

Teacher Effectiveness-a parameter of Quality in Higher Education in the polarized scenario of 'UGC Governed' and 'non-UGC Governed' Teachers in Aided Arts and Science Colleges of Chennai City

C.R.Ravi *, Dr.M.V.Arulalan **

* Associate Professor, Head, Dept. of Commerce, Former Unit Secretary of Association of University Teachers(AUT), A.M Jain College, Chennai- 600 114

** Associate Professor, Head, Dept. of Commerce, Chairman, Zone II of Association of University Teachers(AUT), Guru Nanak College, Chennai- 600 042.

I. INTRODUCTION

Aided College system coming under the grant-in-aid Code dates to the pre-independence era. Block grant of 50% was granted to aided colleges before Independence and from 1972-73, the grant-in-aid pattern was as follows:

- a. From 1.4.1977, the revised pattern of grant-in-aid came into force in order to ensure prompt and full payment of salaries to staff in aided colleges, namely, 100% of salary grant and non-salary grant¹
- b. Managements of aided colleges were directed by the Government to open a Bank A/c entitled 'Approved Staff Salary Account' for making payment to the approved staff w.e.f. 1.4.1977, followed by Advance Salary Grant system which was introduced from 1978-79.²
- c. After the Review Committee suggested certain measures, 'Direct Payment' system was introduced from 1.4.1980 by which salaries directly got transferred from the Treasury to the bank account of individual staff.³

The concept of Evening College came into existence during 1970s owing to the demand from employed people thronging at the portals of higher education. This created the 'grant less sector teachers'. The market orientation of the unaided shift has created a special status to it as against the aided in the context of the utility-viability, marketability-employability criteria, being zealously advocated by the market theorists of globalization.⁴This situation assumed greater proportions after the New Educational Policy of 1986, followed by a virtual moratorium imposed by the State Government in 1988-89 on Aided Courses and mushrooming growth of Self-financing Colleges, culminating in the creation of dichotomy of teachers in aided colleges, i.e., Teachers '**governed by UGC scales of pay and 'not governed by UGC scales of pay'**'. While majority of UGC governed teachers are members of one teacher Association or other, only a negligible part of those not-governed by UGC scales are members of Association, with varying pay scales, service conditions, professional development measures, participation in management and other factors impacting the effectiveness of a teacher, thus the present study. It should be underscored that teacher organisations which had a crucial role in fostering the Direct Payment Scheme were unable to prevent the

drift and privatisation move resulting in the unaided stream in aided colleges and creation of self-financing colleges and education being converted as a commodity from being a cherished noble exercise on account of the global phenomenons.

II. NEED FOR THE PRESENT STUDY

"The term teacher effectiveness is used broadly, to mean the collection of characteristics, competencies, and behaviors of teachers at all educational levels that enable students to reach desired outcomes".⁵ Awofala claimed that teacher effectiveness is synonymous to individual teachers' performance and "teacher effectiveness is encompassed in knowledge, attitudes, and performance".⁶ Teacher effectiveness is important because the "effectiveness of every teacher is the life of every educational institution".⁷ In particular, teacher characteristics are one of the factors that influence teachers' overall effectiveness. "Teacher characteristics are relatively stable traits that are related to and influence the way teachers practice their profession". Specifically, "effective teachers are those who achieve the goals they have set for themselves or which they have set for them by others". Additionally, "the work of effective teachers reverberates far outside of school walls. Their students develop a love of learning and a belief in themselves that they carry with them throughout their lives". It must be recognized also that "the quality of a teacher can make the difference of a full year's growth in learning for a student in a single year".⁸ Teacher Evaluation by the students is also known as 'Students' Feedback' over teachers and their teaching. It has become an integral part of National Assessment and Accreditation (NAAC) process and grant of Autonomous Status to colleges. Institutions follow different evaluation criteria of their own. As there has been no full-fledged study research or study on evaluation criteria, there is a need for research about evaluation criteria for 'Teachers' Effectiveness' and identification of factors for enhancing the same and also the extent of organized teachers' satisfaction level with their associations and its dimensions.

III. OBJECTIVES OF THE STUDY

1. To know the profile of the Aided college teachers

2. To examine the association of income groups with age, position, nature of position and experience groups of the teachers.

3. To measure their opinions about Teachers' Service Conditions (TSC) and Teacher Effectiveness (TE).

4. To find the latent dominant dimensions in the TE variables.

5. To identify the profile and TSC significantly influencing Total TE.

6. To identify the dominant differentiations in TSC between teachers governed by UGC Scales and not governed by UGC Scales in aided colleges.

7. To identify the dominant underlying dimensions of Members Satisfaction With their Association (MSWA) Variables.

Research Methodology: The study is based on primary data collected from a random sample of 150 teachers, 75 teachers - 'Governed by UGC Scales of pay' and 75 teachers - 'not governed by UGC Scales of pay' working in the aided colleges in the city of Chennai using a structured questionnaire. Gender, age (years), educational qualification, first generation higher educated, religion, community, spouse employment and family monthly income are the Personal Profiles. Position, appointment earlier to or later than 01.04.2003, status of the college - autonomous or otherwise, NAAC Accreditation or otherwise, experience, association membership, knowledge of Governance of service conditions and monthly income are the Professional Profiles of the teachers covered by the study. Their opinion was obtained on each of the **Teachers' Service Conditions (TSC)** viz., In-service Monetary Benefit Realisation (ISMBR), In-service Non-monetary Benefit Realisation (ISNMBR), Post-Retirement Monetary Benefit Realisation (PRMBR), Professional Development Benefit Realisation (PDBR), Defined Teaching Responsibility Fulfilment (DTRF), Professional Development Responsibilities (PDRF), Corporate Life Responsibilities Fulfilment (CLRF), Internal Management Rights (IMR), External Management Rights (EMR), Primary Remedy (PR) and Secondary Remedy (SR). The perception of the Members Satisfaction With Associations [MSWA] was measured in terms of 12 variables as listed out in Table No.12.

The Ten Teaching Effectiveness (TE) variables are Regularity in the conduct of Assignment/Seminar, Regularity in the conduct of tests, Motivating/Counselling sessions, Promptness in handling classes, Ensuring fair and just Internal Assessment, Ensuring adequate understanding by students, Being impartial to students/parents, Updated subject knowledge & Expertise, Effective Communication and Timely Syllabus Completion.

TSC, TE and MSWA variables have been measured using 5 point Likert scale of Strongly Agree, Agree, No Opinion, Disagree and Strongly Disagree with the weights of 5,4,3,2 and 1 respectively.

Percentage Analysis, Descriptive Statistics, Chi-square Test, Factor Analysis, Discriminant Analysis and Multiple Regression have been used for analysis.

The major findings of the study are as follows:

I. Personal Profile of the Aided College Teachers:

Majority of the respondents are male, younger, M.Phil., holders, non-minority and have self-employed or employed spouses. Sizable section of them are Ph.Ds., BCs first generation graduates with monthly family income of more than Rs.1,00,000. (Table 1)

II. Organisational Profile of Aided College teachers:

While majority of the respondents are Assistant Professors, appointed after 1.4.2008 without Standard Pensionary Benefits, working in autonomous and accredited colleges, unaware of Government Rules or being governed by Tamil Nadu Private Colleges (Regulation) Act 1976 or Service Agreements and sizeable sections of them earn monthly family income of more than a lakh of rupees. (Table 2)

III. Significance Of Association Between Income Groups And Profile Groups

The income of the respondents is significantly associated with their position, nature of position, age and experience. While Assistant Professors, aided management staff, youngsters and lesser experienced are significantly associated with lesser pay, associate professors, elders, more experienced and UGC scale teachers are significantly associated with better pay (Tables 3 and 4).

IV. Factorisation of Teaching Effectiveness Variables of Aided College Teachers

Factor Analysis has been applied to identify the latent dominant dimensions of the 10 teaching effectiveness variables of the aided college teachers.

The results show TE Variables of Aided College Teachers with their **communality values** ranging from **0.361 to 0.889** and also **MSA values** ranging from **0.781 to 0.901**, have goodness of fit for factorization. **KMO-MSA** value of **0.857** and **chi-square value of 898.891** with df of **45** and **P-value of 0.000** reveal that factor analysis can be applied for 10 Teaching Effectiveness variables of the Aided College teachers. Two dominant independent Teaching Effectiveness factors explaining **64.633%** of total variance have been extracted out of 10 Teaching Effectiveness Variables. Of them, the most dominant factor is **Assessment Front Factor (AFF) with 7 variables** explaining 33.621% variance, followed by **Teaching Front Factor (TFF) with 3 variables explaining 33.012% variance**, in the order of their dominance. (Table 5)

V. Descriptive Statistics of Teaching Effectiveness

With lesser standard deviation value of 4.102, the mean value of 45.967 is robust measure of Total TE. There is a slight negativeskewness in Total TE. (Table 6)

VI. Multiple Regression Analysis of Profiles and TSC factors on Total TE

The Multiple Correlation coefficient (R) is 0.513. The F-Value of 12.929 at P-Value of 0.000 shows that OLS Model has the goodness of fit for the multiple regression run. The External Management Rights (EMR), Experience, Educational Qualification and Generation higher educated status are the 4 Independent Factors which significantly influence the Total Teaching Effectiveness in the order of their influence and they explain 26.33% of the variance in Total TE. While EMR has positive influence on Total TE, whereas more experienced, second generation higher educated and science teachers are significantly associated with higher Total TE. (Table 7)

VII. Discriminant Analysis between TSC Factors between UGC Scale and Management Scale Teachers

The Discriminant Analysis has been done to find out whether there are significant differentiations in TSC factors between UGC scale teachers and Management Scale teachers in the aided colleges. There are significant differentiations in the TSC factors except DRRF, CLRF, IMR, PR and SR. The TSC of the UGC scale teachers are significantly better than the management scale teachers in the factors of ISNMBR, ISMBR, PDBR, PRMBR, EMR and PDRF in the order of differentiation. However in the TSC factors of IMR, SR, PR, DTRF and CLRF, not significant differences have been observed even though factor levels are on the higher side among both categories of teachers. (Tables 8 – 11)

VIII .DOMINANT DIMENSIONS OF MEMBERS SATISFACTION WITH ASSOCIATION [MSWA] VARIABLES

The factor analysis has been run to understand the underlying dominant latent dimensions in the 12 MSWA variables. Extraction methods of Principal Component Analysis and Rotation Method of Varimax with Kaiser Normalization have been applied and the results are shown in Tables 12 and 13 which reveal that with lesser S.D values, the mean values of MSWA variables are the robust measures of their Central values. The communalities are ranging from **0.557** to **0.872** and the MSAs (Measure of Statistical Adequacy) ranging from **0.862** to **0.944** for MSWA Variables, show that those variables are fit for factorization. Moreover, KMO- MSA test value of **0.894** and Bartlett's Test of sphericity with chi-square value of **1609.376** at d.f. of **66** and P Value of **0.000** indicate that the factor analysis can be applied to 12 MSWA variables.

Two independent MSWA factors have been extracted out of 12 MSWA variables and they together explain **67.438%** of variance.

The most dominant factor 1 explains **33.863%** of variance in MSWA variables and it contains **Six** MSWA variables of Association Strategies, Members' Participation in Association, Association Objectives and Policies, Effective Leadership, AIFUCTO role and JAC role in the order of importance of their relative correlation with it and therefore, it has been labelled as **Association Centric (AC) factor**.

The second most dominant factor 2 explains **33.574%** variance in MSWA variables and it comprises of **six** MSWA variables viz., M.Phil/Ph.D incentives, Career Advancement Promotion, rectification of pay anomalies, Post superannuation re-employment, UGC scales of pay earned and Grievance Redressal in the order of their importance of relative correlation with it and therefore, it has been named as **Benefit Centric (BC) factor**.

Thus, two independent factors have been extracted out of 12 MSWA variables of which the AC factor is the most dominant one, followed by the BC factor.

The conclusions that emerge are:

i. The satisfaction of the members with each and every 12 aspects of their Associations is on the higher side [with the minimum mean value of 62.4% ($31.11/5 * 100$) which is highly consistent and therefore more reliable.

ii. Those 12 members-satisfaction aspects with their Associations have been statistically grouped in 2 Factors, namely, Association Centric (AC) Satisfaction (33.863% variance explained) and Benefit Centric (BC) Satisfaction (33.574% variance explained), of which the AC is more dominant than BC.

iii. In the AC Satisfaction Factor, Association Strategies are the most satisfying to the members, followed by their Participation in Association Activities, Objectives and Policies of their Association, Effectiveness of the Association Leadership, Role of AIFUCTO and Role of JAC in that order. In terms of BC satisfaction, the members derive the most satisfaction with M.Phil/Ph.D., Incentives, followed by CAS, Rectification of Anomalies, Re-employment on superannuation, UGC scales of pay Realized and Redressal of Grievances in that order.

IV. SUGGESTIONS

The Awareness of the Aided college teachers about their service conditions as governed by Government Rules, TNPC(R) Act and Service Conditions must be enhanced.

1. All TSC factors except EMR should be improved in order that TE is enhanced in the interest of the students, even though they are at better levels.
2. The polarisation of UGC and non-UGC scales of pay has left the non-UGC teachers dissatisfied with their management-fixed scales. Hence, steps are to be initiated to revise their scales of pay to a considerable level commensurate with their qualification and experience.
3. In terms of ISNABR, PRMBR, PDBR, DTRF and EMR factors, effective steps be taken by the 'powers that be', in order that the Aided Management Staff are endowed with higher morale which would augur well for improving TE.
4. Though the Association Centric (AC) Satisfaction is already on the higher side, the Teacher Associations shall further endeavor to conduct Seminars and Conferences to consolidate further the Association Centric Satisfaction of members towards their Associations for the furtherance of teachers' overall welfare in future also.

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Teachers(AUT), A.M Jain College, Chennai- 600 114, e-mail: raviamjain@gmail.com

Second Author – Dr.M.V.Arulalan, Associate Professor, Head, Dept. of Commerce, Chairman, Zone II of Association of University Teachers(AUT), Guru Nanak College, Chennai- 600 042., e-mail: gncarulalan@yahoo.com.

AUTHORS

First Author – C.R.Ravi, Associate Professor, Head, Dept. of Commerce, Former Unit Secretary of Association of University

ANNEXURE

Table 1 PERSONAL PROFILE OF AIDED COLLEGIATE TEACHERS

PROFILE	GROUPS WITH FREQUENCY				Total
GENDER	Male = 89 [59.3%]		Female = 61 [40.7%]		150 [100%]
AGE[YRS]	<35 = 53 [35.3%]	[35-50] = 70 [46.7%]		>50 = 27 [18%]	150 [100%]
EDUCATIONAL QUALIFICATION	M.Com = 61 [40.7%]	M.A = 34 [22.7%]		M.Sc = 55 [36.7%]	150 [100%]
M.Phil	Yes = 106 [70.7%]		No = 44 [29.3]		150 [100%]
P.hD	Yes = 68 [45.3%]		No = 82 [54.7%]		150 [100%]
FIRST GENERATION LEARNER	YES = 60 [40%]		NO = 90 [60%]		150 [100%]
RELIGION	Minority = 54 [36%]		Non-minority= 96 [64%%]		150 [100%]
COMMUNITY	SC/ST = 21 [14%]	MBC = 30 [20%]	BC = 74 [49.3%]	OC = 25 [16.7%]	150 [100%]
SPOUSE EMPLOYMENT	Self employed = 15 [10%]	Employed = 63 [42%]		Others = 72 [48%]	150 [100%]
FAMILY MONTHLY INCOME(Rs)	Upto 20,000 = 28 [18.7%]	[20,000-50,000] = 39 [26%]	[50,000-100000] = 38 (25.3%)	>100000 = 45 [30%]	150 [100%]

Table 2 PROFESSIONAL PROFILE OF AIDED COLLEGIATE TEACHERS

PROFILE	GROUPS WITH FREQUENCY	
POSITION	Assistant professor = 113 [75.3%]	Associate professor = 37 [24.7%]

APPOINTMENT	Earlier to 1.4.2003 = 62 [41.3%]		After 1.4.2003 = 88 [58.7%]			
STREAM OF COLLEGE	Autonomous = 82 [54.7%]			Non- autonomous = 68 [45.3%]		
NAAC ACCREDITATION	Non-accreditation = 12 [8%]			Accreditation = 138 [92%]		
GOVERNANCE OF SERVICE	Govt. Rules		TNPC® Act		Service agreements	
	No = 75 [50.0%]	Yes = 75 [50%]	No = 100 [66.7%]	Yes =50 [33.3%]	No = 129 [86%]	Yes =21 [14%]
INCOME PER MONTH(Rs)	UPTO 20,000 = 54 [36%]	[20,000-50,000] = 29[19.3%]	[50,000-100000] =39 [26%]		[>100000] = 28 [18.7%]	
Experience	≤ 12 years =106(70.7%)			≥ 12 years =44(29.3%)		

Table 3 CROSS TABLE BETWEEN INCOME GROUPS AND PROFILE GROUP OF AIDED COLLEGIATE TEACHERS

Income per month (Rs in Ks)	Position		Nature Of Position		Age (years)			Experience(years)	
	Assistant Professor	Associate Professor	Aided (UGC)	Aided management	<35	(35-50)	>50	Upto 12	> 12
	UPTO 20	52	2	0	54	38	15	1	48
[20-50]	25	4	15	14	8	20	1	24	5
[50-100]	31	8	37	2	5	25	9	26	13
[>100]	5	23	23	5	2	10	16	8	20

Table 4 SIGNIFICANCE OF ASSOCIATION BETWEEN INCOME GROUPS & PROFILE GROUP OF AIDED COLLEGETEACHERS

S.No	INCOME PER MONTH	Cramer's value	X ² - Value	df	P-value	Inference
1.	Position	0.657	64.756	3	0.000	Significant
2.	Nature of position	0.804	97.016	3	0.000	Significant
3.	Age	0.507	77.251	6	0.000	Significant

4.	Experience Groups	0.483	34.932	3	0.000	Significant
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Table 5 FACTORISATION OF TEACHING EFFECTIVENESS VARIABLES OF AIDED COLLEGE TEACHERS

Factors	Variance Explained	Variables	Factor Loading	Communalities	MSA	Mean	S.D
Assessment Front	33.621%	Regularity of Assignment/Seminars	0.825	0.721	0.901	4.530	0.552
		Regularity of Tests	0.814	0.700	0.863	4.560	0.537
		Motivating/Counseling students	0.655	0.646	0.906	4.600	0.531
		Regularity of promptness	0.624	0.634	0.926	4.590	0.569
		Ensuring fair and just Internal Assessment	0.575	0.361	0.919	4.500	0.758
		Ensuring Adequate understanding by students	0.567	0.551	0.812	4.680	0.496
		Being impartial to students/parents	0.505	0.381	0.781	4.470	0.730
Teaching Front	31.012%	Updated subject knowledge & Expertise	0.916	0.889	0.803	4.680	0.496
		Effective Communication	0.895	0.858	0.809	4.680	0.509
		Timely syllabus completion	0.732	0.722	0.880	4.670	0.485
KMO- MSA = 0.857 , Total Variance Explained = 64.633%							
Bartlett's Test of Sphericity Chi-Square value of 898.981 with d. f of 45 and P- Value of 0.000							

Table 6 DESCRIPTIVE STATISTICS OF TEACHING EFFECTIVENESS TOTAL

Description	Score	Description	Score
Mean	45.967	Std. Error of Kurtosis	0.394
Median	46.000	Minimum	36.000
Mode	50.000	Maximum	50.000
Std. Deviation	4.102	Q1	43.000
Skewness	-0.526	Q3	50.000
Std. Error of Skewness	0.198	Out of maximum score	50.000
Kurtosis	-1.038		

Table 7 INFLUENCING VARIABLES SIGNIFICANTLY INFLUENCING THE TOTAL TEACHING EFFECTIVENESS OF AIDED COLLEGE TEACHERS

Influencing Variables	Unstandardised		Standardised	T	Sig
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Constant	35.435	1.975		17.942	0.000
EMR	1.949	0.398	0.353	4.895	0.000
Experience – Present position	-0.138	0.038	-0.258	-3.597	0.000
Educational Qualification	0.767	0.337	0.165	2.280	0.024
First Generation Learner	1.344	0.599	0.161	2.243	0.026
R = 0.513 R ² = 0.263 Adjusted R ² = 0.243 F value = 12.929 with P value of 0.000					

Table 8 RESULTS OF DISCRIMINANT ANALYSIS

Discriminant Function	Eigen value	Variance explained	Canonical Correlation	Wilks Lambda	Chi Square	df	P value	Influence
1	0.395	100%	0.532	0.717	47.444	11	0.000	significant

Table 9 STRUCTURE MATRIX OF DISCRIMINANT FACTORS IN DISCRIMINANT FUNCTIONS

Factors	1	Factors	1
ISNMBR	0.786	IMR	0.238
ISMBR	0.749	SR	0.209
PDBR	0.622	PR	0.092
PRMBR	0.573	DTRF	-0.064
EMR	0.443	CLRF	-0.054
PDRF	0.267		

Table 10 CLASSIFICATION RESULTS IN FORMATION OF AIDED COLLEGE TEACHERS

Number	Predicted Group Membership	Total

	1	2	
Aided (UGC Scales)	58	17	75
Aided (Management Staff)	23	52	75
Total	81	69	150

#72.3 of original grouped cases are correctly classified.

Table 11 FACTOR WISE TEST OF EQUALITY OF MEAN VALUES

Factors	AIDED(UGC Scales)		AIDED(Management Staff)		Wilks' Lambda	F	df1	df2	P-Value	S/NS
	Mean	SD	Mean	SD						
ISMBR	4.0112	0.508	3.350	0.861	0.819	32.810	1	148	0.000	S
PRMBR	3.925	0.611	3.320	1.026	0.885	19.228	1	148	0.000	S
PDBR	4.213	0.555	3.604	0.961	0.867	22.621	1	148	0.000	S
ISNMBR	4.193	0.421	3.521	0.871	0.804	36.126	1	148	0.000	S
DTRF	3.896	0.562	3.941	0.564	0.998	0.238	1	148	0.626	NS
PDRF	4.212	0.565	4.020	0.588	0.973	4.160	1	148	0.043	S
CLRF	3.888	0.648	3.931	0.615	0.999	0.171	1	148	0.680	NS
IMR	4.143	0.562	3.950	0.731	0.978	3.298	1	148	0.071	NS
EMR	4.404	0.620	4.006	0.805	0.928	11.491	1	148	0.001	S
PR	3.501	0.683	3.418	0.759	0.997	0.500	1	148	0.481	NS
SR	3.587	0.741	3.373	0.886	0.983	2.558	1	148	0.112	NS

NOTE: S- Significant NS: Not Significant

Table 12 MEAN, S.D, COMMUNALITIES AND MSA OF MSWA VARIABLES

MSWA VARIABLES	MEAN	S.D	COMMUNALITIES	MSA
Association objectives and policies	3.640	0.976	0.724	0.896
Association strategies	3.510	0.955	0.822	0.883
Members' Participation in Association	3.630	0.929	0.723	0.902

Effective Leadership	3.470	0.991	0.662	0.944
UGC scales of pay earned	3.640	1.007	0.538	0.924
Rectification of pay anomalies	3.110	0.976	0.642	0.884
M.Phil/Ph.D Incentives	3.270	1.015	0.787	0.862
Career Advancement Promotion	3.190	0.901	0.752	0.884
Post Superannuation Re-employment	3.250	0.871	0.557	0.930
Grievance Redressal	3.110	0.860	0.563	0.889
JAC Role	3.350	0.875	0.670	0.868
AIFUCTO Role	3.410	0.907	0.653	0.886
KMO – MSA = 0.894				
Bartlett's Test of Sphericity Chi Square Value = 1609.376 at df66 with P value of 0.000				

Table 13 MSWA FACTORS

FACTOR	MSWA VARIABLES	FACTOR LOADING	EIGEN VALUE	EXPLAINED VARIANCE
Factor 1 AC	Association strategies	0.869	4.064	33.863%
	Members' Participation in Association	0.836		
	Association objectives and policies	0.811		
	Effective Leadership	0.792		
	AIFUCTO Role	0.618		
	JAC Role	0.601		
Factor 2 BC	M.Phil/Ph.D Incentives	0.876	4.029	33.574%
	Career Advancement Promotion	0.859		
	Rectification of pay anomalies	0.772		
	Post Superannuation Re-employment	0.658		
	UGC scales of pay earned	0.618		
	Grievance Redressal	0.584		
TOTAL VARIANCE EXPLAINED				67.438%

