science (F&CS)	3.86	.999	.089
	Fine Arts	3.91	.811	.081
	Journalism and Communication (J&C)	4.35	.564	.078
	Law	3.66	.879	.074
	Management Studies (MS)	3.84	.771	.078
	Performing Arts (PA)	4.06	.826	.081
	Pharmacy	4.12	.746	.096
	Science	3.59	.932	.065
	Social Work (SW)	3.90	.824	.082
	Total	3.83	.886	.020

Table 96 reveals Descriptive Statistics reports that there is a difference in perception of students towards 'Pedagogy 'of teachers among various faculties, 'Arts (M=3.67, S.D.= .922), and 'Commerce', (M=3.72, S.D.= .880), 'Education and Psychology' (M=3.87, S.D.= .779), 'E&T' (M=3.49, S.D=.825), 'F&CS' (M=3.81, S.D= .983), 'Fine Arts' (M=3.66, S.D=.792), 'Journalism and Communication' (M=3.69, S.D=.764), 'Law' (M= 3.59, S.D= .838), 'Management Studies' (M=3.68,

S.D= .808), 'Performing Arts' (M=4.12, S.D= .764), 'Pharmacy' (M=4.01, S.D= .810), 'Science' (M=3.53, S.D=.824), 'Social Work' (M=3.68, S.D=.766). The highest mean reported is by the faculty of 'Performing Arts'. It shows that perception of students towards 'Pedagogy' is above agreement. The lowest mean is reported by the faculty of 'E&T'. This shows that perception of students is above neutral level.

Table 96 reports that there is a difference in perception of students towards 'TE' among various faculties, 'Arts (M=3.72, S.D.= .906), and 'Commerce', (M=3.85, S.D.= .918), 'Education and Psychology' (M=4.19, S.D.= .803), 'E&T' (M=3.62, S.D=.839), 'F&CS' (M=3.86, S.D= .999), 'Fine Arts' (M=3.91, S.D=.811), 'Journalism and Communication' (M=4.35, S.D=.564), 'Law' (M= 3.66, S.D= .879), 'Management Studies' (M=3.84, S.D= .771), 'Performing Arts' (M=4.06, S.D= .826), 'Pharmacy' (M=4.12, S.D= .746), 'Science' (M=3.59, S.D=.932), 'Social Work' (M=3.90, S.D=.824). The highest mean reported is by the faculty of 'Journalism and Communication'. It shows that perception of students towards 'technical skills of teachers' is above agreement. The lowest mean is reported by the faculty of 'Science'. This shows that perception of students is above neutral level.

Table 97

Test of homogeneity of variance for 'Pedagogy' and 'teacher engagement with students': Name of faculty

	Levene Statistic	df1	df2	Sig.
Pedagogy	1.598	12	1936	.085(ns)
Techer engagement with students	2.196	12	1936	.010*

p<.05, ns: not significant*

Table 97 reports results of 'Levene's test for equality of variances' for 'pedagogy', *p*=.08 >.05, which infers that there is a homogeneity of variance. However, for 'teacher engagement with students' where *p*= .01<.05, there is no homogeneity of variance for 'teacher engagement with students'. Hence, One-way ANOVA is used for further analysis for 'Pedagogy' and Welch test is used for 'TE'.

H$_0$: μ Arts = μ Commerce= μ Education and Psychology= μ Engineering and Technology= μ Family and Community Science= μ Fine Arts= μ Journalism and Communication= μ Law= μ Management Studies= μ Performing Arts= μ Pharmacy= μ Science= μ Social Work

Ha: at least one of the μ differs significantly.

One-way ANOVA is conducted to compare the perception of students for 'Pedagogy' with respect to name of faculty.

Table 98

ANOVA for Pedagogy: Name of faculty

		SS	df	MS	F	Sig.
P	Between Groups	51.915	12	4.326	6.102	.000***
	Within Groups	1372.536	1936	.709		
	Total	1424.451	1948			

***p<.001

Table 98 reports ANOVA values for 'pedagogy', F (12, 1936) = 6.102, *p*= .000 < .05. As *p* value is less than .05, rejects null hypothesis. It infers that there is a significant difference among the groups towards perception for 'pedagogy.'

Table 99

Post Hoc Tukey HSD: Name of the Faculty

Name of the faculty respondent belongs to		Mean Difference	Std. Error	Sig.
Arts	Commerce	-0.045	0.08	1.00(ns)
	Education and Psychology	-0.2	0.09	0.54*
	Engineering and Technology	0.179	0.08	0.53(ns)
	Family and Community Science	-0.139	0.1	0.96(ns)
	Fine Arts	0.013	0.1	1.00(ns)
	Journalism and Communication	-0.014	0.13	1.00(ns)
	Law	0.087	0.09	1.00(ns)
	Management Studies	-0.009	0.1	1.00(ns)
	Performing Arts	-.450*	0.1	0.00***
	Pharmacy	-0.339	0.12	0.23(ns)
	Science	0.145	0.08	0.88(ns)
	Social Work	-0.001	0.1	1.00(ns)
Commerce	Arts	0.045	0.08	1.00(ns)
	Education and Psychology	-0.155	0.08	0.79(ns)
	Engineering and Technology	0.223	0.07	0.07(ns)
	Family and Community Science	-0.095	0.09	1.00(ns)
	Fine Arts	0.057	0.1	1.00(ns)
	Journalism and Communication	0.031	0.13	1.00(ns)
	Law	0.132	0.09	0.95(ns)
	Management Studies	0.035	0.1	1.00(ns)

	Performing Arts	-.406[*]	0.1	0.00***
	Pharmacy	-0.294	0.12	0.4(ns)
	Science	0.19	0.08	0.39(ns)
	Social Work	0.043	0.1	1.00(ns)
Education and Psychology	Arts	0.2	0.09	0.54(ns)
	Commerce	0.155	0.08	0.79(ns)
	Engineering and Technology	.379[*]	0.08	0.00***
	Family and Community Science	0.061	0.1	1.00(ns)
	Fine Arts	0.213	0.11	0.73(ns)
	Journalism and Communication	0.186	0.13	0.98(ns)
	Law	0.287	0.1	0.13(ns)
	Management Studies	0.191	0.11	0.86(ns)
	Performing Arts	-0.25	0.11	0.45(ns)
	Pharmacy	-0.139	0.13	1.00(ns)
	Science	.345[*]	0.09	0.01*
	Social Work	0.199	0.11	0.82(ns)
Engineering and Technology	Arts	-0.179	0.08	0.5(ns)
	Commerce	-0.223	0.07	0.07*
	Education and Psychology	-.379[*]	0.08	0.00***
	Family and Community Science	-.318[*]	0.09	0.02*
	Fine Arts	-0.166	0.1	0.89(ns)
	Journalism and Communication	-0.193	0.13	0.95(ns)
	Law	-0.091	0.09	1.00(ns)
	Management Studies	-0.188	0.1	0.79(ns)
	Performing Arts	-.629[*]	0.1	0.00***
	Pharmacy	-.518[*]	0.12	0.00***
	Science	-0.033	0.08	1.00(ns)
	Social Work	-0.18	0.1	0.83(ns)
Family and Community Science	Arts	0.139	0.1	0.96(ns)
	Commerce	0.095	0.09	1.00(ns)
	Education and Psychology	-0.061	0.1	1.00(ns)
	Engineering and Technology	.318[*]	0.09	0.02*
	Fine Arts	0.152	0.11	0.98(ns)
	Journalism and Communication	0.125	0.14	1.00(ns)
	Law	0.227	0.1	0.59(ns)
	Management Studies	0.13	0.11	1.00(ns)
	Performing Arts	-0.311	0.11	0.2*
	Pharmacy	-0.2	0.13	0.95(ns)
	Science	0.285	0.1	0.13(ns)

	Social Work	0.138	0.11	0.99(ns)
Fine Arts	Arts	-0.013	0.1	1.00(ns)
	Commerce	-0.057	0.1	1.00(ns)
	Education and Psychology	-0.213	0.11	0.73(ns)
	Engineering and Technology	0.166	0.1	0.89(ns)
	Family and Community Science	-0.152	0.11	0.98(ns)
	Journalism and Communication	-0.027	0.14	1.00(ns)
	Law	0.075	0.11	1.00(ns)
	Management Studies	-0.022	0.12	1.00(ns)
	Performing Arts	-.463[*]	0.12	0.01*
	Pharmacy	-0.352	0.14	0.33(ns)
	Science	0.133	0.1	0.99(ns)
	Social Work	-0.014	0.12	1.00(ns)
Journalism and Communication	Arts	0.014	0.13	1.00(ns)
	Commerce	-0.031	0.13	1.00(ns)
	Education and Psychology	-0.186	0.13	0.98(ns)
	Engineering and Technology	0.193	0.13	0.95(ns)
	Family and Community Science	-0.125	0.14	1.00(ns)
	Fine Arts	0.027	0.14	1.00(ns)
	Law	0.101	0.14	1.00(ns)
	Management Studies	0.005	0.15	1.00(ns)
	Performing Arts	-0.436	0.14	0.11(ns)
	Pharmacy	-0.325	0.16	0.71(ns)
	Science	0.159	0.13	0.99(ns)
	Social Work	0.013	0.14	1.00(ns)
Law	Arts	-0.087	0.09	1.00(ns)
	Commerce	-0.132	0.09	0.95(ns)
	Education and Psychology	-0.287	0.1	0.13(ns)
	Engineering and Technology	0.091	0.09	1.00(ns)
	Family and Community Science	-0.227	0.1	0.59(ns)
	Fine Arts	-0.075	0.11	1.00(ns)
	Journalism and Communication	-0.101	0.14	1.00(ns)
	Management Studies	-0.097	0.11	1.00(ns)
	Performing Arts	-.538[*]	0.11	0.00***
	Pharmacy	-0.426	0.13	0.06*
	Science	0.058	0.09	1.00(ns)
	Social Work	-0.089	0.11	1.00(ns)
Management Studies	Arts	0.009	0.1	1.00(ns)
	Commerce	-0.035	0.1	1.00(ns)

	Education and Psychology	-0.191	0.11	0.86(ns)
	Engineering and Technology	0.188	0.1	0.79(ns)
	Family and Community Science	-0.13	0.11	1.00(ns)
	Fine Arts	0.022	0.12	1.00(ns)
	Journalism and Communication	-0.005	0.15	1.00(ns)
	Law	0.097	0.11	1.00(ns)
	Performing Arts	-.441*	0.12	0.01*
	Pharmacy	-0.33	0.14	0.46(ns)
	Science	0.155	0.1	0.96(ns)
	Social Work	0.008	0.12	1.00(ns)
Performing Arts	Arts	.450*	0.1	0.00***
	Commerce	.406*	0.1	0.00***
	Education and Psychology	0.25	0.11	0.45(ns)
	Engineering and Technology	.629*	0.1	0.00***
	Family and Community Science	0.311	0.11	0.2(ns)
	Fine Arts	.463*	0.12	0.01*
	Journalism and Communication	0.436	0.14	0.11(ns)
	Law	.538*	0.11	0.00***
	Management Studies	.441*	0.12	0.01*
	Pharmacy	0.111	0.14	1.00(ns)
	Science	.595*	0.1	0.00***
	Social Work	.449*	0.12	0.01*
Pharmacy	Arts	0.339	0.12	0.23(ns)
	Commerce	0.294	0.12	0.4(ns)
	Education and Psychology	0.139	0.13	1.00(ns)
	Engineering and Technology	.518*	0.12	0.00***
	Family and Community Science	0.2	0.13	0.95(ns)
	Fine Arts	0.352	0.14	0.33(ns)
	Journalism and Communication	0.325	0.16	0.71(ns)
	Law	0.426	0.13	0.06*
	Management Studies	0.33	0.14	0.46(ns)
	Performing Arts	-0.111	0.14	1.00(ns)
	Science	.484*	0.12	0.01*
	Social Work	0.338	0.14	0.41(ns)
Science	Arts	-0.145	0.08	0.88(ns)
	Commerce	-0.19	0.08	0.39(ns)
	Education and Psychology	-.345*	0.09	0.01*

	Engineering and Technology	0.033	0.08	1.00(ns)
	Family and Community Science	-0.285	0.1	0.13(ns)
	Fine Arts	-0.133	0.1	0.99(ns)
	Journalism and Communication	-0.159	0.13	0.99(ns)
	Law	-0.058	0.09	1.00(ns)
	Management Studies	-0.155	0.1	0.96(ns)
	Performing Arts	-.595*	0.1	0.00***
	Pharmacy	-.484*	0.12	0.01*
	Social Work	-0.147	0.1	0.97(ns)
Social Work	Arts	0.001	0.1	1.00(ns)
	Commerce	-0.043	0.1	1.00(ns)
	Education and Psychology	-0.199	0.11	0.82(ns)
	Engineering and Technology	0.18	0.1	0.83(ns)
	Family and Community Science	-0.138	0.11	0.99(ns)
	Fine Arts	0.014	0.12	1.00(ns)
	Journalism and Communication	-0.013	0.14	1.00(ns)
	Law	0.089	0.11	1.00(ns)
	Management Studies	-0.008	0.12	1.00(ns)
	Performing Arts	-.449*	0.12	0.01*
	Pharmacy	-0.338	0.14	0.41(ns)
	Science	0.147	0.1	0.97(ns)

Perception of various faculties towards 'Pedagogy' of teachers (P) in Post-Hoc Tukey Test

'Arts': Table 99 reports that there is significant difference between 'Arts' and 'PA'. Faculties of 'PA'(M=4.12) and 'Arts'(M=3.67) differ significantly in their perception towards 'pedagogy' of teachers. Table 96 reports that perception towards 'P' of teachers is significantly better and above agreement in 'Performing Arts' as compared to 'Arts'.

'Commerce': Table 99 reports that there is significant difference between 'Commerce' and 'PA'. Faculties of 'PA'(M=4.12) and 'Commerce'(M=3.72) differ significantly in their perception towards 'pedagogy' of teachers. Perception towards 'P' of teachers is significantly better and above agreement in 'Performing Arts' as compared to 'Commerce'.

'Education and Psychology' (E&P): Table 99 reports that faculties of 'E&T' and 'Science' differ significantly in their perception towards 'pedagogy' of teachers with 'E&P'. Perception towards 'pedagogy' of teachers' is significantly better and

close to agreement in 'E&P'(M=3.87) as compared to 'E&T' (M=3.49), 'Science'(M=3.53).

'Engineering and Technology' (E&T): Table 99 reports that Faculties of 'E&P'(M=3.87), 'F&CS'(M=3.81), 'Arts'(M=3.67), and 'Pharmacy'(M=4.01) differ significantly in their perception towards 'pedagogy' of teachers with 'E&T' (M=3.49). Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'Pharmacy' as compared to other groups.

'Family and Community Science' (F&CS): Table 99 reports that Faculty of 'E&T' differ significantly in their perception towards 'pedagogy' of teachers with 'F&CS'. Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and close to agreement in 'F&CS' (M=3.81) as compared to 'E&T' (M=3.49).

'Fine Arts': Table 99 reports that Faculty of 'Fine Arts' differ significantly in their perception towards 'pedagogy' of teachers with 'Arts'. Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better in 'Arts', (M=3.67) as compared to 'FA', (M=3.66).

'Journalism and Communication': Table 99 reports that there is no significant difference between 'J&C' with any other faculty.

'Law': Table 99 reports that Faculty of 'Performing Arts' differ significantly in their perception towards 'pedagogy' of teachers with 'Law'. Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'PA', (M=4.12) as compared to 'Law', (M=3.59).

'Management Studies': Table 99 reports that Faculty of 'Performing Arts' differ significantly in their perception towards 'pedagogy' of teachers with 'Management Studies'. Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'PA', (M=4.12) as compared to 'Management Studies', (M=3.68).

'Performing Arts (PA)': Table 99 reports that Faculty of 'Arts', (M=3.67) 'Commerce'(M=3.72), 'E&T'(M=3.49), 'FA'(M=3.66), 'Law' (M=3.59), 'Management Studies' (M=3.68), 'Science' (M=3.53), and 'Social Work', (M=3.68) differ significantly in their perception towards 'pedagogy' of teachers with 'Performing Arts', (M=4.12). Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'PA' as compared to other groups.

'Pharmacy': Table 99 reports that Faculty of 'E&T'(M=3.49) and 'Science', (M=3.53) differ significantly in their perception towards 'pedagogy' of teachers with 'Pharmacy', (M=4.01). Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'Pharmacy', (M=4.01) as compared to other groups.

'Science': Table 99 reports that Faculty of 'E&P', (M=3.87), 'PA', (M=4.12) and 'Pharmacy', (M=4.01) differ significantly in their perception towards 'pedagogy' of teachers with 'Science'. Table 96 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'PA' as compared to other groups.

'Social Work': Table 99 reports that Faculty of 'Social Work' (M=3.68), and 'Performing Arts'(M=4.12) differ significantly in their perception towards 'pedagogy' of teachers. Table 99 reports that perception towards 'pedagogy' of teachers' is significantly better and above agreement in 'PA' as compared to 'Social Work'.

Based on Name of Faculty

Table 100

Welch test for 'TE': Name of faculty

Teaching engagement				
	Statistic[a]	df1	df2	Sig.
Welch	11.055	12	559.344	.000

For the component, 'technical skills of teachers', since *p* value is less than 0.5 for TS, it means there is no homogeneity of variance, hence Welch test is used. Since *p* value < 0.5=.000, there is a significant difference among groups. It infers that at least one of the groups differs significantly.

Perception of various faculties towards 'Teacher Engagement' with students in Post-Hoc Games Howell

To know which group differs significantly, Post-Hoc test (Games-Howell) is applied.

Table 101

Post- Hoc Games Howell for 'teachers' engagement with students: Name of faculty

| Teachers' engagement with students | | | | |
Name of the faculty respondent belongs to		Mean Difference	Std. Error	Sig.
Arts	Commerce	-0.13	0.083	0.94(ns)
	Education and Psychology	-.467[*]	0.089	0.00**
	Engineering and Technology	0.1	0.08	0.99(ns)
	Family and Community Science	-0.139	0.109	0.988(ns)
	Fine Arts	-0.194	0.103	0.803(ns)
	Journalism and Communication	-.629[*]	0.101	0.00**
	Law	0.065	0.097	1.00(ns)
	Management Studies	-0.12	0.101	0.993(ns)
	Performing Arts	-0.342	0.103	0.053(ns)
	Pharmacy	-.399[*]	0.115	0.04*
	Science	0.128	0.091	0.973(ns)
	Social Work	-0.181	0.104	0.877(ns)
Commerce	Arts	0.13	0.083	0.94(ns)
	Education and Psychology	-.337[*]	0.082	0.003*
	Engineering and Technology	0.23	0.072	0.079(ns)
	Family and Community Science	-0.009	0.103	1.00(ns)
	Fine Arts	-0.064	0.097	1.00(ns)
	Journalism and Communication	-.499[*]	0.095	0.00***
	Law	0.194	0.091	0.636(ns)
	Management Studies	0.01	0.095	1.00(ns)
	Performing Arts	-0.212	0.097	0.595(ns)
	Pharmacy	-0.269	0.11	0.42*
	Science	0.258	0.084	0.109(ns)
	Social Work	-0.051	0.098	1.00(ns)
Education and Psychology	Arts	.467[*]	0.089	0.00***
	Commerce	.337[*]	0.082	0.003*
	Engineering and Technology	.567[*]	0.079	0.00***
	Family and Community Science	0.328	0.108	0.119(ns)
	Fine Arts	0.273	0.102	0.268(ns)
	Journalism and Communication	-0.162	0.1	0.919(ns)
	Law	.532[*]	0.096	0.00***
	Management Studies	.347[*]	0.1	0.035*
	Performing Arts	0.125	0.102	0.991(ns)
	Pharmacy	0.068	0.114	1.00(ns)
	Science	.595[*]	0.09	0.00***

	Social Work	0.286	0.103	0.222(ns)
Engineering and Technology	Arts	-0.1	0.08	0.99(ns)
	Commerce	-0.23	0.072	0.079(ns)
	Education and Psychology	-.567[*]	0.079	0.00***
	Family and Community Science	-0.239	0.101	0.481(ns)
	Fine Arts	-0.294	0.094	0.101(ns)
	Journalism and Communication	-.729[*]	0.092	0.00***
	Law	-0.035	0.089	1.00(ns)
	Management Studies	-0.22	0.092	0.463(ns)
	Performing Arts	-.442[*]	0.094	0.00***
	Pharmacy	-.499[*]	0.108	0.001**
	Science	0.028	0.082	1.00(ns)
	Social Work	-0.281	0.096	0.158(ns)
Family and Community Science	Arts	0.139	0.109	0.988(ns)
	Commerce	0.009	0.103	1.00(ns)
	Education and Psychology	-0.328	0.108	0.119(ns)
	Engineering and Technology	0.239	0.101	0.481(ns)
	Fine Arts	-0.055	0.12	1.00(ns)
	Journalism and Communication	-.490[*]	0.118	0.004*
	Law	0.204	0.115	0.865(ns)
	Management Studies	0.019	0.118	1.00(ns)
	Performing Arts	-0.203	0.12	0.895(ns)
	Pharmacy	-0.26	0.131	0.739(ns)
	Science	0.267	0.11	0.433(ns)
	Social Work	-0.042	0.121	1.00(ns)
Fine Arts	Arts	0.194	0.103	0.803(ns)
	Commerce	0.064	0.097	1.00(ns)
	Education and Psychology	-0.273	0.102	0.268(ns)
	Engineering and Technology	0.294	0.094	0.101(ns)
	Family and Community Science	0.055	0.12	1.00(ns)
	Journalism and Communication	-.435[*]	0.112	0.01*
	Law	0.259	0.109	0.473(ns)
	Management Studies	0.074	0.112	1.00(ns)
	Performing Arts	-0.148	0.114	0.986(ns)
	Pharmacy	-0.205	0.126	0.916(ns)
	Science	0.322	0.104	0.102(ns)
	Social Work	0.013	0.115	1.00(ns)
Journalism and Communication	Arts	.629[*]	0.101	0.00***
	Commerce	.499[*]	0.095	0.00***
	Education and Psychology	0.162	0.1	0.919(ns)
	Engineering and Technology	.729[*]	0.092	0.00***

	Family and Community Science	.490[*]	0.118	0.004*
	Fine Arts	.435[*]	0.112	0.01*
	Law	.694[*]	0.108	0.00***
	Management Studies	.509[*]	0.111	0.001**
	Performing Arts	0.287	0.112	0.347(ns)
	Pharmacy	0.23	0.124	0.817(ns)
	Science	.757[*]	0.102	0.00***
	Social Work	.448[*]	0.114	0.008**
Law	Arts	-0.065	0.097	1.00(ns)
	Commerce	-0.194	0.091	0.636(ns)
	Education and Psychology	-.532[*]	0.096	0.00***
	Engineering and Technology	0.035	0.089	1.00(ns)
	Family and Community Science	-0.204	0.115	0.865(ns)
	Fine Arts	-0.259	0.109	0.473(ns)
	Journalism and Communication	-.694[*]	0.108	0.00***
	Management Studies	-0.185	0.108	0.885(ns)
	Performing Arts	-.407[*]	0.109	0.015*
	Pharmacy	-.464[*]	0.121	0.012*
	Science	0.063	0.099	1.00(ns)
	Social Work	-0.246	0.111	0.576(ns)
Management Studies	Arts	0.12	0.101	0.993(ns)
	Commerce	-0.01	0.095	1.00(ns)
	Education and Psychology	-.347[*]	0.1	0.035*
	Engineering and Technology	0.22	0.092	0.463(ns)
	Family and Community Science	-0.019	0.118	1.00(ns)
	Fine Arts	-0.074	0.112	1.00(ns)
	Journalism and Communication	-.509[*]	0.111	0.001**
	Law	0.185	0.108	0.885(ns)
	Performing Arts	-0.222	0.112	0.75(ns)
	Pharmacy	-0.279	0.124	0.56(ns)
	Science	0.248	0.102	0.426(ns)
	Social Work	-0.061	0.114	1.00(ns)
Performing Arts	Arts	0.342	0.103	0.053*
	Commerce	0.212	0.097	0.595(ns)
	Education and Psychology	-0.125	0.102	0.991(ns)
	Engineering and Technology	.442[*]	0.094	0.00***
	Family and Community Science	0.203	0.12	0.895(ns)
	Fine Arts	0.148	0.114	0.986(ns)
	Journalism and Communication	-0.287	0.112	0.347(ns)
	Law	.407[*]	0.109	0.015*

	Management Studies	0.222	0.112	0.75(ns)
	Pharmacy	-0.057	0.126	1.00(ns)
	Science	.470*	0.104	0.001**
	Social Work	0.161	0.115	0.974(ns)
Pharmacy	Arts	.399*	0.115	0.04*
	Commerce	0.269	0.11	0.42(ns)
	Education and Psychology	-0.068	0.114	1.00(ns)
	Engineering and Technology	.499*	0.108	0.001**
	Family and Community Science	0.26	0.131	0.739(ns)
	Fine Arts	0.205	0.126	0.916(ns)
	Journalism and Communication	-0.23	0.124	0.817(ns)
	Law	.464*	0.121	0.012*
	Management Studies	0.279	0.124	0.56(ns)
	Performing Arts	0.057	0.126	1.00(ns)
	Science	.527*	0.116	0.001**
	Social Work	0.218	0.127	0.883(ns)
Science	Arts	-0.128	0.091	0.973(ns)
	Commerce	-0.258	0.084	0.109(ns)
	Education and Psychology	-.595*	0.09	0.00***
	Engineering and Technology	-0.028	0.082	1.00(ns)
	Family and Community Science	-0.267	0.11	0.433(ns)
	Fine Arts	-0.322	0.104	0.102(ns)
	Journalism and Communication	-.757*	0.102	0.00***
	Law	-0.063	0.099	1.00(ns)
	Management Studies	-0.248	0.102	0.426(ns)
	Performing Arts	-.470*	0.104	0.001**
	Pharmacy	-.527*	0.116	0.001**
	Social Work	-0.309	0.105	0.153(ns)
Social Work	Arts	0.181	0.104	0.877(ns)
	Commerce	0.051	0.098	1.00(ns)
	Education and Psychology	-0.286	0.103	0.222(ns)
	Engineering and Technology	0.281	0.096	0.158(ns)
	Family and Community Science	0.042	0.121	1.00(ns)
	Fine Arts	-0.013	0.115	1.00(ns)
	Journalism and Communication	-.448*	0.114	0.008**
	Law	0.246	0.111	0.576(ns)
	Management Studies	0.061	0.114	1.00(ns)
	Performing Arts	-0.161	0.115	0.974(ns)
	Pharmacy	-0.218	0.127	0.883(ns)
	Science	0.309	0.105	0.153(ns)

Table 101 reports multiple comparisons in post-hoc Games-Howell test. It infers that there is a significant difference between various faculties in perception of students towards 'technical skills of teachers'.

Perception of various faculties towards 'Teacher engagement with students' (TE) in Games-Howell

'Arts': Table 101 reports that faculty of 'Arts', (M=3.72) differs significantly with 'E&P', (M=4.19) 'J&C', (M=4.35) and 'Pharmacy', (M=4.12) in their perception towards 'TE'. Perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to other groups.

'Commerce': Table 101 reports that faculty of 'Commerce', (M=3.85) differs significantly with 'E&P', (M=4.19) and 'J&C'(M=4.35) in their perception towards 'TE'. Perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to other groups.

'Education and Psychology' (E&P): Table 101 reports that faculty of 'E&P', (M=4.19) differs significantly with 'Arts' (M=3.72), 'Commerce' (M=3.85), 'E&T' (M=3.62), 'Law' (M=3.66), 'Management Studies,'(M=3.84) and 'Science', (M=3.59) in their perception towards 'TE'. Table 96 reports that perception towards 'TE' is significantly better and above agreement in 'E&P' as compared to other groups.

'Engineering and Technology' (E&T): Table 101 reports that faculty of 'E&T', (M=3.62) differs significantly with 'E&P'(M=4.19), 'J&C' (M=3.86), 'Performing Arts'(M=4.06), and 'Pharmacy, (M=4.12)' in their perception towards 'TE'. Table 96 reports that perception of 'J&C' is significantly better and above agreement towards 'TE' as compared to other groups.

'Family and Community Science' (F&CS): Table 101 reports that faculty of 'F&CS'(M=3.86) differ significantly with 'J&C'(M=4.35) in their perception towards 'TE'. Table 96 reports that perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to 'F&CS'.

'Fine Arts': Table 101 reports that faculty of 'Fine Arts'(M=3.91) differ significantly with 'J&C'(M=4.35) in their perception towards 'TE'. Table 96 reports that perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to 'Fine Arts'.

'Journalism and Communication': Table 101 reports that faculty of 'J&C' differs significantly with 'Arts'(M=3.72), 'Commerce'(M=3.85), 'E&T'(M=3.62), and 'F&CS(M=3.86)', 'Law'(M=3.66), 'Fine Arts'(M=3.91), 'Management Studies'(M=3.84), 'Science'(M=3.59), and 'Social Work'(M=3.90) in their perception towards 'TE'. Table 89 reports that perception of 'J&C' is significantly better and above agreement towards 'TE' as compared to other groups.

'Law': Table 101 reports that faculty of 'Law'(M=3.66) differs significantly with 'E&P'(M=4.19), 'J&C' (M=4.35), 'PA'(M=4.06), and 'Pharmacy'(M=4.12) in their perception towards 'TE'. Table 89 reports that perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to other groups.

'Management Studies': Table 101 reports that Faculty of 'MS'(M=3.84) differs significantly in their perception towards 'TE' with 'E&P'(M=4.19) and 'J&C'(M=4.35). Table 96 reports that perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to other groups.

'Performing Arts (PA)': Table 101 reports that faculty of 'PA'(M=4.06) differ significantly with 'E&T'(M=3.62), 'Law'(M=3.66), 'Science'(M=3.59) in their perception towards 'TE'. Table 96 reports that perception towards 'TE' is significantly better and above agreement in 'PA' as compared to other groups.

'Pharmacy': Table 101 reports that faculty of 'Pharmacy' differ significantly with 'Arts'(M=3.72), 'E&T'(M=3.62), 'Science'(M=3.59(M=3.66) in their perception towards 'TE'. Table 96 reports that perception towards 'TE' is significantly better and above agreement in 'Pharmacy' as compared to other groups.

'Science': Table 101 reports that faculty of 'Science'(M=3.59) differ significantly with 'E&P'(M=4.19), 'J&C'(M=4.35), 'PA'(4.06) and 'Pharmacy'(M=4.12) in their perception towards 'TE'. Table 89 reports that perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to other groups.

'Social Work': Table 101 reports that faculty of 'Social Work'(M=3.90) differs significantly with 'J&C'(M=4.35) in their perception towards 'TE'. Table 89 reports that perception towards 'TE' is significantly better and above agreement in 'J&C' as compared to 'Social Work'.

Opinions of respondents towards improvement in the following:

Table 102

Weighted Mean Scores

Statements	Weighted Mean
Communication Skills	3.96
Interview Skills	3.72
Personality Development	3.77
Group Discussion	3.73
Risk Taking Ability	3.57
Decision Making Ability	3.8
Identifying our strengths	3.76
Ability to manage stress	3.88

Table 102 reports opinions that are sought from respondents to suggest how teachers can improve the following skills and abilities in students. Opinion statements are calculated to know which suggestion has received maximum score. Here, the highest mean score recorded is 'communication skills'. It means that students want more seminars to be held at their faculties. The lowest mean score recorded for 'risk taking ability'.

Q11. of the questionnaire explores perception of students towards 'Leadership Qualities of Teachers'. After the perception of 'SS' and 'TS', an attempt is made to explore perception of students towards the 'Leadership qualities of Teachers' which is shown in Table 103. To further explore and test hypotheses that have been framed in Chapter 1, one-sample test, two independent sample t test, ANOVA, (Tukey HSD)/ Welch (Games-Howell) have been used for further analysis of data.

Perception of students on Leadership Qualities of Teachers' (LQT)

Students are asked about their perception on teachers' leadership qualities.

Table 103 shows values for Mean and SD for all the variables. Teachers help us to look at problems through different angles and arrive at solutions ($\bar{x}$= 4.17, SD=0.949), Teachers help us in building networks with people ($\bar{x}$= 4.11, SD=1.003), Teachers maintain healthy relationships with students ($\bar{x}$= 4.1, SD= 1.005), Teachers enable us to work in teams and finish our tasks smoothly ($\bar{x}$= 3.96, SD= 1.024), Teachers help us in thinking outside the box ($\bar{x}$= 3.93, SD= 1.042), Teachers motivate us to accomplish our goals ($\bar{x}$= 3.78, SD= 1.047), Teachers help us to plan our projects/

strategies on our own (x̄= 3.78, SD= 1.102), Teachers train us on presentation skills (x̄= 3.68, SD= 1.155). The statement with highest mean score is Teachers help us to look at problems through different angles and arrive at solutions (x̄= 4.17, SD=0.949), and lowest mean score is Teachers train us on presentation skills (x̄= 3.68, SD= 1.155).

Table 103

Descriptive Statistics (Composite) for 'LQT': Mean, SD, Cronbach's Alpha

Feedback Statements	Mean	Std. Deviation	Cronbach's Alpha (α)
Teachers help us to look at problems through different angles and arrive at solutions	4.17	0.949	.887
Teachers help us in building networks with people	4.11	1.003	
Teachers maintain healthy relationships with students	4.1	1.005	
Teachers enable us to work in teams and finish our tasks smoothly	3.96	1.024	
Teachers help us in thinking outside the box	3.93	1.042	
Teachers motivate us to accomplish our goals	3.78	1.047	
Teachers help us to plan our projects/ strategies on our own	3.78	1.102	
Teachers train us on presentation skills	3.68	1.155	

Components formed based on the Review of Literature: 'Leadership Qualities of Teachers'

As statements are on a formative scale, factorization could not be conducted. Composite mean scores are obtained to measure perception of students towards 'Leadership Qualities of Teachers'. The reliability of 'LQT' is (α= .887) reported at Table 103, which means that scale is highly reliable and shows 88% internal consistency among items.

Analysis of Leadership Qualities of Teachers

One sample t test was conducted at 5% α level of significance to know the perception of students regarding 'leadership qualities of teachers'.

$H_0: \bar{x} = \mu$ $H_a: \bar{x} \neq \mu$

Where, μ is population mean or the test value (neutral value of 5-point Likert scale) and $\bar{x}$ is the sample mean.

Table 104

One-Sample t Test for Leadership qualities of teachers (LD)

	t	df	Sig. (2-tailed)	Mean Difference	Test Value = 3 95% Confidence Interval of the Difference	
					Lower	Upper
	53.340	1948	0.000***	0.941	0.91	0.98

*** p < 0.001

Descriptive Statistics for 'Leadership Qualities of Teachers'
Table 105
Descriptive Statistics for 'LQT'

	N	Mean	Std. Deviation	Std. Error Mean
Leadership qualities of teachers	1949	3.94	.779	.018

Based on Table 104 and 105, the values for the component 'leadership qualities of teachers' (M= 3.94, S.D. = .77); t (1948) = 53.34, $p < .001$. Hence, null hypothesis is rejected. It infers that perception of students towards 'leadership qualities of teachers' is above the neutral level. It infers that students have perception which is close to agreement towards 'leadership qualities of teachers.'

Based on gender

An independent-samples t-test at 5% α level was conducted to compare the perception of 'leadership qualities of teachers' among males and females of the M. S. university. Levene's Test for Equality of Variances is shown at table 106 leadership qualities of teachers', $p = .32$ which is >.05, Thus, there is a homogeneity of variance for the component: 'Leadership qualities of teachers'.

H_0: μ Male = μ Female   Ha: μ Male ≠ μ Female

Table 106 and table 107 report values for 'leadership qualities of teachers' male (M = 3.90, SD = .75) and female (M= 3.97, SD = .79); t (1947) = 1.799, p= 0.072(ns) > .05, hence, fail to reject null hypothesis. It infers that there is no significant difference between males and females in perception towards 'leadership qualities of teachers'.

Table 106

Descriptive Statistics for Male and Female: 'LQT'

	Gender of the respondent	N	Mean	Std. Deviation	Std. Error Mean
TP	Male	823	3.90	.754	.026
	Female	1126	3.97	.796	.024

Table 107

Independent Sample t-test for Leadership qualities of teachers: Gender

Independent Samples Test			Leadership qualities of teachers	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		0.962	
	Sig.		0.327	
t-test for Equality of Means	t		-1.799	-1.814
	df		1947	1822.508
	Sig. (2-tailed)		0.072	0.070
	Mean Difference		-0.064	-0.064
	Std. Error Difference		0.036	0.035
	95% Confidence Interval of the Difference	Lower	-0.134	-0.134
		Upper	0.006	0.005

ns: not significant

Based on Age

Table 108

Descriptive Statistics for Age: LQT

	N	Mean	Std. Deviation	Std. Error
'Below 20'	495	3.94	.776	.035
'20-less than 25'	1296	3.93	.781	.022
'25 and above'	158	4.04	.767	.061

Table 108 reports highest mean belongs to '25 and above' age group, (M=4.04, SD= .767) and lowest belongs to '20-less than 25' (M=3.93, SD= .781).

Table 109

Test of homogeneity of variance for 'Leadership qualities of teachers': Age

	Levene Statistic	df1	df2	Sig.
Leadership qualities of teachers	.700	2	1946	.497 (ns)

ns: not significant

H_0: μ below 20 = μ 20-less than 25= μ 25 and above

Ha: at least one of the μ differs significantly.

One-way ANOVA is conducted to compare the perception of students for 'leadership qualities of teachers' with respect to their age groups. Table 109 reports results of 'Levene's test for equality of variances' for 'leadership qualities of teachers', *p*=.49 >.05. It infers that there is a homogeneity of variances for the above component.

Table 110

ANOVA for 'Leadership qualities of teachers'

		SS	df	MS	F	Sig.
TPT	Between Groups	1.797	2	0.899	1.483	.227(ns)
	Within Groups	1179.326	1946	.606		
	Total	1181.123	1948			

ns-not significant

Table 110 reports values for 'Leadership qualities of teachers', F (2, 1946) = 1.483, *p*= .227 > .05. As *p* value is more than .05, fails to reject null hypothesis. It infers that there is no significant difference among age groups for 'below 20' (M= 3.94, SD= .77), '20-less than 25' (M=3.93, SD= .78), '25 and above' (M=4.04, SD= .76).

Table 111

Post-Hoc Tukey HSD: Age

Age of the respondent	Age of the respondent	Mean Difference	Std. Error	Sig.
'Below 20'	'20-less than 25'	.006	.041	.990(ns)
	'25 and above'	-.107	.071	.290(ns)
'20-less than 25'	'Below 20'	-.006	.041	.990(ns)
	'25 and above'	-.112	.066	.200(ns)
'25 and above'	'Below 20'	.107	.071	.290(ns)
	'20-less than 25'	.112	.066	.200(ns)

Table 111 reports as *p*>.05, it infers that there is no significant difference among various age groups in perception towards 'LQT'.

Based on Medium of Instruction

Table 112

Descriptive Statistics for MOI: LQT

	N	Mean	Std. Deviation	Std. Error
English	1029	3.96	.769	.024
Gujarati	887	3.92	.792	.027
Others	33	3.94	.732	.127

Table 112 reports descriptive statistics where highest mean is reported by 'English' as MOI (M=3.96, SD=.769) and lowest mean is reported by 'Gujarati' as MOI, (M=3.92, SD=.792).

Table 113

Test of homogeneity of variance for 'Leadership qualities of teachers': Medium of instruction

	Levene Statistic	df1	df2	Sig.
Leadership qualities of teachers	0.674	2	1946	.510(ns)

ns-not significant

Table 113 reports results of 'Levene's test for equality of variances' for 'leadership qualities of teachers', p=.51 >.05. It infers that there is a homogeneity of variances for the above component. Since there is a homogeneity of variance, One-way ANOVA is used for further analysis.

H_0: μ English = μ Gujarati= μ others

Ha: at least one of the μ differs significantly

Table 114

ANOVA for Leadership qualities of teachers

	SS	df	MS	F	Sig.
Between Groups	.631	2	.315	.520	.595(ns)
Within Groups	1180.493	1946	.607		
Total	1181.123	1948			

ns- not significant

Table 114 reports ANOVA values for 'leadership qualities of teachers', p= .59 > .05. As p value is more than .05, fail to reject null hypothesis. Thus, there is no significant difference between students from various mediums of instruction towards 'LQT'.

Table 115

Post-Hoc Tukey HSD: MOI

(I) Medium of instruction	(J) Medium of instruction	Mean Difference (I-J)	Std. Error	Sig.
English	Gujarati	.036	.036	.565(ns)
	Others	.022	.138	.986(ns)
Gujarati	English	-.036	.036	.565(ns)
	Others	-.014	.138	.994(ns)
Others	English	-.022	.138	.986(ns)
	Gujarati	.014	.138	.994(ns)

Table 115 reports Tukey HSD. As p>.05, it infers that there is no significant difference among groups.

Based on Program/Course

Table 116

Descriptive Statistics for Program/Course: LQT

Program of the respondent	N	Mean	Std. Deviation	Std. Error
Certificate	28	3.64	.685	.129
Diploma	40	3.94	.684	.108
UG	1053	3.91	.796	.025
PG	828	3.99	.760	.026

Table 116 reports descriptive statistics for program/ course. The highest mean reported is of 'PG, (M=3.99, SD= .760) and the lowest mean is 'Certificate', (M=3.64, SD= .685).

Table 117

Test of homogeneity of variance for 'Leadership qualities of teachers': Program/ course

	Levene Statistic	df1	df2	Sig.
Leadership qualities of teachers	1.947	3	1945	.120 (ns)

ns: not significant

Table 117 reports results of 'Levene's test for equality of variances' for 'leadership qualities of teachers', $p=.12 >.05$, It infers that there is a homogeneity of variances for the component. As there is homogeneity of variance for the component, ANOVA is used for further analysis.

H_0: μ Certificate = μ Diploma= μ UG= μ PG

Ha: at least one of the μ differs significantly.

One-way ANOVA is conducted to compare the perception of students for 'leadership qualities of teachers' with respect to their programs/ courses.

Table 118

ANOVA for 'leadership qualities of teachers'

		SS	df	MS	F	Sig.
	Between Groups	5.316	3	1.772	2.931	.125(ns)
TP	Within Groups	1175.807	1945	.605		
	Total	1181.123	1948			

ns-not significant

Table 118 and table 116 report values for 'leadership qualities of teachers', F (3, 1945) = 2.931, *p*= .125 > .05. As *p* value is more than .05, fails to reject null hypothesis. The mean and SD for all groups of students are 'Certificate' (M=3.64, S.D= .685), 'Diploma' (M=3.94, S.D= .684), 'UG' (M=3.91, S.D= .796) and 'PG' (M=3.99, S.D= .760) regarding their perception about 'leadership qualities of teachers'. It infers that there is no significant difference among different programs.

Table 119

Post-Hoc Tukey HSD: Program/ course

(I) Name of the program/ course	(J) Name of the program/ course	Mean Difference (I-J)	Std. Error	Sig.
Certificate	Diploma	-.299	.192	.401(ns)
	UG	-.273	.149	.257(ns)
	PG	-.350	.149	.089(ns)
Diploma	Certificate	.299	.192	.401(ns)
	UG	.026	.125	.997(ns)
	PG	-.051	.126	.978(ns)
UG	Certificate	.273	.149	.257(ns)
	Diploma	-.026	.125	.997(ns)
	PG	-.077	.036	.147(ns)
PG	Certificate	.350	.149	.089(ns)
	Diploma	.051	.126	.978(ns)
	UG	.077	.036	.147(ns)

Table 119 reports values for Post-Hoc Tukey HSD. As *p*>.05, it infers that there is no significant difference among groups.

Based on Name of Faculty

Table 120 below reveals Descriptive Statistics and there is a difference in perception of students towards 'Leadership qualities of teachers' among various faculties, 'Arts (M=3.88, S.D.= .838), and 'Commerce', (M=3.93, S.D.= .794),

'Education and Psychology' (M=4.20, S.D.= .677), 'E&T' (M=3.80, S.D=.765), 'F&CS' (M=3.99, S.D= .903), 'Fine Arts' (M=4.02, S.D=.712), 'Journalism and Communication' (M=4.31, S.D=.555), 'Law' (M= 3.68, S.D= .804), 'Management Studies' (M=4.03, S.D= .652), 'Performing Arts' (M=4.04, S.D= .804), 'Pharmacy' (M=4.17, S.D= .605), 'Science' (M=3.83, S.D=.800), 'Social Work' (M=3.99, S.D=.652). The highest mean reported is by the faculty of 'Journalism and Communication' (M=4.31, SD=.677). It shows that perception of students towards 'technical skills of teachers' is above agreement. The lowest mean is reported by the faculty of 'Law' (M=3.68, SD=.804). This shows that the perception of students is above neutral level.

Table 120

Descriptive Statistics for LQT: Name of faculty

	Mean	Std. Deviation	Std. Error
Arts	3.88	.838	.059
Commerce	3.93	.794	.046
Education and Psychology (E&P)	4.20	.677	.052
Engineering and Technology (E&T)	3.80	.765	.045
Family and Community Science (F&CS)	3.99	.903	.080
Fine Arts (FA)	4.02	.712	.071
Journalism and Communication (J&C)	4.31	.555	.077
Law	3.68	.804	.067
Management Studies (MS)	4.03	.652	.066
Performing Arts (PA)	4.04	.804	.079
Pharmacy	4.17	.605	.078
Science	3.83	.800	.056
Social Work (SW)	3.99	.652	.065
Total	3.94	.779	.018

Table 121

Test of homogeneity of variance for 'Leadership qualities of teachers (LQT)': Name of faculty

	Levene Statistic	df1	df2	Sig.
Leadership qualities of teachers	2.810	12	1936	.001**

$p<.01$

Table 121 reports results of 'Levene's test for equality of variances' for 'leadership qualities of teachers', $p=.001 <.05$, which infers that there is no homogeneity of variance. Hence, Welch test is used for further analysis for 'LQT'.

H0: μ Arts= μ Commerce= μ Education and Psychology= μ Engineering and Technology= μ Family and Community Science= μ Fine Arts= μ Journalism and Communication= μ Law= μ Management Studies= μ Performing Arts= μ Pharmacy= μ Science= μ Social Work

Ha: at least one of the μ differs significantly.

Table 121 reveals that for the component, 'leadership qualities of teachers', since *p* value is less than 0.5 for TS, it means there is no homogeneity of variance, hence Welch test is used. Since *p* value < 0.5=.000, there is a significant difference among groups. It infers that at least one of the groups differs significantly.

Table 122

Welch Test for Equality of Means

Robust Tests of Equality of Means

Leadership qualities of teachers

	Statistic	df1	df2	Sig.
Welch	7.431	12	558.983	.000***

***p<.001

   To know which group differs significantly, Post-Hoc test (Games-Howell) is applied in the table that follows.

Table 123

Post-Hoc Games-Howell for Leadership qualities of teachers: Name of faculty

(I) Name of the faculty respondent belongs to		Mean Difference	Std. Error	Sig.
Arts	Commerce	-0.056	0.075	1.000(ns)
	Education and Psychology	-.322*	0.079	0.003**
	Engineering and Technology	0.08	0.074	0.997(ns)
	Family and Community Science	-0.113	0.099	0.996(ns)
	Fine Arts	-0.144	0.092	0.938(ns)
	Journalism and Communication	-.434*	0.097	0.001**
	Law	0.198	0.09	0.586(ns)
	Management Studies	-0.152	0.089	0.888(ns)
	Performing Arts	-0.162	0.098	0.910(ns)
	Pharmacy	-0.293	0.098	0.137(ns)
	Science	0.047	0.081	1.000(ns)
	Social Work	-0.114	0.088	0.985(ns)
Commerce	Arts	0.056	0.075	1.000(ns)
	Education and Psychology	-.266*	0.07	0.010*
	Engineering and Technology	0.136	0.064	0.653(ns)

	Family and Community Science	-0.057	0.092	1.000(ns)
	Fine Arts	-0.088	0.084	0.998(ns)
	Journalism and Communication	-.379[*]	0.09	0.004**
	Law	0.253	0.082	0.098(ns)
	Management Studies	-0.096	0.081	0.993(ns)
	Performing Arts	-0.107	0.091	0.994(ns)
	Pharmacy	-0.237	0.091	0.314(ns)
	Science	0.103	0.073	0.972(ns)
	Social Work	-0.059	0.08	1.000(ns)
Education and Psychology	Arts	.322[*]	0.079	0.003**
	Commerce	.266[*]	0.07	0.010*
	Engineering and Technology	.402[*]	0.069	0.000***
	Family and Community Science	0.209	0.096	0.603(ns)
	Fine Arts	0.178	0.088	0.718(ns)
	Journalism and Communication	-0.112	0.093	0.992(ns)
	Law	.520[*]	0.085	0.000***
	Management Studies	0.171	0.084	0.718(ns)
	Performing Arts	0.16	0.094	0.895(ns)
	Pharmacy	0.029	0.094	1.000(ns)
	Science	.369[*]	0.077	0.000***
	Social Work	0.208	0.084	0.390(ns)
Engineering and Technology	Arts	-0.08	0.074	0.997(ns)
	Commerce	-0.136	0.064	0.653(ns)
	Education and Psychology	-.402[*]	0.069	0.000***
	Family and Community Science	-0.193	0.092	0.664(ns)
	Fine Arts	-0.224	0.084	0.276(ns)
	Journalism and Communication	-.514[*]	0.089	0.000***
	Law	0.118	0.081	0.964(ns)
	Management Studies	-0.231	0.08	0.171(ns)
	Performing Arts	-0.242	0.09	0.273(ns)
	Pharmacy	-.372[*]	0.09	0.005**
	Science	-0.033	0.072	1.000(ns)
	Social Work	-0.194	0.079	0.411(ns)
Family and Community Science	Arts	0.113	0.099	0.996(ns)
	Commerce	0.057	0.092	1.000(ns)
	Education and Psychology	-0.209	0.096	0.603(ns)
	Engineering and Technology	0.193	0.092	0.664(ns)
	Fine Arts	-0.031	0.107	1.000(ns)
	Journalism and Communication	-0.321	0.111	0.174(ns)
	Law	0.311	0.105	0.141(ns)
	Management Studies	-0.038	0.104	1.000(ns)

	Performing Arts	-0.049	0.112	1.000(ns)
	Pharmacy	-0.18	0.112	0.926(ns)
	Science	0.16	0.098	0.918(ns)
	Social Work	-0.001	0.103	1.000(ns)
Fine Arts	Arts	0.144	0.092	0.938(ns)
	Commerce	0.088	0.084	0.998(ns)
	Education and Psychology	-0.178	0.088	0.718(ns)
	Engineering and Technology	0.224	0.084	0.276(ns)
	Family and Community Science	0.031	0.107	1.000(ns)
	Journalism and Communication	-0.29	0.105	0.228(ns)
	Law	.342*	0.098	0.032*
	Management Studies	-0.007	0.097	1.000(ns)
	Performing Arts	-0.018	0.106	1.000(ns)
	Pharmacy	-0.149	0.105	0.971(ns)
	Science	0.191	0.09	0.654(ns)
	Social Work	0.03	0.096	1.000(ns)
Journalism and Communication	Arts	.434*	0.097	0.001**
	Commerce	.379*	0.09	0.004**
	Education and Psychology	0.112	0.093	0.992(ns)
	Engineering and Technology	.514*	0.089	0.000***
	Family and Community Science	0.321	0.111	0.174(ns)
	Fine Arts	0.29	0.105	0.228(ns)
	Law	.632*	0.102	0.000***
	Management Studies	0.283	0.102	0.224(ns)
	Performing Arts	0.272	0.11	0.400(ns)
	Pharmacy	0.142	0.11	0.985(ns)
	Science	.481*	0.095	0.000***
	Social Work	0.32	0.101	0.089(ns)
Law	Arts	-0.198	0.09	0.586(ns)
	Commerce	-0.253	0.082	0.098(ns)
	Education and Psychology	-.520*	0.085	0.000***
	Engineering and Technology	-0.118	0.081	0.964(ns)
	Family and Community Science	-0.311	0.105	0.141(ns)
	Fine Arts	-.342*	0.098	0.032*
	Journalism and Communication	-.632*	0.102	0.000***
	Management Studies	-.349*	0.095	0.017*
	Performing Arts	-.360*	0.104	0.034*
	Pharmacy	-.490*	0.103	0.000***
	Science	-0.151	0.088	0.886(ns)
	Social Work	-0.312	0.094	0.053(ns)

Management Studies	Arts	0.152	0.089	0.888(ns)
	Commerce	0.096	0.081	0.993(ns)
	Education and Psychology	-0.171	0.084	0.718(ns)
	Engineering and Technology	0.231	0.08	0.171(ns)
	Family and Community Science	0.038	0.104	1.000(ns)
	Fine Arts	0.007	0.097	1.000(ns)
	Journalism and Communication	-0.283	0.102	0.224(ns)
	Law	.349*	0.095	0.017*
	Performing Arts	-0.011	0.103	1.000(ns)
	Pharmacy	-0.141	0.102	0.976(ns)
	Science	0.198	0.087	0.531(ns)
	Social Work	0.037	0.093	1.000(ns)
Performing Arts	Arts	0.162	0.098	0.910(ns)
	Commerce	0.107	0.091	0.994(ns)
	Education and Psychology	-0.16	0.094	0.895(ns)
	Engineering and Technology	0.242	0.09	0.273(ns)
	Family and Community Science	0.049	0.112	1.000(ns)
	Fine Arts	0.018	0.106	1.000(ns)
	Journalism and Communication	-0.272	0.11	0.400(ns)
	Law	.360*	0.104	0.034*
	Management Studies	0.011	0.103	1.000(ns)
	Pharmacy	-0.13	0.111	0.994(ns)
	Science	0.209	0.097	0.616(ns)
	Social Work	0.048	0.102	1.000(ns)
Pharmacy	Arts	0.293	0.098	0.137(ns)
	Commerce	0.237	0.091	0.314(ns)
	Education and Psychology	-0.029	0.094	1.000(ns)
	Engineering and Technology	.372*	0.09	0.005**
	Family and Community Science	0.18	0.112	0.926(ns)
	Fine Arts	0.149	0.105	0.971(ns)
	Journalism and Communication	-0.142	0.11	0.985(ns)
	Law	.490*	0.103	0.000***
	Management Studies	0.141	0.102	0.976(ns)
	Performing Arts	0.13	0.111	0.994(ns)
	Science	.340*	0.096	0.032*
	Social Work	0.178	0.102	0.868(ns)
Science	Arts	-0.047	0.081	1.000(ns)
	Commerce	-0.103	0.073	0.972(ns)
	Education and Psychology	-.369*	0.077	0.000***
	Engineering and Technology	0.033	0.072	1.000(ns)
	Family and Community Science	-0.16	0.098	0.918(ns)

	Fine Arts	-0.191	0.09	0.654(ns)
	Journalism and Communication	-.481*	0.095	0.000***
	Law	0.151	0.088	0.886(ns)
	Management Studies	-0.198	0.087	0.531(ns)
	Performing Arts	-0.209	0.097	0.616(ns)
	Pharmacy	-.340*	0.096	0.032*
	Social Work	-0.161	0.086	0.809(ns)
Social Work	Arts	0.114	0.088	0.985(ns)
	Commerce	0.059	0.08	1.000(ns)
	Education and Psychology	-0.208	0.084	0.390(ns)
	Engineering and Technology	0.194	0.079	0.411(ns)
	Family and Community Science	0.001	0.103	1.000(ns)
	Fine Arts	-0.03	0.096	1.000(ns)
	Journalism and Communication	-0.32	0.101	0.089(ns)
	Law	0.312	0.094	0.053(ns)
	Management Studies	-0.037	0.093	1.000(ns)
	Performing Arts	-0.048	0.102	1.000(ns)
	Pharmacy	-0.178	0.102	0.868(ns)
	Science	0.161	0.086	0.809(ns)

However, Table 123 reports multiple comparisons in post-hoc Games-Howell test. It infers that there is a significant difference among various faculties in perception of students towards 'leadership qualities of teachers'.

Perception of various faculties towards 'Leadership qualities of teachers' (LQT) in Games -Howell

'Arts': Table 123 reports that faculty of 'Arts'(M=3.88) differs significantly with 'E&P'(M=4.20) and 'J&C'(M=4.31) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'J&C' as compared to other groups.

'Commerce': Table 123 reports that faculty of 'Commerce'(M=3.88) differs significantly with 'E&P'(M=4.20) and 'J&C'(M=4.31) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'J&C' as compared to other groups.

'Education and Psychology' (E&P): Table 123 reports that faculty of 'E&P'(M=4.20) differs significantly with 'Commerce'(M=3.93), 'E&T'(M=3.80), 'Law'(M=3.68) and 'Science'(M=3.83) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'E&P' as compared to other groups.

'Engineering and Technology' (E&T): Table 123 reports that faculty of 'E&T'(M=3.80) differs significantly with 'E&P'(M=4.20), 'J&C'(M=4.31) and 'Pharmacy' in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'J&C' as compared to other groups.

'Family and Community Science' (F&CS): 'Engineering and Technology' (E&T): Table 123 reports that faculty of 'F&CS' does not differ significantly from other groups.

'Fine Arts': Table 123 reports that faculty of 'Fine Arts'(M=4.02) differs significantly with 'Law'(M=3.68), in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'Fine Arts' as compared to the other group.

'Journalism and Communication': Table 123 reports that faculty of 'J&C'(M=4.31) differs significantly from 'E&T'(M=3.80), 'Arts'(M=3.88), 'Commerce'(M=3.93), 'Law'(M=3.68), and 'Science'(M=3.83) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'J&C' as compared to other groups.

'Law': Table 123 reports that faculty of 'Law'(M=3.68) differs significantly from 'E&P'(M=4.20), 'Fine Arts'(M=4.02), 'J&C'(M=4.31), 'MS'(M=4.03), and 'Pharmacy'(M=4.17) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'J&C' as compared to other groups.

'Management Studies': Table 123 reports that faculty of 'MS'(M=4.03) differs significantly from 'Law'(M=3.68) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'MS' as compared to another group.

'Performing Arts (PA)': Table 123 reports that faculty of 'PA'(M=4.04) differs significantly from 'Law'(M=3.68) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'PA' as compared to another group.

'Pharmacy': Table 123 reports that faculty of 'Pharmacy'(M=4.17) differs significantly with 'E&T'(M=3.80), 'Law'(M=3.68) and 'Science'(M=3.83) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'Pharmacy' as compared to other groups.

'Science': Table 123 reports that faculty of 'Science' (M=3.83) differs significantly with 'E&P'(M=4.20) and 'J&C'(M=4.31) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'J&C' as compared to other groups.

'Social Work': Table 123 reports that faculty of 'Social Work'(M=3.99) differs significantly with 'Law'(M=3.68) in their perception towards 'LQT'. Table 120 reports that perception towards 'LQT' is significantly better and above agreement in 'SW' as compared to the other group.

Q12 of the questionnaire explores what should have been better in your faculty from the current position? There are 21 statements on which students have shown their perception towards various items/ statements regarding teachers in different areas with respect to their faculties. Kruskal Wallis H test is used to know the significant difference between faculties with respect to perception of students towards various statements about their respective faculties.

Improvement in 'Perception of teachers' from the current position among various areas

H_0: x̃ Arts = x̃=Commerce = x̃ Education and Psychology= x̃ Engineering and technology= x̃ Family and community science= x̃ Fine arts= x̃ Journalism and Communication= x̃ Law= x̃ Management Studies= x̃ Performing Arts= x̃ Pharmacy= x̃ Science= x̃ Social Work

Ha: At least one of the x̃ differs significantly.

Table 124

Mean ranks of Kruskal Wallis test

Perception towards Teachers	Name of the faculty respondent belongs to	N	Mean Rank
Teachers guide us with finding opportunities for building successful careers for ourselves (part of self-awareness)	Arts	203	946.44
	Commerce	299	996.12
	Education and Psychology	168	1013.37
	Engineering and Technology	292	912.58
	Family and Community Science	127	1030.40
	Fine Arts	101	946.15
	Journalism and Communication	52	965.64
	Law	142	938.80
	Management Studies	97	991.10
	Performing Arts	105	1072.35
	Pharmacy	60	995.34
	Science	203	957.00

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	Social Work	100	1009.17
	Total	1949	
Time management of teachers	Arts	203	952.31
	Commerce	299	969.48
	Education and Psychology	168	884.50
	Engineering and Technology	292	976.44
	Family and Community Science	127	1037.27
	Fine Arts	101	932.47
	Journalism and Communication	52	1072.37
	Law	142	956.70
	Management Studies	97	966.42
	Performing Arts	105	1053.54
	Pharmacy	60	1034.92
	Science	203	996.79
	Social Work	100	970.33
	Total	1949	
No. of teachers	Arts	203	984.11
	Commerce	299	1033.63
	Education and Psychology	168	951.31
	Engineering and Technology	292	920.78
	Family and Community Science	127	1004.57
	Fine Arts	101	957.37
	Journalism and Communication	52	828.67
	Law	142	927.44
	Management Studies	97	924.87
	Performing Arts	105	1041.20
	Pharmacy	60	1009.37
	Science	203	1020.95
	Social Work	100	968.40
	Total	1949	
Enhancing creativity skills of students	Arts	203	954.12
	Commerce	299	1074.63
	Education and Psychology	168	973.35
	Engineering and Technology	292	921.79
	Family and Community Science	127	1013.39
	Fine Arts	101	978.35
	Journalism and Communication	52	923.36
	Law	142	949.21
	Management Studies	97	945.03
	Performing Arts	105	1089.33
	Pharmacy	60	992.73
	Science	203	896.73
	Social Work	100	946.25
	Total	1949	

The quality of faculty members' knowledge	Arts	203	976.46
	Commerce	299	1062.13
	Education and Psychology	168	949.70
	Engineering and Technology	292	929.64
	Family and Community Science	127	1050.68
	Fine Arts	101	963.34
	Journalism and Communication	52	816.90
	Law	142	933.04
	Management Studies	97	868.69
	Performing Arts	105	1097.43
	Pharmacy	60	978.43
	Science	203	943.65
	Social Work	100	980.12
	Total	1949	
Performance of teachers w.r.t. communication	Arts	203	969.13
	Commerce	299	1062.47
	Education and Psychology	168	937.40
	Engineering and Technology	292	862.17
	Family and Community Science	127	1018.96
	Fine Arts	101	1006.75
	Journalism and Communication	52	912.19
	Law	142	986.67
	Management Studies	97	930.75
	Performing Arts	105	1060.95
	Pharmacy	60	927.73
	Science	203	995.73
	Social Work	100	985.16
	Total	1949	
Engaging students in sessions	Arts	203	962.75
	Commerce	299	994.64
	Education and Psychology	168	1011.73
	Engineering and Technology	292	904.02
	Family and Community Science	127	1100.16
	Fine Arts	101	937.36
	Journalism and Communication	52	929.40
	Law	142	976.10
	Management Studies	97	938.54
	Performing Arts	105	1032.83
	Pharmacy	60	1021.21
	Science	203	952.46
	Social Work	100	980.62
	Total	1949	
Assessment criteria	Arts	203	944.24
	Commerce	299	981.77

	Education and Psychology	168	979.49
	Engineering and Technology	292	885.35
	Family and Community Science	127	1004.79
	Fine Arts	101	1001.75
	Journalism and Communication	52	1035.55
	Law	142	947.17
	Management Studies	97	1016.27
	Performing Arts	105	1053.01
	Pharmacy	60	1031.88
	Science	203	1008.29
	Social Work	100	990.98
	Total	1949	
Making curriculum more of industry-oriented	Arts	203	932.23
	Commerce	299	948.57
	Education and Psychology	168	1044.99
	Engineering and Technology	292	871.24
	Family and Community Science	127	1011.36
	Fine Arts	101	973.55
	Journalism and Communication	52	1003.14
	Law	142	997.28
	Management Studies	97	1104.11
	Performing Arts	105	961.84
	Pharmacy	60	966.93
	Science	203	1029.72
	Social Work	100	1017.60
	Total	1949	
Placement activities	Arts	203	930.91
	Commerce	299	950.10
	Education and Psychology	168	1036.52
	Engineering and Technology	292	875.22
	Family and Community Science	127	925.42
	Fine Arts	101	997.61
	Journalism and Communication	52	983.07
	Law	142	1001.07
	Management Studies	97	1085.57
	Performing Arts	105	1046.60
	Pharmacy	60	1025.48
	Science	203	999.81
	Social Work	100	1062.79
	Total	1949	
Industry-academic collaboration	Arts	203	966.35
	Commerce	299	925.09
	Education and Psychology	168	1087.12
	Engineering and Technology	292	839.37

	Family and Community Science	127	1000.81
	Fine Arts	101	1020.59
	Journalism and Communication	52	975.84
	Law	142	1058.79
	Management Studies	97	1009.89
	Performing Arts	105	969.50
	Pharmacy	60	943.13
	Science	203	1030.84
	Social Work	100	1028.93
	Total	1949	
Student exchange programme with foreign institutions	Arts	203	967.94
	Commerce	299	1025.76
	Education and Psychology	168	941.14
	Engineering and Technology	292	940.53
	Family and Community Science	127	1008.07
	Fine Arts	101	957.11
	Journalism and Communication	52	887.12
	Law	142	950.05
	Management Studies	97	904.07
	Performing Arts	105	1053.98
	Pharmacy	60	931.93
	Science	203	996.82
	Social Work	100	1019.73
	Total	1949	
Teachers' capability to use technology	Arts	203	953.74
	Commerce	299	1035.46
	Education and Psychology	168	911.46
	Engineering and Technology	292	923.91
	Family and Community Science	127	1014.33
	Fine Arts	101	973.94
	Journalism and Communication	52	954.12
	Law	142	985.63
	Management Studies	97	971.40
	Performing Arts	105	1098.92
	Pharmacy	60	958.33
	Science	203	939.28
	Social Work	100	996.05
	Total	1949	
Treating students fairly	Arts	203	958.67
	Commerce	299	939.09
	Education and Psychology	168	1073.03
	Engineering and Technology	292	879.36
	Family and Community Science	127	964.12
	Fine Arts	101	982.18

	Journalism and Communication	52	995.57
	Law	142	1086.56
	Management Studies	97	1024.97
	Performing Arts	105	1024.14
	Pharmacy	60	895.00
	Science	203	991.90
	Social Work	100	981.17
	Total	1949	
Foreign teachers to teach few classes/ units	Arts	203	959.76
	Commerce	299	945.65
	Education and Psychology	168	1089.00
	Engineering and Technology	292	876.45
	Family and Community Science	127	1002.17
	Fine Arts	101	978.63
	Journalism and Communication	52	967.38
	Law	142	951.98
	Management Studies	97	1069.59
	Performing Arts	105	1025.74
	Pharmacy	60	911.13
	Science	203	1020.09
	Social Work	100	990.20
	Total	1949	
More experiential learning than theoretical learning	Arts	203	961.69
	Commerce	299	1036.97
	Education and Psychology	168	903.07
	Engineering and Technology	292	886.22
	Family and Community Science	127	1017.35
	Fine Arts	101	1097.85
	Journalism and Communication	52	901.37
	Law	142	916.59
	Management Studies	97	955.68
	Performing Arts	105	1123.42
	Pharmacy	60	970.01
	Science	203	1022.51
	Social Work	100	909.64
	Total	1949	
Respect for students from all backgrounds and cultures	Arts	203	976.55
	Commerce	299	1044.73
	Education and Psychology	168	951.49
	Engineering and Technology	292	896.76
	Family and Community Science	127	999.01
	Fine Arts	101	1006.91
	Journalism and Communication	52	854.76
	Law	142	998.72

	Management Studies	97	971.94
	Performing Arts	105	1039.86
	Pharmacy	60	909.20
	Science	203	981.08
	Social Work	100	959.45
	Total	1949	
Teachers' readiness to help students	Arts	203	982.69
	Commerce	299	1069.24
	Education and Psychology	168	925.70
	Engineering and Technology	292	903.16
	Family and Community Science	127	961.35
	Fine Arts	101	996.17
	Journalism and Communication	52	836.72
	Law	142	955.41
	Management Studies	97	971.22
	Performing Arts	105	1057.74
	Pharmacy	60	973.22
	Science	203	988.21
	Social Work	100	956.92
	Total	1949	
Understanding nature of teachers towards students	Arts	203	908.98
	Commerce	299	936.71
	Education and Psychology	168	1001.09
	Engineering and Technology	292	910.02
	Family and Community Science	127	1044.51
	Fine Arts	101	996.81
	Journalism and Communication	52	987.47
	Law	142	1047.34
	Management Studies	97	1077.24
	Performing Arts	105	952.28
	Pharmacy	60	976.44
	Science	203	1010.78
	Social Work	100	1001.08
	Total	1949	
Building relationships with students	Arts	203	967.92
	Commerce	299	980.76
	Education and Psychology	168	1052.86
	Engineering and Technology	292	883.80
	Family and Community Science	127	1004.30
	Fine Arts	101	893.49
	Journalism and Communication	52	1014.79
	Law	142	996.77
	Management Studies	97	989.33
	Performing Arts	105	976.52

	Pharmacy	60	1060.50
	Science	203	995.16
	Social Work	100	993.45
	Total	1949	
Flexible Curriculum (offer Choice Based Credit System CBCS)	Arts	203	970.30
	Commerce	299	1001.57
	Education and Psychology	168	1066.15
	Engineering and Technology	292	863.17
	Family and Community Science	127	1038.30
	Fine Arts	101	965.54
	Journalism and Communication	52	923.25
	Law	142	956.06
	Management Studies	97	965.94
	Performing Arts	105	1020.70
	Pharmacy	60	1033.18
	Science	203	979.33
	Social Work	100	978.60
	Total	1949	

Table 124 reports mean ranks of various faculties w.r.t to perception towards improvements to the following statements. However, Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported for 'Teachers guide us with finding opportunities for building successful careers for us' as $\chi2$ (12) = 12.230, $p=.427>.05$, fails to reject null hypothesis. It infers that there is no significant difference among faculties w.r.t. 'Teachers guide us with finding opportunities for building successful careers for us'. Table 124 reports mean ranks for 'Teachers guide us with finding opportunities for building successful careers for us' for Arts (946.44), Commerce (996.12), Education and Psychology (E&P) (1013.37), E&T (912.58), Family and Community Science (F&CS) (1030.40), Fine Arts (946.15), Journalism and communication (J&C) (965.64), Law (938.80), Management Studies (991.10), Performing Arts (1072.35), Pharmacy (995.34), Science (957.00), Social Work (1009.17). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of E&T.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Time management of teachers' as $\chi2$ (12) = 12.659, $p=.394>.05$, fails to reject null hypothesis. It infers that there is no significant difference among faculties w.r.t. 'Time management of teachers'. Table 124 reports mean ranks for 'Time management of teachers' for Arts (952.31), Commerce (969.48), Education and Psychology (E&P) (884.50), E&T (976.44), Family and Community Science (F&CS) (1037.27), Fine Arts (932.47), Journalism and communication (J&C) (1072.37), Law

(956.70), Management Studies (966.42), Performing Arts (1053.54), Pharmacy (1034.92), Science (996.79), Social Work (970.33). The highest reported rank is by faculty of 'Journalism and Communication' and lowest rank reported is by faculty of 'E&P'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'No. of teachers' as $\chi2$ (12) = 16.540, $p=.168>.05$, fails to reject null hypothesis. It infers that there is no significant difference among faculties w.r.t. 'No. of teachers.' However, Table 124 reports mean ranks for 'No. of teachers' for Arts (984.11), Commerce (1033.63), Education and Psychology (E&P) (951.31), E&T (920.78), Family and Community Science (F&CS) (1004.57), Fine Arts (957.37), Journalism and communication (J&C) (838.67), Law (927.44), Management Studies (924.87), Performing Arts (1041.20), Pharmacy (1009.37), Science (1020.95), Social Work (968.40). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of 'J&C'.

Table 125 reports for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Enhancing creativity skills of students' as $\chi2$ (12) = 24.388, $p=.018<.05$, rejects null hypothesis. It infers that one group differs significantly. However, Table 124 reports mean ranks for 'Enhancing creativity skills of students' for Arts (954.12), Commerce (1074.63), Education and Psychology (E&P) (973.35), E&T (921.79), Family and Community Science (F&CS) (1013.39), Fine Arts (978.35), Journalism and communication (J&C) (923.36), Law (949.21), Management Studies (945.03), Performing Arts (1089.33), Pharmacy (992.73), Science (896.73), Social Work (946.25). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of 'Science'. It infers there is a significant difference between faculty of 'PA' and 'Science' in perception towards 'Enhancing creativity of students'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'The quality of faculty members' knowledge' as $\chi2$ (12) = 28.049, $p=.005<.05$, rejects null hypothesis. It infers that one group differs significantly in their perception towards 'The quality of faculty members' knowledge'. However, Table 124 reports mean ranks for 'The quality of faculty members' knowledge' for Arts (976.46), Commerce (1062.13), Education and Psychology (E&P) (949.70), E&T (929.64), Family and Community Science (F&CS) (1050.68), Fine Arts (963.34), Journalism and communication (J&C) (816.90), Law (933.04), Management Studies (868.69), Performing Arts (1097.43), Pharmacy (978.43), Science (943.65), Social Work (980.12). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of

'J&C'. It infers that there is a significant difference in perception towards 'The quality of faculty members' knowledge' between faculty of 'PA' and 'J&C'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Performance of teachers' w.r.t. communication' as $\chi 2$ (12) = 27.157, $p=$.007<.05, rejects null hypothesis. It infers that one group differs significantly in their perception towards Performance of teachers' w.r.t. communication'. However, Table 123 reports mean ranks for 'Performance of teachers' for Arts (969.13), Commerce (1062.47), Education and Psychology (E&P) (937.40), E&T (862.17), Family and Community Science (F&CS) (1018.96), Fine Arts (1006.75), Journalism and communication (J&C) (912.19), Law (986.67), Management Studies (930.75), Performing Arts (1060.95), Pharmacy (927.73), Science (995.73), Social Work (985.16). The highest reported rank is by faculty of 'Commerce' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference in the perception towards 'Performance of teachers' w.r.t. communication' between faculty of 'Commerce' and faculty of 'E&T'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Engaging students in sessions' as $\chi 2$ (12) = 16.401, $p=$.174>.05, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Engaging students in sessions' for Arts (962.75), Commerce (994.64), Education and Psychology (E&P) (1011.73), E&T (904.02), Family and Community Science (F&CS) (1100.16), Fine Arts (937.36), Journalism and communication (J&C) (929.40), Law (976.10), Management Studies (938.54), Performing Arts (1032.83), Pharmacy (1021.21), Science (952.46), Social Work (980.62). The highest reported rank is by faculty of 'F&CS' and lowest rank reported is by faculty of 'E&T'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Assessment criteria' as $\chi 2$ (12) = 14.634, $p=$.262>.05, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Assessment criteria' for Arts (944.24), Commerce (981.77), Education and Psychology (E&P) (979.49), E&T (885.35), Family and Community Science (F&CS) (1004.79), Fine Arts (1001.75), Journalism and communication (J&C) (1035.55), Law (947.17), Management Studies (1016.27), Performing Arts (1053.01), Pharmacy (1031.88), Science (1008.29), Social Work (990.98). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of 'E&T'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Making curriculum more of industry-oriented' as χ^2 (12) = 24.611, p=.017<.05, rejects null hypothesis. It infers that there is a significant difference between faculties. However, Table 123 reports mean ranks for 'Making curriculum more of industry-oriented' for Arts (932.23), Commerce (948.57), Education and Psychology (E&P) (1044.99), E&T (871.24), Family and Community Science (F&CS) (1011.36), Fine Arts (973.55), Journalism and communication (J&C) (1003.14), Law (997.28), Management Studies (1104.11), Performing Arts (961.84), Pharmacy (966.93), Science (1029.72), Social Work (1017.60). The highest reported rank is by faculty of 'Management Studies' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'Management Studies' and 'E&T'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Placement activities' as χ^2 (12) = 25.009, p=.015<.05, rejects null hypothesis. It infers that there is a significant difference between groups. However, Table 124 reports mean ranks for 'Placement activities' for Arts (930.91), Commerce (950.10), Education and Psychology (E&P) (1036.52), E&T (875.22), Family and Community Science (F&CS) (925.42), Fine Arts (997.61), Journalism and communication (J&C) (983.07), Law (1001.07), Management Studies (1085.57), Performing Arts (1046.60), Pharmacy (1025.48), Science (999.81), Social Work (1062.79). The highest reported rank is by faculty of 'Management Studies' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'Management Studies' and 'E&T' in perception towards Placement activities'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Industry-academic collaboration' as χ^2 (12) = 35.925, p=.000<.05, rejects null hypothesis. It infers that there is a significant difference between groups. However, Table 124 reports mean ranks for 'Industry-academic collaboration' for Arts (966.35), Commerce (925.09), Education and Psychology (E&P) (1087.12), E&T (839.37), Family and Community Science (F&CS) (1000.81), Fine Arts (1020.59), Journalism and communication (J&C) (975.84), Law (1058.79), Management Studies (1009.89), Performing Arts (969.50), Pharmacy (943.13), Science (1030.84), Social Work (1028.93). The highest reported rank is by faculty of 'E&P' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'E&P' and E&T' in perception towards Industry-academic collaboration'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Student exchange programme with foreign institutions' as $\chi 2$ (12) = 12.057, $p=.441>.05$, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Student exchange programme with foreign institutions' for Arts (967.94), Commerce (1025.76), Education and Psychology (E&P) (941.14), E&T (940.53), Family and Community Science (F&CS) (1008.07), Fine Arts (957.11), Journalism and communication (J&C) (887.12), Law (950.05), Management Studies (904.07), Performing Arts (1053.98), Pharmacy (931.93), Science (996.82), Social Work (1019.73). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of 'J&C'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Teachers' capability to use technology' as $\chi 2$ (12) = 16.297, $p=.178>.05$, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Teachers' capability to use technology' for Arts (953.74), Commerce (1035.46), Education and Psychology (E&P) (911.46), E&T (923.91), Family and Community Science (F&CS) (1014.33), Fine Arts (973.94), Journalism and communication (J&C) (954.12), Law (985.63), Management Studies (971.40), Performing Arts (1098.92), Pharmacy (958.33), Science (939.28), Social Work (996.05). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of 'E&P'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Treating students fairly' as $\chi 2$ (12) = 24.840, $p=.016<.05$, rejects null hypothesis. It infers that there is a significant difference between groups. However, Table 124 reports mean ranks for 'Treating students fairly' for Arts (958.67), Commerce (939.09), Education and Psychology (E&P) (1073.03), E&T (879.36), Family and Community Science (F&CS) (964.12), Fine Arts (982.18), Journalism and communication (J&C) (995.57), Law (1086.56), Management Studies (1024.97), Performing Arts (1024.14), Pharmacy (895.00), Science (991.90), Social Work (981.17). The highest reported rank is by faculty of 'Law' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'Law' and 'E&T' in their perception towards 'Treating students fairly'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Foreign teachers to teach few classes' as $\chi 2$ (12) = 25.126, $p=.014<.05$, rejects null hypothesis. It infers that there is a significant difference between

groups. However, Table 124 reports mean ranks for 'Foreign teachers to teach few classes' for Arts (959.76), Commerce (945.65), Education and Psychology (E&P) (1089.00), E&T (876.45), Family and Community Science (F&CS) (1002.17), Fine Arts (978.63), Journalism and communication (J&C) (967.38), Law (951.98), Management Studies (1069.59), Performing Arts (1025.74), Pharmacy (911.13), Science (1020.09), Social Work (990.20). The highest reported rank is by faculty of 'E&P' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'E&P' and 'E&T' in their perception towards Foreign teachers to teach few classes'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'More experiential learning than theoretical learning' as $\chi2$ (12) = 34.786, p=.001<.05, rejects null hypothesis. It infers that there is a significant difference between groups. However, Table 124 reports mean ranks for 'More experiential learning than theoretical learning' for Arts (961.69), Commerce (1036.97), Education and Psychology (E&P) (903.07), E&T (886.22), Family and Community Science (F&CS) (1017.35), Fine Arts (1097.85), Journalism and communication (J&C) (901.37), Law (916.59), Management Studies (955.68), Performing Arts (1123.42), Pharmacy (970.01), Science (1022.51), Social Work (909.64). The highest reported rank is by faculty of 'Performing Arts' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'PA' and 'E&T' in their perception towards 'More experiential learning than theoretical learning'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Respect for students from all backgrounds and cultures as $\chi2$ (12) = 17.324, p=.138>.05, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Respect for students from all backgrounds and cultures' for Arts (976.55), Commerce (1044.73), Education and Psychology (E&P) (951.49), E&T (896.76), Family and Community Science (F&CS) (999.01), Fine Arts (1006.91), Journalism and communication (J&C) (854.76), Law (998.72), Management Studies (971.94), Performing Arts (1039.86), Pharmacy (909.20), Science (981.08), Social Work (959.45). The highest reported rank is by faculty of 'Commerce' and lowest rank reported is by faculty of 'J&C'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Teachers' readiness to help students' as $\chi2$ (12) = 22.237, p=.035<.05, rejects null hypothesis. It infers that there is a significant difference between groups. However, Table 124 reports mean ranks for 'Teachers' readiness to help students'

for Arts (982.69), Commerce (1069.24), Education and Psychology (E&P) (925.70), E&T (903.16), Family and Community Science (F&CS) (961.35), Fine Arts (996.17), Journalism and communication (J&C) (836.72), Law (955.41), Management Studies (971.22), Performing Arts (1057.74), Pharmacy (973.22), Science (988.21), Social Work (956.92). The highest reported rank is by faculty of 'Commerce' and lowest rank reported is by faculty of 'J&C'. It infers that there is a significant difference between faculty of 'Commerce' and 'J&C' in perception towards Teachers' readiness to help students.'

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Understanding nature of teachers towards students' as $\chi2$ (12) = 18.619, p=.098>.05, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Understanding nature of teachers towards students' for Arts (908.98), Commerce (936.71), Education and Psychology (E&P) (1001.09), E&T (910.02), Family and Community Science (F&CS) (1044.51), Fine Arts (996.81), Journalism and communication (J&C) (987.47), Law (1077.24), Management Studies (1077.24), Performing Arts (952.28), Pharmacy (976.44), Science (1010.78), Social Work (1001.08). The highest reported rank is by faculty of 'Management Studies' and lowest rank reported is by faculty of 'Arts'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Building relationships with students' as $\chi2$ (12) = 16.964, p=.151>.05, fails to reject null hypothesis. It infers that there is no significant difference between groups. However, Table 124 reports mean ranks for 'Building relationships with students' for Arts (967.92), Commerce (980.76), Education and Psychology (E&P) (1052.86), E&T (883.80), Family and Community Science (F&CS) (1004.30), Fine Arts (893.49), Journalism and communication (J&C) (1014.79), Law (996.77), Management Studies (989.33), Performing Arts (976.52), Pharmacy (1060.50), Science (995.16), Social Work (993.45). The highest reported rank is by faculty of 'Pharmacy' and lowest rank reported is by faculty of 'E&T'.

Table 125 reports values for Kruskal Wallis test that is conducted at 5% significant level. The values are reported 'Flexible Curriculum (offer Choice Based Credit System CBCS)' as $\chi2$ (12) = 22.103, p=.036<.05, rejects null hypothesis. It infers that there is a significant difference between groups. However, Table 124 reports mean ranks for 'Flexible Curriculum (offer Choice Based Credit System CBCS)' for Arts (970.30), Commerce (1001.57), Education and Psychology (E&P) (1066.15), E&T (863.17), Family and Community Science (F&CS) (1038.30), Fine Arts (965.54), Journalism and communication

(J&C) (923.25), Law (956.06), Management Studies (965.94), Performing Arts (1020.70), Pharmacy (1033.18), Science (979.33), Social Work (978.60). The highest reported rank is by faculty of 'Pharmacy' and lowest rank reported is by faculty of 'E&T'. It infers that there is a significant difference between faculty of 'Pharmacy' and 'E&T' in their perception towards 'Flexible Curriculum (offer Choice Based Credit System CBCS)'.

Table 125

Perception of students for improvement in following areas from the current position

Statements	Kruskal-Wallis H	df	Asymp. Sig.
Teachers guide us with finding opportunities for building successful careers for us	12.230	12	.427(ns)
Time management of teachers	12.659	12	.394(ns)
No. of teachers	16.540	12	.168(ns)
Enhancing creativity skills of students	24.388	12	.018*
The quality of faculty members' knowledge	28.049	12	.005*
Performance of teachers	27.157	12	.007*
Engaging students in sessions	16.401	12	.174(ns)
Assessment criteria	14.634	12	.262(ns)
Making curriculum more of industry-oriented	24.611	12	.017*
Placement activities	25.009	12	.015*
Industry-academic collaboration	35.925	12	.000***
Student exchange programme with foreign institutions	12.057	12	.441(ns)
Teachers' capability to use technology	16.297	12	.178(ns)
Treating students fairly	24.840	12	.016*
Foreign teachers to teach few classes	25.126	12	.014*
More experiential learning than theoretical learning	34.786	12	.001**
Respect for students from all backgrounds and cultures	17.324	12	.138(ns)
Teachers' readiness to help students	22.237	12	.035*
Understanding nature of teachers towards students	18.619	12	.098(ns)
Building relationships with students	16.964	12	.151(ns)
Flexible Curriculum (offer Choice Based Credit System)	22.103	12	.036*

a. Kruskal Wallis Test

b. Grouping Variable: Name of the faculty respondent belongs to

Table 125 reports *p* values of statements and shows whether there is any significant difference in the perception of students towards statements.

The next question in the questionnaire tries to explore impact of various tools (Curriculum, Teaching methods (TM), and Assessment methods (AM)) on the abilities of students that are tabulated at Table 126.

Perception of students towards Abilities' enhancing tools: Curriculum, Teaching Methods, and Assessment Methods

Table 126

Mean ranks of Abilities enhancing tools: Curriculum, TM, AM

Abilities of students	Abilities' enhancing Tools	N	Mean Rank
Problem solving skills are enhanced through	Curriculum	1949	2804.48
	Teaching methods	1949	3137.52
	Assessment methods	1949	2830.00
Critical thinking skills are enhanced through	Curriculum	1949	2809.93
	Teaching methods	1949	3116.79
	Assessment methods	1949	2845.29
Engagement in deeper learning comes from	Curriculum	1949	2843.58
	Teaching methods	1949	3107.12
	Assessment methods	1949	2821.30
Strengths and weaknesses of students can be identified through	Curriculum	1949	2648.96
	Teaching methods	1949	3028.52
	Assessment methods	1949	3094.53
Team building attributes can be enhanced through	Curriculum	1949	2772.08
	Teaching methods	1949	3023.08
	Assessment methods	1949	2976.85
Innovation can be enhanced through	Curriculum	1949	2835.34
	Teaching methods	1949	3034.22
	Assessment methods	1949	2902.44
Creativity can be enhanced through	Curriculum	1949	2833.30
	Teaching methods	1949	3056.93
	Assessment methods	1949	2881.78
Confidence building gets better through	Curriculum	1949	2698.42
	Teaching methods	1949	3076.56
	Assessment methods	1949	2997.02
Professional (skill) education is enriched through	Curriculum	1949	2883.48
	Teaching methods	1949	3036.73
	Assessment methods	1949	2851.79
Chances of students' employability are enhanced through	Curriculum	1949	2864.01
	Teaching methods	1949	2980.89
	Assessment methods	1949	2927.10
Business and entrepreneurial skills are enhanced through	Curriculum	1949	2902.19
	Teaching methods	1949	3018.95
	Assessment methods	1949	2850.86
Research orientation of students gets boosted through	Curriculum	1949	2897.42
	Teaching methods	1949	3013.38
	Assessment methods	1949	2861.21
Ethics and values can be taught through	Curriculum	1949	2861.00
	Teaching methods	1949	3172.02
	Assessment methods	1949	2738.98
Basic concepts of students can be cleared through	Curriculum	1949	2857.77
	Teaching methods	1949	3151.76
	Assessment methods	1949	2762.48

Table 126 reports mean rank scores of all ability enhancing tools: Problem solving skills are enhanced through curriculum with a mean rank score (2804.48), teaching methods (3137.52), assessment methods (2830.00). It is seen that teaching methods report the highest mean rank score of all the three. Lowest mean rank is shown by Curriculum. Critical thinking skills are enhanced through curriculum (2809.93), Teaching methods (3116.79), and Assessment methods (2845.29). Here, teaching methods reports the highest mean rank score. Engagement in deeper learning comes from curriculum (2843.58), teaching methods (3107.12), and assessment methods (2821.30). Here, teaching methods reports the highest mean rank score. Strengths and weaknesses of students can be identified through curriculum (2648.96), teaching methods (3028.52), Assessment methods (3094.53). It is seen that assessment methods reports the highest mean score. Team building attributes can be enhanced through curriculum (2772.08), teaching methods (3023.08) and assessment methods (2976.85).

It is seen that assessment methods reports the highest mean score. Innovation can be enhanced through curriculum (2835.34), Teaching methods (3034.22), and Assessment methods (2902.44). Teaching methods report the highest mean rank. Creativity can be enhanced through curriculum (2833.30), teaching methods (3056.93), and assessment methods (2881.78). Teaching methods report the highest mean rank. Confidence building gets better through curriculum (2698.42), teaching methods (3076.56), assessment methods (2997.02). Teaching methods report the highest mean rank. Professional (skill) education is enriched through curriculum (2883.48), Teaching methods (3036.73), and Assessment methods (2851.79). Teaching methods show the highest mean rank of all three. Chances of students' employability are enhanced through Curriculum (2864.01), Teaching methods (2980.89), and Assessment methods (2927.10). Teaching methods report the highest mean rank. Business and entrepreneurial skills are enhanced through curriculum (2902.19), teaching methods (3018.95), and assessment methods (2850.86). It is seen that teaching methods report the highest mean rank. Research orientation of students gets boosted through curriculum (2897.42), teaching methods (3013.38) and assessment methods (2861.21). Teaching methods report the highest mean rank. Ethics and values can be taught through curriculum (2861.00), teaching methods (3172.02), assessment methods (2738.98). Teaching methods report the highest mean rank. Basic concepts of students can be cleared through curriculum (2857.77), teaching methods (3151.76) and assessment methods (2762.48). Teaching methods report the highest mean rank. Table 128 shows whether there is any significant difference between the groups.

Table 127

Kruskal Wallis Test for Abilities' enhancing tools: Curriculum, TM, AM

Abilities of students	Chi-square	df	Asymp. Sig.
Problem solving skills are enhanced through Curriculum, TM, Assessment	51.719	2	.000***
Critical thinking skills are enhanced through Curriculum, TM, Assessment	42.563	2	.000***
Engagement in deeper learning comes from Curriculum, TM, Assessment	38.198	2	.000***
Strengths and weaknesses of students can be identified through Curriculum, TM, Assessment	86.756	2	.000***
Team building attributes can be enhanced through Curriculum, TM, Assessment	26.797	2	.000***
Innovation can be enhanced through Curriculum, TM, Assessment	15.551	2	.000***
Creativity can be enhanced through Curriculum, TM, Assessment	21.000	2	.000***
Confidence building gets better through Curriculum, TM, Assessment	60.375	2	.000***
Professional (skill) education is enriched through Curriculum, TM, Assessment	14.945	2	.001**
Chances of students' employability are enhanced through Curriculum, TM, Assessment	5.183	2	.075(ns)
Business and entrepreneurial skills are enhanced through Curriculum, TM, Assessment	11.202	2	.004**
Research orientation of students gets boosted through Curriculum, TM, Assessment	9.646	2	.008**
Ethics and values can be taught through Curriculum, TM, Assessment	75.390	2	.000***
Basic concepts of students can be cleared through Curriculum, TM, Assessment	62.945	2	.000***

a. Kruskal Wallis Test

b. Grouping Variable: Ability enhancing tools

ns: not significant

K Independent samples (Kruskal-Wallis) test at 5% α level is conducted to compare influence of 'teaching learning activities': curriculum, teaching methods, and assessment on students' abilities.

H0: x̃ Curriculum = x̃=teaching methods = x̃ Assessment

Ha: At least one of the x̃ differs significantly.

Table 126 reports that Problem solving skills are enhanced through Curriculum, TM, Assessment: There is a significant difference between teaching methods (highest mean rank) and Curriculum (lowest mean rank) χ^2 (2) = 51.719, $p<.05=.000$***. Critical thinking skills are enhanced through Curriculum, TM, Assessment: There is a significant difference between curriculum and TM as χ^2 (2) = 42.563, $p<.05=.000$***. Engagement in deeper learning comes from Curriculum, TM, Assessment: There is a significant difference between assessment methods and TM as χ^2 (2) = 38.198, $p<.05=.000$***. Strengths and weaknesses of students can be identified through Curriculum, TM, Assessment: There is a significant difference between assessment methods and curriculum as χ^2 (2) = 86.756, $p<.05=.000$***. Team building attributes can be enhanced through Curriculum, TM, Assessment: There is a significant difference between assessment methods and curriculum as χ^2 (2) = 26.797, $p<.05=.000$***. Innovation can be enhanced through Curriculum, TM, Assessment: There is a significant difference between curriculum and TM as χ^2 (2) = 15.551, $p<.05=.000$***. Creativity can be enhanced through Curriculum, TM, Assessment: There is a significant difference between assessment and TM as χ^2 (2) = 21.000, $p<.05=.000$***. Confidence building gets better through Curriculum, TM, Assessment: There is a significant difference between curriculum and TM as χ^2 (2) = 60.375, $p<.05=.000$***. Professional (skill) education is enriched through Curriculum, TM, Assessment: There is a significant difference between assessment and TM as χ^2 (2) = 14.945, $p<.05=.000$***. Chances of students' employability are enhanced through Curriculum, TM, Assessment: There is no significant difference among groups as χ^2 (2) = 5.183, $p=.075>.05$. Business and entrepreneurial skills are enhanced through Curriculum, TM, Assessment: There is a significant difference between assessment and TM as χ^2 (2) = 11.202, $p<.05=.004$**. Research orientation of students gets boosted through Curriculum, TM, Assessment: There is a significant difference between assessment and TM as χ^2 (2) = 9.646, $p<.05=.008$**. Ethics and values can be taught through Curriculum, TM, Assessment: There is a significant difference between assessment and TM as χ^2 (2) = 75.390, $p<.05=.000$***. Basic concepts of students can be cleared through Curriculum, TM,

Assessment: There is a significant difference between assessment and TM as χ2 (2) = 62.945, *p*<.05=.000***.

In order to find out significant difference among other groups, Two-sample Kolmogorov-Smirnov Test is used which is tabulated at Table 128 below.

Table 128

Two-Sample Kolmogorov-Smirnov Test: Comparisons between Curriculum, TM, AM

Variables	Comparisons	Sig values	Result
Problem solving skills are enhanced through Curriculum, TM, Assessment methods	Curriculum and Teaching methods	.000***	Significant
	Curriculum and Assessment methods	.756(ns)	Not significant
	TM and Assessment methods	.000***	Significant
Critical thinking skills are enhanced through	TM and Assessment methods	.000***	Significant
	TM and Curriculum	.000***	Significant
	Curriculum and Assessment	.622(ns)	Not significant
Engagement in deeper learning comes from	TM and curriculum	.000***	Significant
	Curriculum and Assessment	1.000(ns)	Not significant
	TM and Assessment methods	.000***	significant
Strengths and weaknesses of students can be identified through	TM and curriculum	.006*	Significant
	Curriculum and Assessment	.000***	Significant
	TM and Curriculum	.000***	Significant
Team building attributes can be enhanced through	TM and assessment	.045*	Significant
	Curriculum and Assessment	.003**	Significant
	TM and Curriculum	.000***	Significant
Innovation can be enhanced through	TM and assessment	.001**	Significant
	Curriculum and Assessment	.676(ns)	Not significant
	TM and Curriculum	.000***	significant
Creativity can be enhanced through	TM and assessment	.000***	Significant
	Curriculum and Assessment	.912(ns)	Not significant
	TM and Curriculum	.000***	significant
Confidence building gets better through	TM and assessment	.038*	Significant
	Curriculum and Assessment	.000***	Significant
	TM and Curriculum	.000***	Significant

Professional (skill) education is enriched through	Curriculum and TM	.002**	Significant
	Curriculum and Assessment	1.000(ns)	Not significant
	TM and Assessment methods	.000***	significant
Chances of students' employability are enhanced through	TM and assessment	.295(ns)	Not significant
	Curriculum and Assessment	.676(ns)	Not significant
	TM and Curriculum	.112(ns)	Not significant
Business and entrepreneurial skills are enhanced through	Curriculum and TM	.162(ns)	Not significant
	TM and assessment	.001**	Significant
	Curriculum and Assessment	.443(ns)	Not significant
Research orientation of students gets boosted through	Curriculum and TM	.029*	Significant
	TM and assessment	.000***	Significant
	Curriculum and Assessment	.853(ns)	Not significant
Ethics and values can be taught through	Curriculum and TM	.000***	Significant
	TM and assessment	.000***	Significant
	Curriculum and Assessment	.130(ns)	Not significant
Basic concepts of students can be cleared through	Curriculum and TM	.000***	Significant
	TM and assessment	.000***	Significant
	Curriculum and Assessment	.492(ns)	Not significant

Table 128 reports that there is a significant difference among other groups other than shown in Table 127.

'Problem solving skills are enhanced through Curriculum, TM, Assessment methods': There is no significant difference between curriculum and Assessment methods as $p=.756>.05$. However, there is a significant difference between Teaching methods and assessment methods as $p=.000<.05$. The results are shown in Annexures 3,4,5 and annexure 6 in the annexures section.

'Critical thinking skills are enhanced through Curriculum, TM, Assessment methods': Table 128 and Annexures 7,8, 9 and 10 in the annexure section report that TM and assessment methods differ significantly as $p=000***<.05$. Curriculum and TM also differ significantly as $p=.000***<.05$.

'Engagement in deeper learning comes from Curriculum, TM, Assessment': Table 128 and annexures 11, 12, 13, and 14 in the annexure section report that curriculum and TM differ significantly as $p=.000<.05$.

'Strengths and weaknesses of students can be identified through Curriculum, TM, Assessment': Table 128 and annexures 15, 16, 17, and 18 in the annexure section report that TM and AM differ significantly as $p=.006<.05$. Curriculum and AM also differ significantly as $p=.000<.05$.

'Team building attributes can be enhanced through Curriculum, TM, Assessment': Table 128 and annexures 19, 20, 21, and 22 in the annexures section report that curriculum and AM differ significantly as $p=.003<.05$. Curriculum and TM also differ significantly as $p=.000<.05$.

'Innovation can be enhanced through Curriculum, TM, Assessment': Table 128 and annexures 23, 24, 25, and 26 report that curriculum and TM differ significantly as $p=.000<.05$. However, there is no significant difference between curriculum and AM as $p=.676>.05$.

'Creativity can be enhanced through Curriculum, TM, Assessment' reports $\chi2$ (2) = 21.000, $p=.000<.05$. Table 128 and annexures 27, 28, 29, and 30 report that there is no significant difference between curriculum and AM as $p=.912>.05$. However, there is a significant difference between curriculum and TM as $p=.000<.05$.
'Confidence building gets better through Curriculum, TM, Assessment' reports $\chi2$ (2) = 60.375, $p=.000<.05$. Table 128 and annexures 31, 32, 33, and 34 report that there is a significant difference between curriculum and AM as $p=.000<.05$. There is a significant difference between curriculum and TM as $p=.000<.05$.

Professional (skill) education is enriched through Curriculum, TM, Assessment reports $\chi2$ (2) = 14.945, $p=.001<.05$. Table 128 and annexures 35, 36, 37, and 38 report that there is no significant difference between curriculum and AM as $p=1.000>.05$. However, there is a significant difference between TM and AM as $p=.000<.05$.
'Chances of students' employability are enhanced through Curriculum, TM, Assessment' reports $\chi2$ (2) = 5.183, $p=.075<.05$. Table 128 and annexures 39, 40, 41, and 42 report that there is no significant difference between TM and AM as $p=.295>.05$. There is no significant difference between curriculum and AM as $p=.676>.05$.

'Business and entrepreneurial skills are enhanced through Curriculum, TM, Assessment' reports $\chi2$ (2) = 11.202, $p=.004<.05$. Table 128 and annexures 43, 44, 45, and 46 report that there is a significant difference between TM and AM as $p=.001<.05$. However, there is no significant difference between curriculum and assessment as p=.443>.05.

'Research orientation of students gets boosted through Curriculum, TM, Assessment' reports $\chi2$ (2) = 9.646, p=.008<.05. Table 128 and annexures 47, 48, 49, and 50 report that there is a significant difference between TM and AM as p=.000<.05. However, there is no significant difference between curriculum and assessment as p=.853>.05.

'Ethics and values can be taught through Curriculum, TM, Assessment' reports $\chi2$ (2) = 75.390, p=.000<.05. Table 128 and annexures 51, 52, 53, 54 report that there is a significant difference between TM and AM as p=.000<.05. However, there is no significant difference between curriculum and assessment as p=.130>.05.

'Basic concepts of students can be cleared through Curriculum, TM, Assessment' reports $\chi2$ (2) = 62.945, p=.000<.05. Table 128 and annexures 55, 56, 57, and 58 report that there is a significant difference between TM and AM as p=.000<.05. However, there is no significant difference between curriculum and AM as p=.492>.05.

The last question in the questionnaire explores perception of students towards the soft skills of staff. There are 13 statements on which students have perceived about their staff. The mean and SD values are tabulated at Table 129. For further analysis one-sample t test, independent sample t test, and ANOVA is shown below.

Perception of students towards 'Soft Skills of Staff'

Mean and SD of Statements on Soft Skills of Staff

Table 129

'Soft skills of staff' (SSS)

Soft Skills of Staff	Mean	Std. Deviation
The staff is always available for consultation	3.79	1.121
The staff is competent and capable enough to resolve students' queries	3.88	1.051
The staff is polite	3.91	1.061
There is a grievance redressal mechanism available if I have any grievance against my teacher/s	3.62	1.109
The staff is more responsive to the feedback given by students	3.72	1.101
The staff responds to the students' grievances in a timely manner	3.69	1.101
The staff is always available for help	3.85	1.090
The staff is student friendly	3.89	1.075
The staff is flexible in approach	3.85	1.038
The staff is well-mannered	3.97	1.037
The staff is always ready to cope with new changes	3.84	1.066
The staff is well-versed with the technology	3.82	1.028
The language used by the staff is clear	4.00	1.031

Table 129 reports descriptive statistics for all the variables. The staff is always available for consultation ($\bar{x}$= 3.79, SD= 1.121), The staff is competent and capable

enough to resolve students' queries (x̄= 3088, SD= 1.051), The staff is polite (x̄=3.91, SD= 1.061), There is a grievance redressal mechanism available if I have any grievance against my teacher/s (x̄= 3.62, SD= 1.109), The staff is more responsive to the feedback given by students (x̄=3.72, SD= 1.101), The staff responds to the students' grievances in a timely manner (x̄=3.69, SD= 1.101), The staff is always available for help (x̄= 3.85, SD= 1.090), The staff is student friendly (x̄= 3.89, SD= 1.075), The staff is flexible in approach (x̄= 3.85, SD= 1.038), The staff is well-mannered (x̄= 3.97, SD= 1.037).

Components formed based on the Review of Literature: 'Soft skills of staff'

As statements are on a formative scale so factorization could not be conducted. Composite mean scores are obtained to measure perception of students towards 'Soft skills of staff'. The reliability of 'SSS' is (α= .952) reported at Table 129, which means that scale is highly reliable and shows 95% internal consistency among items.

Table 130

Descriptive Statistics of the component: 'Soft skills of staff'.

Component	N	Mean	Std Deviation	Skewness (with std error)	Kurtosis (with std error)	Cronbach's alpha
Soft skills of staff	1949	3.83	.852	-.745 (.055)	.246 (.111)	.952

Table 130 reveals descriptive statistics and Cronbach's alpha of the component 'SSS'. One sample – t-test is shown in table 129.

Analysis of Soft Skills of Staff

Table 131

One sample t test is conducted at 5% α level of significance to know the perception of students regarding 'soft skills of staff'.

H$_0$: x̄ = μ H$_a$: x̄ ≠ μ

Where, μ is population mean or the test value (neutral value of 5-point Likert scale) and x̄ is the sample mean.

One-Sample t Test for soft skills of staff (SSS)

Test Value = 3					
T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
43.208	1948	0.000***	0.834	0.80	0.87

*** *p < 0.001*

Based on Table 131, the values for the component 'soft skills of staff' (M= 3.83, S.D. = .85); t (1948) = 43.20, *p* < .001. Hence, null hypothesis is rejected. It

infers that perception of students towards 'soft skills of staff' is above the neutral level. It means that perception of students is close to agreement towards 'soft skills of staff'.

Based on Gender

An independent-samples t-test at 5% α level was conducted to compare the perception of 'soft skills of staff' among males and females of the M. S. university. Levene's Test for Equality of Variances is shown at table 133 'soft skills of staff', $p = .20$ which is >.05, Thus, there is homogeneity of variance for the component: 'soft skills of staff'.

H0: μ Male = μ Female   Ha: μ Male ≠ μ Female

Table 132

Descriptive Statistics for Soft skills of Staff (SSS)

Descriptive Statistics for 2 components					
	Gender of the respondent	N	Mean	Std. Deviation	Std. Error Mean
TP	Male	823	3.76	.846	.029
	Female	1126	3.89	.852	.025

Descriptive statistics show mean and SD values for males and females. For males, (M=3.76, SD=.846) and females (M=3.89, SD=.852).

Table 133

Independent Sample t-test for Soft skills of staff: Gender

Independent Samples Test			SKS Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		1.604	
	Sig.		.206(ns)	
t-test for Equality of Means	t		-3.242	-3.246
	df		1947	1778.158
	Sig. (2-tailed)		.001*	.001*
	Mean Difference		-.126	-.126
	Std. Error Difference		.039	.039
	95% Confidence Interval of the Difference	Lower	-.203	-.203
		Upper	-.050	-.050

p<.05*

Table 132 and table 133 report values for 'soft skills of staff' male (M = 3.76, SD = .84) and female (M= 3.89, SD = .85); t (1947) = 1.799, *p*= 0.001* < .05, hence rejects null hypothesis. It infers that there is a significant difference between males and females in

perception towards 'soft skills of staff'. Females have a significantly better perception towards 'SSS', which is close to agreement as compared to males.

Based on Age

Table 134

Descriptive statistics for SSS: Age

	N	Mean	Std. Deviation	Std. Error
'Below 20'	495	3.872	.816	.037
'20-less than 25'	1296	3.82	.857	.024
'25 and above'	158	3.878	.914	.073

Table 134 shows mean and SD values for age for the component' SSS'. The highest mean belongs to the '25 and above' age group and the lowest mean belongs to the age group '20-less than 25'. Levene's test of homogeneity of variance is reported below.

Table 135

Levene's test of homogeneity of variance for 'Soft skills of staff': Age

	Levene Statistic	df1	df2	Sig.
Soft skills of staff	1.249	2	1946	.287 (ns)

ns: not significant

Table 135 reports results of 'Levene's test for equality of variances' for 'soft skills of staff', $p=.28 >.05$. It infers that there is a homogeneity of variances for the above component. Since, there is a homogeneity of variance, ANOVA is used for further analysis which is tabulated at table 136.

H0: μ below 20 = μ 20-less than 25= μ 25 and above

Ha: at least one of the μ differs significantly.

Table 136

ANOVA for 'Soft skills of staff': Age

		SS	df	MS	F	Sig.
TPT	Between Groups	1.228	2	.614	.846	.429(ns)
	Within Groups	1411.692	1946	.725		
	Total	1412.920	1948			

ns-not significant

Table 136 reports values for 'soft skills of staff', F (2, 1946) = 0.846, *p*= .429 > .05. As *p* value is more than .05, fails to reject null hypothesis. It infers that there is no significant difference among age groups for 'below 20' (M= 3.87, SD= .81), '20-less than 25' (M=3.82, SD= .85), '25 and above' (M=3.87, SD= .91).

Based on Medium of Instruction

Table 137

Test of homogeneity of variance for 'Soft skills of staff': Medium of instruction

	N	Mean	Std. Deviation	Std. Error
English	1029	3.81	.851	.027
Gujarati	887	3.87	.849	.029
Others	33	3.63	.921	.160

Table 137 reports mean and SD values for medium of instructions. The highest mean is 'Gujarati', (M=3.87, SD=.849), and lowest mean is 'others', (M=3.63, SD=.921). Levene's test of homogeneity of variance is tabulated in Table 137.

Table 138

Levene's Test of Homogeneity of Variance: Medium of instruction

	Levene Statistic	df1	df2	Sig.
Soft skills of staff	.019	2	1946	.981(ns)

ns-not significant

H0: μ English = μ Gujarati= μ others

Ha: at least one of the μ differs significantly.

Levene's test is conducted to compare the perception of students for 'soft skills of staff' with respect to their medium of instruction. Table 138 reports results of 'Levene's test for equality of variances' for 'soft skills of staff', *p*=.98 >.05. It infers that there is a homogeneity of variances for the above component.

Table 139

ANOVA for Soft skills of staff: MOI

	SS	df	MS	F	Sig.
Between Groups	3.065	2	1.532	2.115	.121(ns)
Within Groups	1409.855	1946	.724		
Total	1412.920	1948			

ns- not significant

Table 139 reports ANOVA values for 'soft skills of staff', *p*= .12 > .05. As *p* value is more than .05, fail to reject null hypothesis. It infers that there is no significant difference between students from various mediums of instruction towards 'soft skills of staff'.

Based on Program/ Course

Table 140

Descriptive Statistics for 'Soft skills of staff': Program/ course

Program of the respondent	N	Mean	Std. Deviation	Std. Error
Certificate	28	3.62	.590	.111
Diploma	40	3.98	.722	.114
UG	1053	3.82	.862	.027
PG	828	3.85	.851	.030

Table 140 reveal the highest mean and SD is reported by Diploma (M=3.98, S.D.= .722), and lowest mean and SD is reported by Certificate (M=3.62, SD= .590).

Table 141

Test of Homogeneity of Variance: Program/ course

	Levene Statistic	df1	df2	Sig.
Soft skills of staff	3.139	3	1945	.024*

*p<.05**

Table 141 reports that since there is no homogeneity of variance, so Welch test would be appropriate to use instead of ANOVA.

Table 142

Welch Test: Program/ course

Robust Tests of Equality of Means			
Soft skills of staff			
Statistic	df1	df2	Sig.
Welch 2.027	3	83.737	.116 (ns)

ns-not significant

Table 142 reports since *p* >.05, fails to reject null hypothesis. The mean and standard deviation of all the groups is reported as Certificate (M=3.62, SD= .590), Diploma (M= 3.98, SD= .722), UG (M= 3.82, SD= .862), PG (M= 3.85, SD= .851). It infers that is no significant difference among various groups of respondents of program/ courses towards soft skills of staff.

Best practices of universities across India: MSU vs other universities

The study further tries to understand the current HR practices in the selected higher education institutions of India and explore the probability of using the HR Scorecard in the higher education institutions. To accomplish this, analysis is done with (n=9) universities. This study focuses on comparative analysis between other universities (n=8) of India and The Maharaja Sayajirao university of Baroda, (MSU) Vadodara. The NAAC grades of universities and MSU are given in Table 142. The data includes 2 universities with a grade A++, which is above MSU. Universities with a grade A comprise 3 universities and MSU bags an A+. Comparisons are drawn based on what best practices are used by universities and how can MSU incorporate the best practices and improve. The HR deliverables (leading indicators) are identified after comparisons and used as recommendations for the study.

Table 143

Grades of universities across India

A++	A	MSU (2018-2022)	No Grades/ Ranks
2	3	A	3

A comparative analysis of The Maharaja Sayajirao University of Baroda and other universities

The following is the analysis of responses received from 8 universities across India from North, West, and East zones vide a questionnaire that is drafted to understand and highlight the differences between the current practices at these universities.

To begin with, Q6 and Q7 are tabulated and analysed as below.

Staff employed at universities vis-à-vis NAAC Grades.

Table 144

Current Employment Structure at Universities

Grades of universities	Permanent teachers	Temporary/ Contractual teachers	Any other type	Non-teaching staff	Ratios (Permanent: Temporary/ Contractual)
A++	240	60	nil	223	4:1
A++	115	45	nil	110	6:5
A	220	nil	nil	118	220:0
A	60	60	nil	40	1:1
A	350	50	nil	400	7:1
No grade	83	69	Guest faculty	128	6:5
No grade	77	38	nil	48	2:1
No grade	40	25	On deputation 5	48	8:5
MSU	510	788	nil	548	5:8

Table 144 reveals that the university with an A+ grade has a total of 510 permanent teachers, which is over twice the number of any single A++ rated university. MSU also has a significantly higher number of temporary/ contractual teachers (735), which is a matter of concern for MSU as none of the A++ universities have more temporary/ contractual than permanent staff. Temporary/ contractual teacher numbers are more prevalent in A++ institutions. MSU's temporary/ contractual staff is the highest against both A++ universities' temporary/ contractual staff put together. Furthermore, non-teaching staff numbers vary greatly, with MSU employing 548 non-teaching staff members, which is more than double the count of any A++ university.

The next question (Q8) identifies the guidelines followed by the various universities vis-à-vis their teacher recruitment.

Table 145

Guidelines followed for Recruitment of Teachers

Current NAAC Grade	Guidelines followed for Recruitment
N.A.	Strict UGC guidelines
A	Both UGC and AICTE w.r.t. type of faculty
A	Both UGC and AICTE w.r.t. type of faculty
A	Both UGC and AICTE w.r.t. type of faculty
A++	Both UGC and AICTE w.r.t. type of faculty
N.A.	Strict UGC guidelines, Strict AICTE guidelines, Both UGC and AICTE w.r.t. type of faculty
A++	Strict UGC guidelines
N.A.	Strict UGC guidelines
MSU (A+)	Both UGC and AICTE w.r.t. type of faculty

Per the responses, it is evident that each university follows the UGC/AICTE/Both guidelines according to their own standards and procedures. Where one A++ university follows Both – UGC and AICTE guidelines with respect to the recruitment of teachers, the other A++ ranked university only strictly follows the UGC guidelines for this process. MSU follows Both – the UGC and AICTE guidelines for teacher recruitment to their university.

Table 146 (below) reports responses to Q9 which asked about areas that are considered for giving training to newly appointed teachers.

Areas of Training for newly appointed teachers

Table 146

Frequency distribution for training given to newly appointed teachers in other universities is compared with MSU (n=8).

Training for newly appointed teachers	Frequency (*f*)	Percentage (%)	MSU
Clarity about university's vision/ mission	7	87.5	Yes
Evaluation process and marking system	7	87.5	Yes
Knowledge of rules and regulations of the university	6	75	Yes
Information and Communication Technology (ICT)	6	75	Yes
Research orientation	6	75	Yes
Effective use of various pedagogical tools and techniques for class	5	62.5	Yes
Orientation programs	5	62.5	Yes
Enhancement of soft skills in teachers	4	50	Yes
Commitment towards students	4	50	Yes
Cross-disciplinary thinking	4	50	Yes
Stress management techniques	4	50	No
Training in placement/ counselling	4	50	Yes
Inclusion and Equity	3	37.5	Yes
Entrepreneurship development in students	3	37.5	Yes
Refresher courses	2	25	Yes
Inter-disciplinary thinking	2	25	No
Training to be adaptive to change	2	25	Yes
Modular training	1	12.5	No
Training on updating curriculum in alignment with best industry practices	0	0	Yes
Any other	0	0	No

Clarity about university's vision/ mission and evaluation process and marking system are considered the most important area for training teachers by 87.5% (n=7) universities and MSU vouches for both. The other important areas considered by 75% (n=6) universities are knowledge of rules and regulations of the university, information, and communication technology (ICT), and research orientation and MSU is no different. MSU considers these areas to be equally important so that teachers are trained in these areas. Effective use of various pedagogical tools and techniques for class and orientation programs are found to be other important areas that universities 62.5% (n=5) have emphasized on. MSU considers providing training in orientation programs too.

MSU considers effective use of pedagogical tools and techniques for class equally important, but do not consider the orientation programs. Enhancement of soft skills in teachers, commitment towards students, cross-disciplinary thinking, stress management techniques, and training in placement are considered important by universities, 50% (n=4) universities. However, MSU does not give any training on stress management techniques. Training in placement/ counselling is provided to teachers by MSU. However, this area is highlighted by A++ university along with commitment towards students and cross-disciplinary thinking. Inclusion and equity, and entrepreneurship development in students are considered other important factors for training new teachers by 37.5% (n=3) universities and MSU is no different. Refresher courses, inter-disciplinary thinking, and training to be adaptive to change are considered important by universities, 25% (n=2) universities and MSU do not consider these as prominent areas where teachers need to be trained. Modular training is only considered by 12.5% (n=1) university. However, MSU does not consider it to be important. Training on updating curriculum in alignment with best industry practices is not considered an important area for training teachers by any university except MSU.

Training provided to Teaching and Non-teaching Staff

Table 147

Frequency Distribution of Areas of training

Areas of training	Teaching		Non-Teaching		Both		Not Applicable		MSU
	Freq	%	Freq	%	Freq	%	Freq	%	
Quality Assurance	1	12.5	0	0	5	62.5	2	25	No
Total Quality Management	2	25	0	0	3	37.5	3	37.5	No
5S	1	12.5	0	0	3	37.5	4	50	No
ISO Certification	0	0	0	0	2	25	6	75	No
Collaboration and Teamwork	1	12.5	0	0	5	62.5	2	25	No
Soft skills Training	1	12.5	2	25	3	37.5	2	25	No
Training in Technology	3	37.5	0	0	3	37.5	2	25	Yes
Conflict Management	0	0	2	25	0	0	6	75	No
Time Management	1	12.5	1	12.5	1	12.5	5	62.5	No

Q10 in the questionnaire explores the training provided to teaching and non-teaching staff by universities in various areas.

Table 146 reports the following:

Quality Assurance: For quality assurance, 62.5% (n=5) universities provide training to teaching and non-teaching staff including universities with A++ grades. 25% (n=2) universities do not give any training to teaching and non-teaching staff. 12.5% (n=1) university gives training to only teaching staff. MSU does not provide training to teachers and staff.

Total quality management (TQM): For TQM, 37.5% (n=3) universities provide training to teaching and non-teaching staff. 37.5% (n=3) universities do not provide any training and MSU also gives no training. 25% (n=2) universities give training to only teaching staff.

5S: For 5S, 4 (50%) universities do not provide training to teaching and non-teaching staff and MSU is no different. 3(37.5%) university provides training to teaching and non-teaching staff. 1(12.5%) university provides training to only teaching staff.

ISO certification: 75% (n=6) universities do not give training in ISO to teaching and non-teaching staff and MSU is no different. 25% (n=2) universities give training to both teaching and non-teaching.

Collaboration and Teamwork: 25% (n=2) universities do not provide training to teaching and non-teaching staff. MSU too does not provide any training. 62.5% (n=5) universities provide teaching to both teaching and non-teaching staff. Only 12.5% (n=1) university gives training to only teaching staff.

Soft skills training: 25% (n=2) universities do not provide training to teaching and non-teaching staff and MSU is no different. 25% (n=2) universities provide training to non-teaching staff. 37.5% (n=3) universities provide training to both teaching and non-teaching. 12.5% (n=1) university provides training to only teaching staff.

Training in technology: 37.5% (n=3) universities do provide training to teaching and non-teaching staff. 37.5% (n=3) universities give training to only teachers, and 25% (n=2) universities do not provide training to teaching and non-teaching staff. MSU provides training to non-teaching staff.

Conflict Management: No training is given to teaching and non-teaching and MSU follows the same.

Time management: No training is given to teaching and non-teaching and MSU follows the same.

The next question (Q11) in the questionnaire tries to explore source of funds for FDPs. There are 6 sources of funds that are explored to see which fund is used the most by universities.

Sources of Funds for Faculty Development Programs (FDPs)

Table 148

Sources for funds spent for faculty development programs:

Sources for funds	Frequency (*f*)	Percentage (%)	MSU
Funds from students' fee	7	87.5	No
Funds from State government grants	5	62.5	Yes
Funds from ICSSR	5	62.5	No
Funds from UGC	2	25	No
Funds from Central government grants	2	25	Yes
Funds from AICTE	1	12.5	Yes
Any others, please specify.	0	0	No

Table 148 reports sources of funding for faculty development programs from various sources. Funds from students' fee are considered by 87.5% (n=7) universities including A and A++ universities. The other sources of funds spent for FDPs are funds from State government grants, Funds from ICSSR are used by 5 universities 62.5% (n=5) including 1 A++ university. Funds from UGC and funds from the central government grants are used by 2 universities 25% (n=2). Only 12.5% (n=1) university spends funds from AICTE for FDPs. However, MSU considers three sources of funds spent for faculty development programs (FDPs) that are funds from Central government grants, funds from AICTE, and funds from State government grants.

Q12 address the current HR practices: Motivation, Empowerment and Participation, Career Development, Recognition and Rewards, and Feedback system at the universities, while also tabulating the mean scores and SD in Table 149. The 5-point rating scale used here is: Always (5), Often (4), Occasionally (3), Rarely (2) and Never (1).

HR Practices in Universities

Table 149

Descriptive Statistics for HR practices

To what extent are all factors responsible for enhancing **motivation** among teachers?	N	Mean	Std. Deviation	MSU
Teachers are rewarded on students' feedback	8	3.75	1.282	3
Ensuring teachers are well-engaged	8	3.88	1.356	3
Ensuring teachers are encouraged in advancing towards their profession	8	4.00	1.309	5
Teachers get adequate time to interact with students	8	3.25	1.488	5
Incentivizing excellence through appropriate rewards	8	3.50	1.512	5
Incentivizing excellence through appropriate promotions	8	3.58	1.604	5
Incentivizing excellence through appropriate recognition	8	3.56	1.414	5
To what extent are all factors responsible for Comfortable working environment (for e.g. ambience, positive work culture etc.)	8	3.88	1.458	5
Are these practices linked to institutional vision/ mission?	8			Yes
Empowerment and Participation Teachers are allowed to participate in the departmental decision-making.	8	4.38	.744	5
Teachers are given autonomy in designing curriculum.	8	4.25	.886	5
Teachers are given autonomy in deciding the pedagogies they want to adopt.	8	4.25	.707	5
Teachers are empowered to evaluate students in their own way	8	4.13	.835	4
Are these practices linked to vision/ mission/ strategy of your institution?	8			Yes
Career Development : Teachers are given scholarships	8	2.38	.518	3
Teachers are motivated to attend faculty development programs	8	4.50	.756	5
Teachers have clear vision for career development	8	4.25	.707	5
Teachers are given financial aids for their development by the university	8	3.63	.744	4
Are these practices linked to vision/ mission/ strategy of your institution?	8			Yes

Recognition and Rewards				
There is a preference for the senior faculty members to be promoted as departmental heads	8	4.13	.835	4
Teachers are given a raise in salary packages/ increments based on their performance	8	3.41	1.195	4
There is a fast-track promotion system for recognizing high impact research and contribution	8	3.25	1.309	2
Are these practices linked to vision/ mission/ strategy of your institution?	8			Yes
To what extent do the following practices help **feedback system** providing feedback to teachers? Departmental Heads	8	3.88	.835	5
Students	8	4.00	.926	5
Colleagues	8	3.38	1.188	1
Self	8	2.13	1.246	5
Are these practices linked to the vision/mission/strategy of your institution?	8			Yes

1. **Motivation Among Teachers: MSU vs Others**

Table 149 states the highest score is given to 'encouragement in advancing towards the profession' (M=4.00, SD=1.309) and lowest score is given to 'Teachers get adequate time to interact with students' (Mean=3.25, SD=1.488). Other factors with mean and SD are reported as: 'Teachers are rewarded on students' feedback', (M=3.75, SD=1.282), 'To ensure teachers are well-engaged', (M=3.88, SD=1.356), 'To ensure teachers are encouraged in advancing towards their profession', (M=4.00, SD=1.309), 'Incentivizing excellence through appropriate rewards', (M=3.50, SD=1.512), 'Incentivizing excellence through appropriate promotions', (M=3.58, SD=1.604), 'Incentivizing excellence through appropriate recognition', (M=3.56, SD=1.414). 'To what extent are all factors responsible for Comfortable working environment (for e.g. ambience, positive work culture etc.)', (M=3.88, SD=1.458).

MSU gives highest rating (5) to 'Ensure teachers are encouraged in advancing towards their profession', 'Teachers get adequate time to interact with students', 'Incentivizing excellence through appropriate rewards', 'Incentivizing excellence through appropriate promotions', and 'Incentivizing excellence through appropriate recognition', 'To what extent are all factors responsible for comfortable working environment (for e.g. ambience, positive work culture etc.). MSU considers these factors as 'occasionally' (3) responsible for increasing motivation among teachers: 'Teachers are rewarded on students' feedback', and 'To ensure teachers are well-engaged.' Other

universities have shown a high linkage of motivation to vision/ mission much like MSU links motivation to vision/ mission of the university.

2. **Empowerment and Participation:** MSU vs Others

Highest score is given to 'Teachers are allowed to participate in the departmental decision-making' (M=4.38, SD= .744). The lowest score is given to 'Teachers are empowered to evaluate students in their own way' (M=4.13, SD=.835). Other factors with mean and SD values are reported as: 'Teachers are given autonomy in designing curriculum' (M=4.25, SD=.886), 'Teachers are given autonomy in deciding the pedagogies they want to adopt', (M=4.25, SD=.707).

MSU gives highest rating (5) to 'Teachers are allowed to participate in the departmental decision-making', 'Teachers are given autonomy in designing curriculum', and 'Teachers are given autonomy in deciding the pedagogies they want to adopt'. 'Teachers are empowered to evaluate students in their own way' are rated as (4) which means that the university 'often' considers these factors responsible for enhancing 'empowerment and motivation' among employees. However, it has been observed that all the universities have linked the practices to vision/ mission/ strategy of their universities. However, MSU links empowerment and participation to vision/ mission of the university.

3. **Career Development**: The highest score is given to 'Teachers are motivated to attend faculty development programs' (Mean: 4.50, SD: .756). The lowest score is given to 'Teachers are given scholarships' (Mean: 2.38, SD: .518). Other factors with mean and SD values are: 'teachers have clear vision for career development ', (M=4.25, SD=.707), 'Teachers are given financial aids for their development by the university', (M=3.63, SD=.744). However, all the universities have linked the practices to vision/ mission/ strategy of their institutions.

MSU highly rates 'Teachers are motivated to attend faculty development programs' (5) and 'Teachers have clear vision for career development,' (5). 'Teachers are given financial aids for their development by the university' is rated as (4). 'Teachers are given scholarships' is rated as (3). These practices are linked to vision/ mission of the university.

4. **Recognition and Rewards**: The highest score is given to 'There is a preference for the senior faculty members to be promoted as departmental heads', (M=4.13, SD=.835). The lowest score is given to fast-track promotion for high-impact research (Mean: 3.00, SD: 1.309). Other factors with mean and SD values are: 'Teachers are

allowed for job rotation', (M=3.25, SD=1.28), 'Teachers are given financial aids for their development by the university', (M=3.75, SD=1.035), 'Teachers are given a raise in salary packages/ increments based on their performance (M=3.41, SD=1.195), 'There is a fast-track promotion system for recognizing high impact research and contribution',(M=3.25, SD=1.309). These practices are linked to vision/ mission of all universities.

MSU rates these factors as (4) that are responsible for enhancing recognition and rewards: 'There is a preference for the senior faculty members to be promoted as departmental heads', 'Teachers are given a raise in salary packages/ increments based on their performance'. 'There is a fast-track promotion system for recognizing high impact research and contribution' is rated as (2). MSU links these practices to the vision/ mission of the university.

5. **Feedback System**: The highest score is given to 'Feedback from students', (Mean: 4.00, SD: .926). The lowest score is given to the 'feedback from self', (Mean: 2.13, SD: 1.246). Other factors with mean and SD values are: 'feedback from colleagues', (M=3.38, SD=1.18). All universities link these practices to vision/ mission of their respective universities.

MSU highly rates (5) about the 'feedback given by departmental heads and students.' However, 'feedback given by colleagues' is rated at (1) and 'feedback given by self' is rated at (5). MSU links these practices to the vision/ mission of the university.

Q13 in the questionnaire explores how often teachers go to Human Resource

Development Centres for Orientation programs and Refresher courses.

Table 150

Orientation programs in Human Resource Development centres

Orientation programs	Frequency	Percentage	MSU
15 days or more	3	37.5	Yes
15 days or less	4	50	No
Don't go	1	12.5	No

Orientation and Refresher courses in HRDCs:

Table 150 highlights that 37.5% (n=3) universities go to HRDCs for orientation programs for 15 days or more. Universities that go to HRDCs for orientation programs for 15 days or less comprise 50% (n=4) universities. It is found that 12.5% (n=1) university does not go HRDCs for orientation programs. The M.S. University engages staff in orientation programs for 15 days or more. In other words, it highlights that all

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87.5% (n=7) universities except one that is newly created, make sure that teachers go for orientation programs and MSU is no different. It is also seen that majority, i.e. 50% universities send teachers for orientation for 15 days or less.

This question explores how often teachers go to Human Resource Development Centres for refresher courses:

Table 151

Refresher courses in Human Resource Development centres

Refresher courses	Frequency	Percentage	MSU
15 days or more	5	62.5	Yes
15 days or less	2	25	No
Don't go	1	12.5	No

Table 151 highlights that 62.5% (n=5) universities go to HRDCs for refresher courses. Other universities that go to HRDCs for refresher courses comprise 25% (n=2) universities. It is seen that just 12.5% (n=1) university does not go to the HRDCs for refresher courses. The M.S. University engages staff in refresher courses for 15 days or more.

In other words, 87.5% (n=7) universities except one make sure that teachers go for refresher courses and MSU is no different. It is seen that majority of universities i.e. 62.5% send teachers for refresher courses for 15 days or more.

Maintaining Teacher-student ratio:

Q14 explores whether teacher-student ratios are maintained in most of faculties. Teachers- student ratio are maintained by 6 (75%) out of 8 universities and MSU is no different. Two universities maintain student-teacher ratios in most of faculties.

Q15 talks about the various methods undertaken by universities to develop competencies of teachers. The ranking is done on a 5-point Likert Scale and the reportage and analysis follows the table.

Developing competencies of teachers through various methods

Table 152 below reveals Mean and SD values for 'Teachers go for professional training', (M=2.67, SD= 1.323) is rated between slightly important and neutral. However, MSU rates this as moderately important (4). 'Training is given to teachers on new methods of teaching,' (M=1.44, SD= .882) is given least importance. However, MSU has rated this factor as neutral (3).

Developing competencies of Teachers: Other universities vs MSU

Table 152

Mean and SD of Developing competencies of teachers

(5=very important and 1=low importance) 5-very important, 4-moderately important, 3-neutral, 2-slightly important, 1-not important.

Methods of developing competencies	N	Mean	Std. Deviation	MSU
Teachers go for professional training	8	2.67	1.323	4
Training is given to teachers in new methods of teaching	8	1.44	.882	3
Training of faculty are done in areas like technology	8	4.00	.500	3
Training of faculty are done in areas like enriching curriculum	8	3.89	1.054	4
Training of faculty are done in areas like assessment methods	8	3.33	1.000	5
Teachers are sent for industrial training	8	4.00	.866	4
Special programmes to bring changes in attitude	8	4.11	.782	3
Research collaborations with foreign institutions	8	3.22	1.394	5
Teaching collaborations with foreign institutions	8	4.00	1.118	4
Conduct faculty exchange programmes	8	3.67	1.225	4
Continuous professional development of teachers is ensured	8	3.56	1.130	5

Table 152 reports that 'Training of faculty are done in areas like technology' (M=4.00, SD=.500) is considered as moderately important. However, MSU rates this factor as 'neutral. (3)' 'Training of faculty are done in areas like enriching curriculum' (M=3.89, SD= 1.054) is above 'neutral level' and towards 'moderately important'. MSU rates this as moderately important (4). 'Training of faculty are done in areas like 'assessment methods', (M=3.33, SD= 1.000) is rated above 'neutral level'. MSU rates this factor as highly important (5). 'Teachers are sent for industrial training' is rated as (M=4.00, SD=.866), which is considered as 'moderately important'. MSU also rates this as moderately important (4). 'Special programmes to bring changes in attitude' is rated (M=4.11, SD=.782), which is above 'moderately important' and towards 'highly important'. However, MSU considers this as 'neutral' (3). 'Research collaborations with foreign institutions,' (M=3.22, SD= 1.394), which is above 'neutral'. However, MSU rates this as very important (5). 'Teaching collaborations with foreign institutions,' (M=4.00, SD=1.118) is considered as moderately important and MSU also considers this factor same as other universities (4). 'Conduct faculty exchange programmes,' (M=3.67, SD= 1.225) is above 'neutral'. MSU rates this as moderately important (4). 'Continuous

professional development of teachers is ensured', (M=3.56, SD= 1.130) is considered above 'neutral', but MSU considers this factor highly important (5).

The next question explores about what areas do university provide training to its teaching and non-teaching staff individually, both, and neither?

The next question in the questionnaire (Q16) explores factors that contribute majorly to the return on investment (ROI) to the university/ institution. Frequencies and percentages are tabulated at Table 153.

What factors majorly contribute to the ROI of your university?

Table 153

Frequency Distribution of Factors measuring ROI

Factors for ROI	Frequency (*f*)	Percentage (%)	The Maharaja Sayajirao University of Baroda
Students' satisfaction	8/8	100	Yes
Teachers' contribution to research	8/8	100	Yes
Competencies of teachers	6/8	75	No
Conferences at the university	0	0	No
Training and development activities for teachers	4/8	50	No
Performance based rewards	4/8	50	Yes
Commitment to university's vision/ mission	5/8	62.5	Yes
Consultancy projects taken by teachers	3/8	25	Yes

Table 153 reports that all universities are asked on which of the following factors are funds/ grants majorly spent by the university? The responses are as follows: 'students' satisfaction' and 'teachers' contribution to academia and research' are two factors where most of grants/ funds are spent by the universities in all (100%) (n=8) universities mentioned above and MSU is on the same page.

Other than these two, 'Performance based rewards', 'Commitment to university's vision/ mission', 'Consultancy projects taken by teachers' are factors that are considered by MSU. 'Competencies of teachers' are highlighted by 75% (n=6) universities. Conferences are not considered by any university, which is a contributing factor for Academic Performance Index (API). **'**Training and developmental activities' is done by 50% (n=4) universities. Another factor that is important is 'performance-based rewards' for teachers, which is considered by 50% (n=4) universities. Commitment to university's vision/mission is considered by all universities except for 62.5% (n=5)

universities. 'Consultancy projects taken by teachers' is considered an important factor considered by universities and is done by 37.5% (n=3) universities.

Q17 addresses the factors that universities employ to measure the performance of teachers.

Factors Measuring Teachers' Performance

Table 154

Factors measuring Teachers' performance: Frequency Distribution

Factors of Measurement	Frequency f	Percentage (%)	MSU
Communication with students	8/8	100	Yes
Teachers involved in self-appraisal	6/8	75	No
Teachers' aligning their efforts with institutional vision/ mission/ strategy	7/8	87.5	No
Number of learning opportunities availed	4/8	50	Yes
Number of PhD's awarded in last 5 years	4/8	50	Yes
Number of projects completed	5/8	62.5	Yes
Number of patents	3/8	37.5	Yes
Number of citations	5/8	62.5	Yes
Number of papers published in journals of high repute in last 5 years	8/8	100	Yes
Maximum development programs completed	3/8	37.5	No
Maximum training programs completed	3/8	37.5	Yes
Meeting students' expectations on time	4/8	50	Yes
Assessment work completed on time	4/8	50	Yes
Innovation and creativity in curriculum	4/8	50	Yes
Innovation and creativity in pedagogy	3/8	37.5	Yes
Adaptation on technology	3/8	37.5	No
Achievements and receiving awards outside university	3/8	37.5	Yes
Clarity of institutional goals	4/8	50	No
Number of seminars attended	1/8	12.5	Yes
Introduction of new courses by the teacher	3/8	37.5	No

Table 154 describes about factors that measure teachers' performance. The responses are as follows: 'Communication with students' and 'number of papers published in journals of high repute in last 5 years' are two factors that help to measure teachers' performance in all 100% (n=8) universities mentioned above and MSU is no different. These factors are perceived as important across the board for measuring teachers' performance.

Other than these two, 'teachers involved in self-appraisal' is reported by 75% (n=6) other universities including 2 universities with an A++ grades and other 3 universities with an A grade too.

The remaining one university does not have any rank and grade. MSU does not consider this factor as important to measure teachers' performance. Another factor includes teachers' aligning their efforts with institutional vision/ mission/ strategy, which is considered important by 87.5% (n=7) universities excluding MSU. 'Number of learning opportunities availed' is another factor which is considered important by only 50% (n=4) universities and MSU also considered this important factor to measure teachers' performance. 'Number of PhD's awarded in last 5 years' is considered important by 50% (n=4) universities and MSU. 'Number of projects completed' is considered important to measure teachers' performance by 62.5% (n=5) universities and MSU. 'Number of patents' is considered important factor to measure performance of teachers by 37.5% (n=3) universities only. This is also considered by MSU. 'Number of citations' is considered an important factor to measure teachers' performance by 62.5% (n=5) universities. However, this is also considered by MSU. 'Number of papers published in journals of high repute in last 5 years' is considered as an important factor by all universities 100% (n=8). 'Maximum development programs' completed is considered important by 37.5% (n=3) universities. MSU does not consider this factor as important. 'Maximum training programs completed' is considered by universities 37.5% (n=3), and by MSU. 'Meeting students' expectations on time' is considered by 50% (n=4) universities and by MSU. 'Assessment work completed on time' is considered by 50% (n=4) universities and MSU is no different. 'Innovation and creativity in curriculum' are considered by 50% (n=4) universities including 1 university with A++, considered by MSU too. 'Innovation and creativity in pedagogy' is considered by 37.5% (n=3) universities including 1 university with grading A++. MSU too considers this factor as important for measuring performance of teachers. 'Adaptation on technology' is considered by 37.5% (n=3) universities. This is not considered by MSU. 'Achievements and receiving awards outside university' is considered by 37.5% (n=3) other universities and also by MSU. 'Clarity of institutional goals' is considered by 50% (n=4) universities that include universities above in grading as compared to MSU and lesser in grade than MSU. MSU too considers this as important factor. 'Number of seminars attended' is only considered by 12.5% (n=1) university with an A grade. This is also considered by MSU. 'Introduction of new courses and programs by the teacher' is considered by 37.5% (n=3) universities including 1 university with A++ grade. However, this is not considered by MSU.

In Q18 universities are asked about attributes of teachers that can be instrumental in making the university/ institute student friendly.

Answers are: Communication with students and involvement in research activities, counselling, soft behaviour, commitment, innovative teaching learning processes, teaching & research, increasing the number of co-curricular activities.

Analysis of the Expert Interview with the Registrar of The Maharaja Sayajirao University of Baroda

To fulfil further objectives of the study, an open- ended interview was conducted with the Registrar sir of The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat. The following questions were asked, and his insights were taken into consideration.

Q1. To explore the probability of using HR Scorecard in higher education institution.

R: *The university does not have the inputs, systems in place to explore the probability of any such performance measurement tool.*

Q2. To understand the challenges in implementing HR Scorecard in the higher education institutions i.e. w.r.t. organisational change and development.

R: *The foremost challenge is the acceptance of this kind of innovation tool. On the supply side, the university will have to arrange the training (like structure and processes). There would be a hesitation on both the ends: receiver and giver.*

Q3. Whether the HR Scorecard could enhance the performance of teaching and non-teaching staff which directly impacts various stakeholders.

R: *This would definitely improve the performance by making them understand the vision/ mission of the university. Training would be designed in a way that would help employees understand and align their efforts with vision/ mission of the university.*

Q4. To understand the impact of introduction of HR Scorecard on various stakeholders.

R: All areas of training are very relevant. As a part of learning and development, university teachers would be better equipped with teaching pedagogy, innovation, creativity, and students' relations. The HR Scorecard would be able to focus on the quality of teaching and administration to serve students. Students' satisfaction will thus lead to satisfied stakeholders including students and governing bodies for better grading and ranking.