LIST OF EXPERTS

1. **Prof. B. K. Passi,** *Former Head and Dean, School of Education, Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh.*

2. **Prof. D. R. Goel,** *Former Head, Centre of Advanced Studies in Education and Dean, Faculty of Education & Psychology, MSU, Vadodara, Gujarat.*

3. **Prof. S.C. Panigrahi,** *Professor, Department of Education, CASE, MSU, Vadodara, Gujarat.*

4. **Prof. Ashutosh Biswal,** *Professor, Department of Education, CASE, MSU, Vadodara, Gujarat.*

5. **Prof. Archana Dubey,** *Former Head and Dean, School of Education, Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh.*

6. **Prof. H. R. Pal,** *Former Dean, School of Education, Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh.*

7. **Prof. Kanhaiya Ahuja,** *School of Economics, Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh.*

8. **Dr. Akhilesh Singh,** *Head, Educational Multimedia Resource Center (EMRC), Devi Ahilya Vishwavidyalaya, Indore, Madhya Pradesh.*

9. **Dr. Roshni J. Desai,** *Principal, Dr. Headgawar Hindi Shala, Vadodara, Gujarat.*

10. **Dr. Jayesh S. Patel,** *Assistant Director, IGNOU Regional center, Ahmedabad, Gujarat.*

TOOL

EDUCATIONAL RESEARCH INFORMATION AND REVIEW SCHEDULE

Developed By: Avtar jit Singh

A.   BASIC INFORMATION ABOUT THE THESIS

1.   Name of the Researcher: _____

2.   Name of Guide: _____ 3. Year: _____

4.   Title of the Study:_____

     _____

     _____

5.   Objectives of the Study:_____

     _____

     _____

     _____

     _____

     _____

B.   PHYSICAL INFORMATION OF THE THESIS

6.   Language of the thesis: HINDI   ☐   ENGLISH   ☐

7.   Number of Pages:_____

8.   Quality of the Paper:_____

9.   Binding work: [Very Good/Good/Satisfactory/Bad/Very Bad]_____

10. Weather Index prepared properly?   [Satisfactory / Not Satisfactory]_____

11. Number and title of the chapters in the Thesis:_____

     _____

     _____

C.   AREA OF THE RESEARCH (Tick mark (√) the area)

i. Adult, Continuing & Non-Formal Education	☐	xix. Mental Health	☐
		xx. Moral Art & Aesthetic Education	☐
ii. Cognitive Processes	☐	xxi. Motivation	☐
iii. Comparative Education		xxii. Open & Distance Education	☐
iv. Correlates of Education	☐	xxiii. Organization, Administration & Management	☐
v. Creativity & Innovations	☐	xxiv. Philosophy of Education	☐
vi. Curriculum Development	☐	xxv. Physical & Health Education	☐
vii. Demographic Studies In Education & Population Education	☐	xxvi. Pre-Primary Education	☐
		xxvii. Primary Education	☐
viii. Ecology & Environmental Studies in Education	☐	xxviii. Psychology of Education	☐
		xxix. Science Education	☐
ix. Economics of Education	☐	xxx. Secondary Education	☐
x. Education of Girls & Women	☐	xxxi. Social Processes	☐
xi. Education of SC, ST, & Minorities	☐	xxxii. Social Science Education	☐
xii. Educational Assessment & Evaluation	☐	xxxiii. Sociology of Education	☐
xiii. Educational Planning & Policy Research	☐	xxxiv. Special Education	☐
xiv. Educational Technology	☐	xxxv. Teacher Education Pre-Service &In-Service	☐
xv. Guidance & Counseling	☐	xxxvi. Teaching Strategies	☐
xvi. Higher Education	☐	xxxvii. Vocational & Technical Education	☐
xvii. History of Education	☐	xxxviii. Any Others	☐
xviii. Mathematics Education	☐		

14. If any other please specify the Area of research

14(a) Major Area: _____ 14 (b) Minor Area:_____

15. Level of Research: Lower Primary/Upper primary/Elementary/Secondary/Higher Education

16. Subject _____

D. REVIEW OF RELATED LITERATURE

17. Number of the Studies Reviewed:_____

18. Time span of the Reviewed Studies:_____

19. How research gaps identified and explained? [Very Good/ Good / Satisfactory/ Bad / Very Bad], Reason for choice _____
_____
_____

20. Is Implication from the previous research rationalized? [YES/NO], Reason for choice_____
_____
_____
_____
_____
_____

21. Over all Comment regarding the Reviewed Literature: [Very Good/ Good/ Satisfactory/ Bad/ Very Bad], Due to_____
_____
_____
_____

E. METHODOLOGY OF THE RESEARCH (Tick mark (√))

22. Kind of Research: BASIC/PURE   ☐   APPLIED   ☐   ACTION   ☐

23. Kind of Research: QUANTITATIVE   ☐   QUALITATIVE ☐   MIXED   ☐

24. Explanation of the terms was there?   [YES/NO] _____

25. Operationalization of the terms was there?   [YES/NO] _____

26. Hypotheses   NULL ☐   ALTERNATIVE ☐   BOTH ☐   NOT NEEDED ☐

F. TYPE/METHOD OF THE RESEARCH

27. The type of research is (Tick mark (√)):

Descriptive Research	☐	Diagnostic Study	☐
Action Research	☐	Experimental Research	☐
Historical Research	☐	Ex-post facto Research	☐
Survey Research	☐	Correlation Research	☐
Case Study	☐	Exploratory Research	☐

Any Other (Please Specify)_____
_____

28. In case of Experimental Design: Pre Experimental ☐   Quasi Experimental ☐   True Experimental Design ☐

29. Kindly specify the sort of Experimental design of the study_____
_____

G. SAMPLING USED

27. Geographical Region of the study: Indore/Out side Indore but in Madhya Pradesh/ Outside Madhya Pradesh but in India/ Out side India_____

28. (a) Type of the Sampling technique used

Probabilistic Sampling technique   ☐   Non probabilistic sampling techniques   ☐

29 (a) In case of **Probabilistic sampling technique,** please tick the type of technique used

Simple Random sampling Technique	☐	Cluster sampling Technique	☐
Stratified Random Sampling Technique	☐	Multi stage Sampling Technique	☐
Systematic Random sampling Technique	☐		

Any Other (Please Specify)_____

29 (b) In case of **Non Probabilistic sampling technique,** please tick the type of technique used

Purposive sampling Technique	☐	Modal instance sampling	☐
Convenient Sampling technique	☐	Expert sampling	☐
Snowball sampling technique	☐	Quota sampling	☐
Accidental/Haphazard	☐	Heterogeneity or diversity sampling	☐

Any Other (Please Specify)_____

30. Size of the Sample_____
_____

H. TOOLS USED

31. Which tool was used in the thesis? (Tick mark (√) which was used)

Standardized	☐	Both	☐
Non Standardized	☐	NA	☐

32. Number of Tools: _____

33. Which type of the tool was used? (Tick mark (√) which was used)

Questionnaire	☐	Rating Scale	☐	Aptitude scale	☐
Attitude scale	☐	Openionnaire	☐	Reaction scale	☐
Check List	☐	Observation	☐	Achievement Test	☐
Schedule	☐	Interview	☐	Any Other:	☐

If any other (please specify):_____
_____

34. Whether Validity of the tool ensured? [Yes / No]. If yes, then specify How?_____
_____

35. Whether Reliability of the tool ensured? [Yes / No]. If yes, then How? _____
_____

I. DATA ANALYSIS TECHNIQUE USED

36. Kind of Statistical techniques used: None/others ☐   Parametric ☐   Non-Parametric ☐   Both ☐

37. (a) Weather Parametric statistical techniques used? If YES then tick mark (√) on the following, being used in the thesis.

Mean	☐	ANOVA	☐	PEARSON' r	☐
t-test	☐	ANCOVA	☐		
Standard Deviation	☐	MANOVA	☐		

Any Other (Please mention the name of technique):_____

(b) Weather Non Parametric statistical techniques used? If YES then tick mark (√) on the following, being used in the thesis.

Median test	☐	Kruskal Wallis H	☐	Kolmogorov Smimov Z	☐
Sign test	☐	Mc Nemar	☐	Runs Test	☐
Mann Whitney U	☐	Chi-Square	☐	Wilcoxon	☐

Any Other (Please mention the name of technique) _____

39. Specify the Qualitative Data Analysis Technique Used (if any):_____

J. REFERENCE STYLE USED

40. Which style of referencing was followed? APA ☐   MLA ☐   Turabian ☐   Any other☐

41. Footnotes/Endnotes are written in the Thesis? [YES/NO], If yes, Is footnotes/Endnotes written as per any of the above mentioned Referencing Style [YES/NO]_____

42. Weather tables are legible and properly made? [Yes /No], If No, please specify the reason

    _____

    _____

    _____

43. Weather graphs are legible and properly made? [Yes / No].

    If No, please specify the reason_____

    _____

    _____

    _____

K. FINAL PRODUCT OF THE THESIS

44. Final output of a thesis_____

    _____

    _____

NOTES: GENERAL ERRORS RELATED TO THE COMPONENTS (If any)

Common Errors in the Thesis_____

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PUBLISHED PAPER

Comparative Study on Effect of Feedback in Terms of Performance Appraisal by Different Assessors on Performance of the Teacher Educators

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Abstract: Due to the paradigm shift from 'Teaching as service' to 'Teaching as Profession' educational administrators boggled their minds for finding ways and means to ensure accountability of the teachers by assessing their performances so as to enhance the quality of the educational process as well as product at all the levels of education. In the recent development into evaluation of teaching performance at the Higher education level in India, the University Grants Commission (UGC) had came with Performance based Appraisal System (PBAS) using the Academic Performance Indicators (API) in 2009. The subsequent amendments in these regulations came in 2013, 2014 and 2016 were adding more to such mechanism for making this system of appraisal more comprehensive, simple and practical. The threefold function of a Teacher at the higher Education level can be summarizing in three words, Teaching, Research and Extension. The present study focuses on the first and most important function of the teacher called teaching. How a teacher is performing in a classroom? How students see his/her performance? How the teacher's peer, him/herself and head of institution sees to his performance? Do the feedbacks by these stakeholder assessors improve his/her performance in a classroom? etc, are some of the basic questions which researcher tried to give justifiable answers through present study.

Keywords: PBAS-API, Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS), Feedback, Stakeholders, Assessors, Peer evaluation, Self Evaluation, Student-Teacher Evaluation, Head Evaluation.

1. INTRODUCTION

The performance appraisal of the teachers at Higher Education level had been the crucial question of debate in the various commission and committees, in the post independent Indian educational reforms. The University Education Commission (1952) pinned up, on ethical grounds, the concerns for increasing the quality of education at the college and university level. The commission had undertaken the minimum qualifications issues and attracting the competent youths for teaching. At the same time the commission had also attempted to regulate the teaching hours, lectures undertaken, working days, vacation time, etc. to bring the quality at higher education level. In further development, Kothari Commission (1966) had recommended to appraise the teachers at regular interval of time. The anecdotal records and service book entries about the teacher's performance were made mandatory. The Head of the institution was being recommended to appraise the performance of teachers at the higher education level. In 1986, National Policy of Education and also its Programme of Action (POA) had recommended for "Annual Performance Appraisal" of the teachers of educational institutions. In 1987, Malhotra Committee appointed for revision of salaries too stressed that teachers' performance should be evaluated by students and there should be compulsory annual submission of 'performance

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appraisal' (an assessment of the performance of teachers which would encourage their accountability). In Dec, 1988, the UGC issued a notification regarding 'Accountability in Higher Education' for all the Universities that Self Appraisal Performance of the teachers is to be made mandatory as a requirement of Career Advancement Scheme (CAS) for the award of new pay scales and be implemented within a year. Considering the recommendations of different commission and committees, NAAC's appraisal scheme for TEIs; Needs of Higher Education in general and teacher education in particular in the context of Quality Education and Emerging roles of Teacher Educators; the University Grants Commission (UGC), a statutory body with its duty such as, coordination, determination and maintenance of standards of Indian Higher Education is witnessing a shift in formulating an Objective, Reliable and Wholistic mechanism for appraising the performance of the teachers and other academic staff working in the Higher Education level. In the recent development into evaluation of teaching performance at the Higher education level in India, the UGC had came with *"Regulation on Minimum qualifications for Appointment of teachers and other Academic staff in Universities and Colleges and Measures for the maintenance of Standards in the Higher Education (2010)"* using the Academic Performance Indicator (API) and Performance Based Assessment System (PBAS). This made greater impact on performance of teachers at Indian higher education level in the last few years. These regulations were first of its kind in terms of Performance Based Appraisal System (PBAS) and Academic Performance Indicators (APIs) by focusing on the performance of teachers on Category A: Teaching, Learning and Evaluation related activities, Category B: Co-curricular, Extension, Professional Development etc and Category C: Research and Academic Contribution. The subsequent amendments in these regulations came in 2013, 2014 and 2016 were adding more to such mechanism for making this system of appraisal more comprehensive, simple and practical.

In Indian Universities the teachers are given the threefold function as Teaching, Research and Extension. The research focuses on the first function of the teacher i.e. the teaching. Researcher personally feels that, the Classroom based teaching learning is the most important aspect in which the teacher gives his maximum time of workload. Further, the following set of questions comes to every cognitive mind. How a teacher is teaching in the classroom? Who should evaluate the performance of the teacher-educator? Whether it is the Students or teacher him/herself or Parents or Peers or Head or Society or All? How a performance appraisal tool can be holistic if it is not appraised by the stakeholders of Assessors? Also, at the same time not only assessing the performance of the teachers by stakeholders is important, but to communicate the performance feedback back to the Teachers is also essential so as he/she can work on the positive areas and areas of improvements to enhance his teaching effectiveness.

The lack of the tool for Performance based appraisal for a specific discipline is much needed whispers of the academia since long, which is less heard. Keeping in mind the aforesaid issues and problem with the present PBAS-API (2010, 203, 2014 and 2016), the present study was an attempt to listen those whispers in much empirical and detailed manner, for the field of Teacher Education *per se* by designing a *system* for appraising the performance of Teacher Educators to assess their performance in the classroom, where appraisal from different perspective (in terms of Peer, Self, Student Teacher and Heads) is also been considered to develop Wholistic Performance Appraisal System.

2. TITLE OF THE STUDY

Comparative Study on Effect of Feedback in terms of Performance appraisal by different Performance Assessors on Performance of Teacher Educators of Teacher Education Institutions in Vadodara District

3.   OBJECTIVES

The Objectives of the Study were:

1. To compare the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, before the feedback was given.

2. To compare the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, after the feedback was given.

3. To compare the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators with respect to Self, Student-teachers, Peers and Head on before and after the feedback was given.

3.1. HYPOTHESIS:

The following Null hypotheses were formulated and tested at 0.05 level of significance.

Under Objective1:

1. *Ho 1:* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, before the feedback was given.

Under Objective 2:

2. *Ho 2:* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, after the feedback was given.

Under Objective 3:

3. *Ho 3:* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators with respect to Self, Student-teachers, Peers and Head on before and after the feedback was given.

For the convenience of analysis the Null Hypothesis Ho 2.3 was further divided into the following null hypotheses.

a) *Ho 3 (a):* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Student-teachers on before and after the feedback was given.

b) *Ho 3 (b):* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Peers on before and after the feedback was given.

c) *Ho 3 (c):* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Self on before and after the feedback was given.

d) *Ho 3 (d):* There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Principal on before and after the feedback was given.

3.2. POPULATION:

Population constitutes all teacher educators, Head of the institutions and enrolled students in Secondary Teacher Education Institutions of Gujarat University. There was total six Teacher Education Institutions (five self-financed and one grant-in-aid colleges) affiliated to Gujarat University in Vadodara District. Generally, in a Teacher Education Institution, one head or principal, seven teacher educators and one unit of hundred student teachers were there as per the NCTE regulations, 2008 and revised regulation 2015.

3.3. SAMPLE:

From population, all six Teacher education Institutions (TEIs) were selected. All selected Teacher Education Institutions were affiliated to Gujarat University. The sample consisted of all teacher educators, head of the teacher education institutions and the student-teachers enrolled in selected teacher education institutions for the year 2013-14. Below Table 3.1 shows the exact number of entities taken under data collection.

Table 1: Data taken from Colleges for Performance Appraisal System

Sr. No.	Name of the Teacher Education Institution	Number of Teacher Educators including Head	Number of Student-Teachers
1.	S.D. Patel B.Ed. College	7	61
2.	Axar Mahila B.Ed. College	8	79
3.	Dabhoi B.Ed. College	8	85
4.	Sanskar B.Ed. College	7	68
5.	Sanskarbharti B.Ed. College	7	28
6.	Pipariya B.Ed. College	7	43
	Total	**44**	**364**

The performance appraisal of teacher educators were measured by self, student-teachers, peers and head were precisely given in below table 3.2. Here, differential strength of student-teachers in respective TEIs was depending on admissions held in year 2013-14 in that particular institute. In table 3.2, the 'total' column values are calculated by first calculating number of appraised form for a teacher educator (i.e. total of column 3 to 6) and multiplying it by number of teacher educators in the institution including self and principal.

Table 2: Sample size from which Data collected through Tool

Sr. No.	Name of the college	Head	Self	Peers	Student-teachers	Total
1.	S.D. Patel B.Ed. College	1	1	5	61	475
2.	Axar Mahila B.Ed. College	1	1	6	79	695
3.	Dabhoi B.Ed. College	1	1	6	85	743
4.	Sanskar B.Ed. College	1	1	5	68	524
5.	Sanskarbharti B.Ed. College	1	1	5	28	244
6.	Pipariya B.Ed. College	1	1	5	43	349
	Total	**6**	**6**	**30**	**364**	**3027**

Here, when it comes to teacher educator as 'principal' in a TEI, so subtract one from total gave the exact number. i.e. for example in S. D. Patel College 1 + 1+ 5 + 61=68 further total assessed forms will be 68* total number of teacher educators= 68*7= 476 but self and principal was same so 476-1= 475 assessed form will be there)

4. TOOLS

The researcher had constructed **'Classroom Teaching-Learning Based Performance Appraisal Scale'** for collecting necessary data for the present study. The face validity and reliability of the tool was established by sending the tool to the experts working in the field of Education and Psychology. The scores generated by employing this scale was named as *Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS).*

4.1. DATA COLLECTION:

Researcher personally visited the institutions and collected the data from teacher educators, head and student-teachers during 2014-15.
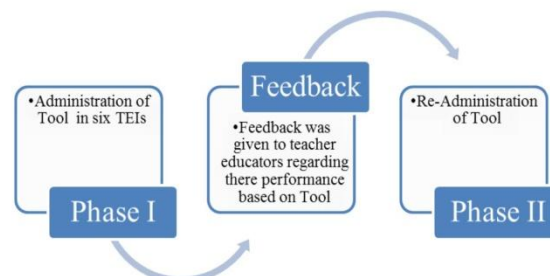
Chart 1: *Modus operandi* of the data collection

4.2. DATA ANALYSIS AND INTERPRETATION:

The collected data was analyzed with Quantitative techniques. Descriptive and inferential statistical techniques like Mean, Standard Deviation, t-test and ANOVA were utilized. The statistical package for Social Sciences (SPSS) was used to analyze the data.

4.2.1. *Analysis with respect to Objective 1:*

Before the Feedback was given, the mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators by Self, Student-teacher, Peers and Head was found to be 7.25, 7.12, 7.06 and 7.41 respectively. To test hypothesis $H_0 1$, Mean, Standard Deviation, Standard Error of Mean, ANOVA, degrees of freedom (df), and level of significance of the scores were calculated. Following Table and Graph represent the results

Table 3: Sum of squares of mean, Mean square, F-value, degrees of freedom (df), and level of significance of the Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by Student Teachers, Peer, Self and Head before the feedback was given

Source of Variation	Sum of Squares	df	Mean Square	F	P-value Sig. (2-tailed)
Between Groups	25.542	3	8.514		
Within Groups	195.390	172	1.136	7.495	.000*
Total	220.932	175			

*Significant
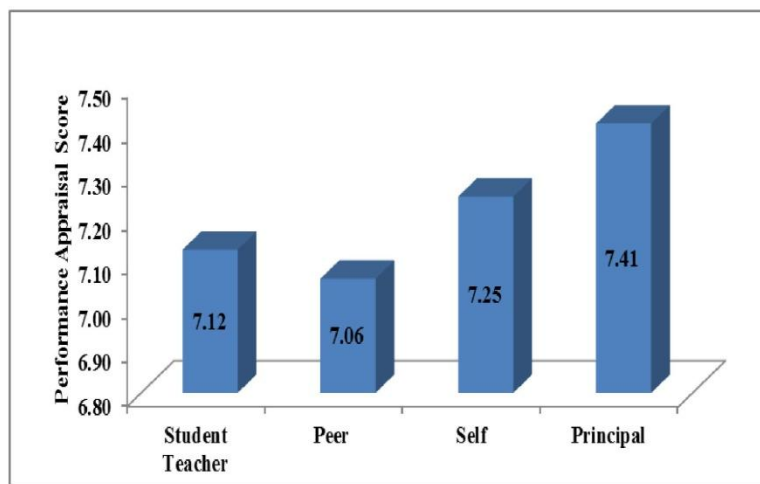
Graph 1: Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) across different assessors (before giving the feedback)

Further, from the Table 3 and Graph 1, it is clear that F-value was found to be 7.495 which was significant at P-value of 0.0 (2- tailed) with df =3,172. This P-value is less than the alpha value of 0.05, thus, the F-value was significant at 0.05 level (and further it was also significant at 0.00 level too). This indicates that the mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of the Teacher Educators differ significantly at 0.00 level of significance with respect to different assessors i.e. Student Teachers, Peer, Self and Head. So, the null hypothesis, "There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, before the feedback was given" was rejected at 0.00 level.

Thus, it can be elicited that Performance Appraisal Scores of Teacher Educators was dependent of the assessors Self, Student-teachers, Peers and Head.

From Graph 1, it can also be elicited that the mean CTLBPAS scores of Heads were found to be more than the other stakeholders (assessors). Moreover, Peers among all stakeholders (assessors) were found to be allocating less CTLBPAS scores for the Teacher Educators. This may be possible due to the competition among the Teacher Educators.

To find out further which groups of the assessors had made significant difference for the Performance Appraisal of the teacher educators, a Post hoc Fisher's Least Significant Difference (LSD) test was performed using the SPSS (version 22). Following Table 4 represent the results.

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Table 4: Post Hoc test for the CTLBPAS between different Assessor groups

Multiple Comparisons						
Dependent Variable: *CTLBPAS*					Test: LSD	
(I) Stakeholder	(J) Stakeholder	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Student Teacher	Peer	-.69773[*]	0.22724	0.002*	-1.1463	-.2492
	Self	-1.05682[*]	0.22724	0.000*	-1.5053	-.6083
	Head	-.64773[*]	0.22724	0.005*	-1.0963	-.1992
Peer	Self	-.35909	0.22724	0.116	-.8076	.0894
	Head	.050	0.22724	0.826	-.3985	.4985
Self	Head	.40909	0.22724	0.074	-.0394	.8576
* Significant at the 0.05 level						

From the Table 4, it was clear that Performance assessed by the Student teachers and Performance assessed by Peers was significantly different at 0.002 level of significance.

Also, Performance assessed by the Student teachers and Performance appraised by the Self was significantly different at 0.00 level of significance.

At the same time, Performance assessed by the Student teachers and Performance appraised by the Heads were significantly different 0.005 levels of significance.

Further, between other possible pairs of assessors there Mean CTLBPAS was not significant different at 0.05 level of significance.

Therefore, it can be elicited that, before the feedback was given, out of four groups of assessors, three groups viz. Peer, self and Head were found homogeneous on assessing the performance of the teacher educators. While the Student-teachers having a different opinion about the performance of the Teacher educators on the Classroom Teaching-Learning based Performance Appraisal.

From the student-teacher's point of view, the Performance of the teacher educators was found to be significantly different than that assessed by Peer, Self and Head, before the feedback was given. Thus, Student-teachers play important role in assessing Teacher Educators.

4.2.2. *Analysis with respect to Objective 2:*

The Objective 2 of the study was, "To compare the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, after the feedback was given."

For comparing the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators with respect to Self, Student-teachers, Peers and Head, after the feedback was given, the following null hypothesis was formulated.

Ho 2.2: There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators as assessed by Self, Student-teachers, Peers and Head, after the feedback was given.

After the feedback was given, the mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators by Self, Student-teacher, Peers and Head was found to be 7.5, 7.5, 7.12 and 7.1 respectively.

To test this hypothesis, Mean, Standard Deviation, Standard Error of Mean, ANOVA, degrees of freedom (df), and level of significance of the scores were calculated. Following Table 4.6 and Graph 4.2 represent the results.

Table 5: Sum of squares of mean, Mean square, F-value, degrees of freedom (df), and level of significance of the CTLBPAS as assessed by Student Teachers, Peer, Self and Head after the feedback was given **different assessors after the feedback was given**

Source of Variation	Sum of Squares	df	Mean Square	F	P-value Sig. (2-tailed)
Between Groups	7.032	3	2.344		
Within Groups	167.097	172	.971	2.413	0.068
Total	174.129	175			

Graph 2: Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) across

Further, from the Table 5 and Graph 2, it is clear that F-value was found to be 2.413 which was significant at P-value of 0.068 (2- tailed) with df =3,172. This P-value was greater than the alpha value of 0.05, thus, the F-value was not significant at 0.05 level of significance. This indicates that the mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of the Teacher Educators did not differ significantly at 0.05 level of significance with respect to different assessors i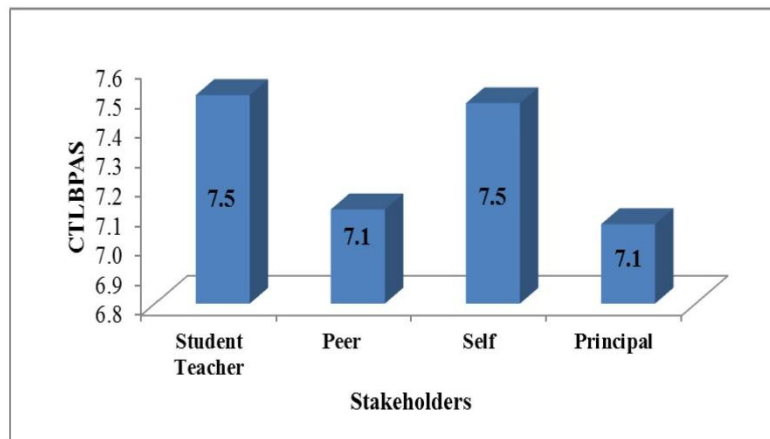.e. Student Teachers, Peer, Self and Head.. So, the null hypothesis, "There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators with respect to Self, Student-teachers, Peers and Head after the feedback was given" was not rejected at 0.05 level of significance.

Therefore, it can be elicited that Student-Teachers, Peer, Self and Head were found homogeneous on assessing the performance of the teacher educators, after the Feedback was given. Therefore, after the feedback was given the Performance Appraisal Scores of Teacher Educators as assessed by Self, Student-teachers, Peers and Head were Homogeneous i.e. consistent, leading to reliability of the scores. Therefore, consistency of Performance appraisal scores across Self, Student-teachers, Peers and Head was observed after the Feedback was given to teacher educators.

4.2.3. Analysis with respect to Objective 3:

For comparing the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators with respect to Self, Student-teachers, Peers and Head on before and after the feedback was given, the null hypothesis *Ho 3:* was formulate. For the sake of convenience of analysis it was further subdivide into four Null hypotheses viz. *Ho* 3(a) to *Ho* 3(d).

To test these hypotheses, Mean, Standard Deviation, Standard Error of Mean, ANOVA, degrees of freedom (df), and level of significance of the scores were calculated. All the null hypotheses were tested at 0.05 level of significance. Following Table 4.9 and Graph 4.5 represent the results.

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Table 6: Sum of squares of mean, Mean square, Correlation 'r', Paired Sampled t-value, degrees of freedom (df), and level of significance (0.05) of the Performance Appraisal Scores with respect to different Assessors on before and after the feedback was given

Paired Samples Statistics								
Pair wise comparison of before and after the feedback	Mean	N	Std. Deviation	Std. Error Mean	df	'r'	't'	P-value Sig. (2-tailed)
Pair 1	Student Teacher Before Feedback	7.125	44	.696	.10531	43	.336	5.823	.002*
	Student Teacher After Feedback	7.504	44	1.03	.15574				
Pair 2	Peer Before Feedback	7.0591	44	1.18	.17809	43	.892	0.658	.514
	Peer after Feedback	7.1182	44	1.32	.19836				
Pair 3	Self Before Feedback	7.2455	44	0.91	.13703	43	.839	2.815	.007*
	Self After Feedback	7.4773	44	0.99	.15008				
Pair 4	Head Before Feedback	7.4114	44	0.92	.13932	43	.749	-3.576	.001*
	Head After Feedback	7.0682	44	0.87	.13093				

Significant at 0.05 level
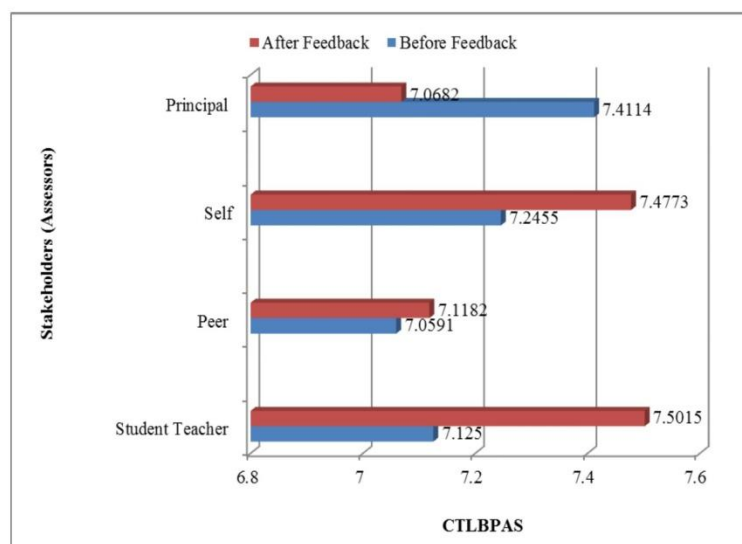
Graph 3: Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators with respect to Self, Student-teachers, Peers and Head on Before and After the feedback was given

From Table 6 it can also be elicited that the mean CTLBPAS scores given by Heads were found to be less than that given by all of the stakeholders (assessors), after feedback was given. Peers were allocating less CTLBPAS scores for the Teacher Educators after feedback was given. Whereas Student-teachers and Self assessed more on CTLBPAS, after feedback was given.

From the Table 6 and Graph 3, it is clear that t-value was found to be 5.823 which was significant at P-value of 0.02 (2-tailed) with df =43. This P-value is less than the 0.05 alpha level of Significance, thus, the t-value is significant at 0.05 level (and further it was also significant at 0.00 level too). This indicates that the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the student teachers for the teacher educators on before and after the feedback was given differ significantly at 0.00 levels of significance. So, the null hypothesis: 2.4(a), "There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Student-teachers, on before and after the feedback was given" was rejected. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the

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student teachers after giving feedback was significantly more than that of before feedback was given. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was improved, after the feedback was given as assessed by the student-teachers.

From the Table 6 and Graph 3, it is clear that t-value was found to be -0.658, which was significant at P-value of 5.14 (2-tailed) with df =43. This P-value is greater than the 0.05 alpha level of Significance, thus, the t-value is not significant at 0.05 level. This indicates that the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the Peers for the teacher educators on before and after the feedback was given do not differ significantly. So, the null hypothesis: 2.4(b), "There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Peers, on before and after the feedback was given" was not rejected. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the peers before or after giving feedback was not makes any difference. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was not improved, after the feedback was given as assessed by the peers.

 From the Table 6 and Graph 3, it is clear that t-value was found to be -2.815, which was significant at P-value of 0.007 (2- tailed) with df =43. This P-value is less than the 0.05 alpha level of Significance, thus, the t-value is significant at 0.05 level. This indicates that the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the self for the teacher educators on before and after the feedback was given differ significantly. So, the null hypothesis: 2.4(b), "There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by Self on before and after the feedback was given" was rejected. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by self, on after giving feedback was significantly more than that of before feedback was given. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was enhanced, after the feedback was given, as assessed by Teacher-Educators themselves.

From the Table 6 and Graph 3, it is clear that t-value was found to be 3.576 which was significant at P-value of 0.00 (2-tailed) with df =43. This P-value is less than the 0.05 alpha level of Significance, thus, the t-value is significant at 0.05 level (and further it was also significant at 0.00 level too). This indicates that the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the Head for the teacher educators on before and after the feedback was given, differ significantly at 0.00 levels of significance. So, the null hypothesis: 2.4(d), "There will be no significant difference in the Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators assessed by the Heads on before and after the feedback was given" was rejected. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the Head before giving feedback was more than that of after feedback was given. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was decreased, after the feedback was given as assessed by the Head.

5.   FINDINGS

The objective wise findings were as under:

5.1. Finding under Objective 1 and 2:

The findings with respect to these two objectives were:

A. Before the Feedback was given, the mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators by Self, Student-teacher, Peers and Head was found to be 7.25, 7.12, 7.06 and 7.41 respectively.

B. Performance Appraisal Scores of Teacher Educators was dependent of the assessors Self, Student-teachers, Peers and Head.

C. Before the feedback was given, out of four groups of assessors three groups viz. Peer, self and Head were found homogeneous on assessing the performance of the teacher educators. While the Student-teachers having a different opinion about the performance of the Teacher educators on the Classroom Teaching-Learning based Performance Appraisal. Thus, Student-teachers play important role in assessing Teacher Educators.

D. After the feedback was given, the mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) of Teacher Educators by Self, Student-teacher, Peers and Head was found to be 7.5, 7.5, 7.12 and 7.1 respectively.

E. After the Feedback was given, all the performance assessors Student-Teachers, Peer, Self and Head were found homogeneous on assessing the performance of the teacher educators. Therefore, after the feedback was given the Performance Appraisal Scores of Teacher Educators as assessed by Self, Student-teachers, Peers and Head were Homogeneous i.e. consistent, leading to reliability of the scores.

Conclusively, it was inferred that, before giving the feedback all stakeholder assessors were of different opinion (heterogeneous) about the performance of the teacher educators. But after giving the feedback, all stakeholder assessors were homogenous about the performance of the teacher educators. i.e. the consistency of Performance appraisal scores across Self, Student-teachers, Peers and Head was observed after the Feedback was given to teacher educators.

5.2. Findings under Objective 3:

The findings with respect to this objective were :

A. The mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the student teachers after giving feedback was significantly more than that of before feedback was given. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was improved after the feedback was given as assessed by the student-teachers.

B. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the peers before or after giving feedback was not makes any difference. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was not improved after the feedback was given as assessed by the peers.

C. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by self, on after giving feedback was significantly more than that of before feedback was given. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was enhanced after the feedback was given, as assessed by Teacher-Educators themselves.

D. The Mean Classroom Teaching-Learning based Performance Appraisal Score (CTLBPAS) as assessed by the Head before giving feedback was more than that of after feedback was given. Thus, it can be elicited that the teacher educators' classroom teaching-learning based performance was decreased after the feedback was given as assessed by the Head.

Conclusively, it can be inferred that the Performance of the Teacher Educators was enhanced after the feedback was given to them as assessed by the Student-teachers, Peers and the Teacher Educator themselves. But from the Head's point of view the performance was decreased on giving the feedback.

6. CONCLUSION

From the study it comes out clear that the feedback by the different assessor groups were found to be effective in improving the performance of a teacher educator in the classroom. The collaborative feedback provided by the Student-teachers, Peers, Teacher educator him/herself and Head of the institution, somehow, improves the overall performance of the Teacher Educator. This important aspect of Team Performance Appraisal can be utilized in the forthcoming forms of PBAS-API by the UGC. Although, recent PBAS mechanism had came up with the Student's feedback for the teacher but the lack of tool in this area can be fulfilled by current piece of research. The present research had came up with a tool for assessing the performance of the teacher educator in the classroom by all the potential stakeholders. Moreover, in the context of Wholistic nature of PBAS-API tool, teacher needs to be evaluated from different angles. In our literature also this was mentioned as आचार्‍ण‍ात् पादमादत्ते पादं शिष्प्रः स्वमेधर्‍ण । सब्रह्मचारिभ्रः पादं पादं कालक्रमेण च ॥ (One fourth from the teacher, one fourth from own intelligence, one fourth from classmates, and one fourth only with time.) So now it is very much necessary to put forth this conviction regarding appraisal from different appraisers.

Tool for Performance Based Appraisal for a specific discipline is much needed whispers of the academia since long, which is less heard. The present study is an attempt to listen those whispers in much empirical and detailed manner for the

field of Teacher Education *per se* by designing a *system* for Performance appraisal for the Teacher Educators. Where appraisal from different perspective been considered to develop Wholistic Performance Based Appraisal System.

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ABSTRACTS OF THE STUDIES

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