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The job of teaching has inherent attributes which seek to motivate people to pursue it as a career choice. However these attributes might influence the motivation of school teachers in different ways. Since the motivation of the teachers have been recognized to be a influence for the effective implementation of the teaching -learning process in schools, it is imperative to study the influence of the iob attributes on the motivation of school teachers so as to optimize teacher motivation in schools. Studies have been conducted on factors that influence people to take up a career in teaching but no study has been conducted on the influence of each attribute of the job of school teaching on the motivation of teachers. In order to design a school as a behavioral system which intrinsically motivates teachers to give their best it is imperative to study the attributes of the job of teaching and know how each attribute influences the motivation of teachers.

The present study seeks to do just that. The study included a random sample of teachers (N=111). The results of the survey were analyzed by SPSS 17.0. A principal component analysis extracted three factors: namely Security factors, operational factors and esteem factors. The study seeks to provide a detailed analysis of how the job attributes influence school teachers to give their best at work.

**Keywords:** Motivation, Teacher, Job attributes, System, Factor score regression

## INTRODUCTION

The behavioral approach, the cognitive approach and the humanistic approach are the three approaches by which studies on human motivation have traditionally been conducted. The behavioral approach has been widely influenced and based on the works of psychologists like B.F. Skinner (Skinner, 1938, 1948) and is based on the fundamental concept of reinforced desired behavior, the cognitive approach, which has as its basis Jean Piaget's theory of equilibration, assimilation and accommodation (Piaget, 1964) and the humanistic approach as propounded by stalwarts like Abraham Maslow (1943) and Friedrich Herzberg (1959) wherein people are motivated to meet unfulfilled deficiency needs.

Brumback(1986) and Maehr(1984) showed that better student performance could be achieved by motivated teachers. Thus a systemic approach which takes into account all the attributes of the job of teaching is required. This study strives to explore the job of teaching and its attributes from an in-depth vertical and systemic approach.

## STUDY OF RELATED LITERATURE

A study of related literature first explored the broad studies of Friedrich Herzberg (1959) who in his study had described the factor work itself as a motivator or growth factor. Thomas Sergiovanni



## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

(1967) found that the factors related to the work itself were satisfiers. This finding was synchronous with Herzberg's two factor theory. With specific instances of studies related to teacher motivation Frase (1992) emphasized that that the intrinsic factors related to the work itself and the job of teaching itself brought joy and satisfaction to teachers and acted as motivators rather than extrinsic rewards. He identified what he termed as work content factors which were essentially factors related to the work itself. Bonnie S. Billingsley ,Lawrence H. Cross ( 1992) had concluded in their study that variables that were intrinsically related to the work itself were better predictors of job commitment and satisfaction than demographic variables like gender, age etc. A.J. Seniwoliba (2013) in his study found that even teachers who were dissatisfied with their salary, recognition, students' indiscipline were motivated and satisfied by the work itself. Thus it was concluded by most studies that work itself played a primary role in motivating teachers at work. However a systemic analysis of the various factors that constituted the work itself and their impact on the motivational levels of teachers was not really explored. It is this gap that the current study seeks to bridge.

After a detailed study of literature and a series of five interview sessions with school education experts , teachers and heads of schools it was concluded by the researchers that the following factors could be said to constitute and describe the inherent job attributes of work of school teaching .1. Job Satisfaction 2. Adequate Pay 3. Work Hours 4. Appraisal, recognition and rewards5. Boss/ Supervisor 6. Security of Tenure 7. Safety at work 8. Organizational Structure 9. Merit based promotions 10. Future Prospects

## RESEARCH OBJECTIVES

The following research objectives were identified for the purpose of the study;-

1. To broadly identify the factors which constitute

- the inherent attributes of the job of teaching.
- To ascertain whether the work of teaching itself influences the motivation of teachers.
- To classify and categorize the different attributes of the job of teaching based on the nature of their influence on the motivation of teachers.
- To ascertain the influence of each component on the motivation of school teachers.
- To design a system model incorporating the components as an intrinsic inherent work -attribute motivational system for school teachers.

# METHODOLOGY

This study can be described as a descriptive research study with no intervention on the part of the researcher. The study was conducted on a random sample of school teachers teaching in the districts of Darieeling and Jalpaiguri in West Bengal (N=111). In order to enhance the reliability and validity of the study and the subsequent analysis of the results it was decided by the researchers to have a large sample size greater than 100. Teachers from the two mentioned districts of North Bengal were approached at random and when the number of respondents reached 111 it was decided that the analysis could be conducted on that sample size since it was adequate. The study was based on responses to a confidential questionnaire that was personally administered to the respondents. The sample consisted of teachers from a wide range of schools such as missionary managed English medium schools, individually managed private English medium schools, Hindi and Bengali medium schools both in the urban and rural areas. The rating scale and the questions were explained to the respondents directly by the researcher. The analysis of the resultant data was carried out by SPSS 17.0. The questionnaire used for the study had twelve questions which the respondents had to rate on a five point Likert- type scale. In the first two questions the respondents were asked to rate their



efforts to give their best at work in school and to rate their overall experiences with the various aspects of their work in school. The scale used here was: 1= Terrible 2= Not satisfactory 3= Satisfactory 4= Good 5= Excellent. These two questions represented the dependent variables. In the following ten questions the teachers' experiences with the various aspects of their work were rated on a five point Likert-type scale. This five point scale was; 1= Terrible 2= Not satisfactory 3= Satisfactory 4= Good 5= Excellent.. These ten questions represented the independent variables. At the first the stage the data was checked for reliability and validity. On ensuring its reliability and validity the data was subsequent quantitative and qualitative analysis was conducted and inferences were drawn.

Table 1 : Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
VAR00001	111	1.00	5.00	2.4775	1.15086
VAR00002	111	1.00	5.00	2.4324	1.14114
VAR00003	111	1.00	5.00	2.5315	1.16634
VAR00004	111	1.00	5.00	2.6216	1.25085
VAR00005	111	1.00	5.00	2.5045	1.18991
VAR00006	111	1.00	5.00	2.6216	1.23623
VAR00007	111	1.00	5.00	2.4775	1.19732
VAR00008	111	1.00	5.00	2.7838	1.26782
VAR00009	111	1.00	5.00	2.8378	1.20258
VAR00010	111	1.00	5.00	2.5135	1.18984
VAR00011	111	1.00	5.00	2.6216	1.23623
VAR00012	111	1.00	5.00	2.6216	1.25809
Valid N (listwise)	111				

Table 2: Reliability Statistics for part part A of the questionnaire		
Cronbach's Alpha	N of Items	
.955	2	

Table 3 : Reliability Statistics for B of the questionnaire		
Cronbach's Alpha	N of Items	
.947	10	

Table 4 : Reliability statistics for thewhole questionnaire		
Cronbach's Alpha N of Items		
.958	12	

The overall Cronbach's Alpha for the overall study was .958. The Cronbach's alpha for section A of the questionnaire which included two questions which represented the dependent variables was .955 and the Cronbach's alpha for Section B of the questionnaire which contained the independent variables was .947. Thus the reliability statistics were accepted.

A correlation analysis with the dependent variable as given in question 1 which asked the respondents to rate their efforts to give their at work in school and question 2 which asked the respondents to rate their overall experience with various work related factors at school yielded a correlation coefficient of .914. Thus the effort to give ones best at work in school every day is highly correlated to ones experience with factors that constitute the work itself.

At the next step a principal component analysis was conducted with all the ten independent variables.

A thorough quantitative analysis of the acquired data brought forth that the KMO measure of sampling adequacy was .870, chi-square was found to be 2593.510 .Thus the KMO and Bartlett's test showed that factor analysis was justified in this case. The principal component analysis extracted three factors with eigenvalues which greater than 1. After a principal component analysis with orthogonal varimax rotation 3 factors were extracted . The three factors which were extracted explained 97.905 % of the variances. It was seen from table 11 that variables 4,6,11,12 loaded onto component 1. Variables 3,5,7,10 loaded onto component 2 while variables 8,9 loaded onto component 3. The three components were named Comfort, Security and Esteem factors.



## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

Table 5: Correlation between the effort to give ones best at work in school and the experience with factors related to the work itself.				
VAR00001 VAR00002				
Effort to give ones best	Pearson Correlation	1	.914**	
at work in school Sig. (2-tailed)			.000	
	N	111	111	
Experience with factors related	Pearson Correlation	.914**	1	
to the work itself at school	Sig. (2-tailed)	.000		
	N	111	111	

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

Table 6 :KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			
Bartlett's Test of Sphericity	Bartlett's Test of Sphericity Approx. Chi-Square		
	Df	45	
	Sig.	.000	

Table 7 : Communalities			
	Initial	Extraction	
VAR00003	1.000	.968	
VAR00004	1.000	.996	
VAR00005	1.000	.972	
VAR00006	1.000	.994	
VAR00007	1.000	.972	
VAR00008	1.000	.978	
VAR00009	1.000	.978	
VAR00010	1.000	.952	
VAR00011	1.000	.988	
VAR00012	1.000	.991	

Extraction Method: Principal Component Analysis.

Table 8 Total variance explained					
0	Initial Eigenvalues				
Component	Total	% of Variance	Cumulative %		
1	6.895	68.950			
2	1.476	14.759			
3	1.420	14.196			
4	.071	.709	98.614		
5	.044	.439	99.053		
6	.041	.405	99.459		
7	.026	.263	99.722		
8	.016	.159	99.881		
9	.008	.084	99.964		
10	.004	.036	100.000		

Extraction Method: Principal Component Analysis.

Table 9 Total variance explained				
0	Initial Eigenvalues	Extraction Sums of Squared Loadings		
Component	Cumulative %	Total	% of Variance	Cumulative %
1	68.950	6.895	68.950	68.950
2	83.709	1.476	14.759	83.709
3	97.905	1.420	14.196	97.905

Extraction Method: Principal Component Analysis.



Table 10 Total variance explained			
	Rotation Sums of Squared Loadings		
Component	nent Total % of Variance Cumulative		Cumulative %
1	3.903	39.030	39.030
2	3.836	38.361	77.392
3	2.051	20.514	97.905

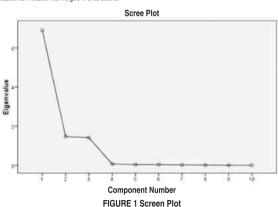
Extraction Method: Principal Component Analysis.

Table 11 Rotated Component Matrix <sup>a</sup>			
Variables	Component		
	1	2	3
JOB SATISFACTION	.307	.918	.178
ADEQUATE PAY	.928	.323	.177
WORK HOURS	.319	.921	.150
APPRAISAL, RECOGNITION AND REWARDS	.931	.319	.160
BOSS / SUPERVISOR	.322	.917	.166
SECURITY OF TENURE	.224	.183	.945
SAFETY AT WORK	.171	.191	.955
ORGANIZATIONAL STRUCTURE	.305	.909	.180
MERIT BASED PROMOTIONS	.922	.308	.208
FUTURE PROSPECTS	.924	.326	.174

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.a. Rotation converged in 5 iterations.

Table 12 : Extracted components from principal component analysis			
COMFORT SECURITY FACTORS		ESTEEM FACTORS	
Job Satisfaction	Security of tenure	Adequate Pay	
Work Hours	Safety at work	Appraisal, recognition and rewards	
Boss/ Supervisor Merit based promotions			
Organizational Structure		Future prospects	

After the principal component analysis a principal component regression was conducted using the principal components as inputs. The multiple linear regression analysis was conducted taking the variable 1 which represented the motivation of the teachers to give their best at work in school as the dependent or predicted variable and the three components extracted by the principal component analysis as the independent or predictor variables. The results of the analysis are as follows:-





# An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

TABLE 13 : Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.842a	.709	.701	.62931	

a. Predictors: (Constant), REGR factor score 3 for analysis 1, REGR factor score

2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: VAR00001

TABLE 14 : Model Summary						
	Change Statistics					
Model	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.709	86.961	3	107	.000	1.862

b. Dependent Variable: VAR00001

	TABLE 15 : Anova						
Model Sum of Squares Df Mean Square F					Sig.		
1	Regression	103.318	3	34.439	86.961	.000a	
	Residual	42.376	107	.396			
	Total	145.694	110				

a. Predictors: (Constant), REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: VAR00001

TABLE 16 : Coefficients						
Unstandardized Coefficients Standardized Coefficients						
Model		В	Std. Error	Beta		
1	(Constant)	2.477	.060			
	REGR factor score 1 for analysis 1	.597	.060	.519		
	REGR factor score 2 for analysis 1	.619	.060	.538		
	REGR factor score 3 for analysis 1	.448	.060	.389		

a. Dependent Variable: VAR00001

TABLE 17 : Coefficients						
Model	95.0% Confidence Interval for the second sec					
		t	Sig.	Lower Bound	Upper Bound	
1	(Constant)	41.477	.000	2.359	2.596	
	REGR factor score 1 for analysis 1	9.947	.000	.478	.716	
	REGR factor score 2 for analysis 1	10.310	.000	.500	.738	
	REGR factor score 3 for analysis 1	7.459	.000	.329	.566	

a. Dependent Variable: VAR00001

Amity Business Review

Vol. 17, No. 2, July - December, 2016



Table 18 : Coefficients					
Collinearity Statistics					
Model			Tolerance	VIF	
1	REGR factor score	1 for analysis 1	1.000	1.000	
	REGR factor score	2 for analysis 1	1.000	1.000	
	REGR factor score	3 for analysis 1	1.000	1.000	

a. Dependent Variable: VAR00001

Table 19 : Collinearity Diagnostics						
				Variance	Proportions	
Model	Dimension	Eigenvalue	Condition Index	(Constant)	REGR factor score 1 for analysis 1	
1	1	1.000	1.000	.00	.91	
	2	1.000	1.000	1.00	.00	
	3	1.000	1.000	.00	.00	
	4	1.000	1.000	.00	.09	

a. Dependent Variable: VAR00001

	Table 20 :Collinearity Diagnostics					
		Variance Proportions				
Model Dimension		REGR factor score 2 for analysis 1	REGR factor score 3 for analysis 1			
1	1	.09	.00			
	2	.00	.00			
	3	.00	1.00			
	4	.91	.00			

a. Dependent Variable: VAR00001

#### Histogram Dependent Variable: VAR00001

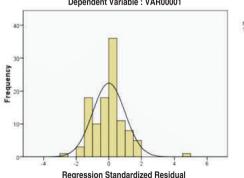
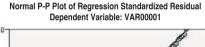


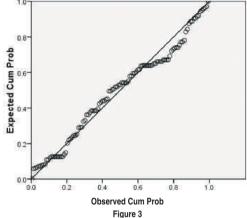
Figure 2

94

# AMITY

## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers





As per the results of the principal component regression which was conducted using the component scores as the predictor variables and the enter method a significant model emerged ( $F_{3.107}$  = 86.961, P < .0005, Adjusted  $R^2 = .701$ ). Durbin-Watson statistics = 1.862 so there was no significant autocorrelation, the conditionality Index was 1 which showed that there was no multicollinearity among variables. Figure 2 illustrates that the residuals are approximately normally distributed. The principal component regression brought forth the fact that all the three factors viz the Comfort factors and Security factors and Esteem factors are significant predictors of workplace motivation of school teachers.

Table 2	21	
Predictor variables	Beta	Р
ESTEEM FACTORS	.519	P<.0005
COMFORT FACTORS	.538	P<.0005
SECURITY FACTORS	.389	P<.0005

Amity Business Review

Vol. 17, No. 2, July - December, 2016

# ANALYSIS AND INTERPRETATIONS

Question 1 was a dependent variable which asked the respondents to rate their efforts to give their best at work in school. This variable sought to ascertain the levels of workplace motivation of the teachers. In a similar vein Question 2 represented a dependent variable wherein the respondents were to rate their overall experience with the various factors which are intrinsically related to the work itself. Correlation analysis between the responses of these two variables showed significant correlation between the responses. Thus the motivation of the teachers is correlated to their experiences with the various factors which are intrinsically related to the work of teaching. This is in conformity to the findings of several previous studies in teacher motivation. The intrinsic factors that are related to the work itself motivate a lot of people to join teaching at the school level. These factors also motivate people to carry on in the profession of teaching for long periods of time and mostly till retirement.



After a principal component analysis of the ten independent variables that were taken to be representative of the work itself , three components were extracted.

- The first component was termed Esteem Factors. It comprised of 4 items, all of which were related to the individual esteem of a school teacher. These factors enhance teacher motivation by creating inherent attributes in the work which boost self esteem of the teachers. These factors were adequate pay, appraisal recognition and rewards, merit based promotions and future prospects.
- The second component represents Comfort Factors which consist of factors which make the work of teaching mentally and physically comfortable. These consist of Job satisfaction, work hours , boss/ supervisor and organizational structure. These factors are essential to increase workplace motivation in terms of directly improving efficiency and thus improving teaching efficacy.
- The third component represents Security factors. This component includes variables like which enhance workplace security both in terms of tenure of service as well as physical security and safety of the teacher. These variables satisfy the safety needs of the teachers.

The results of the principal component regression showed that the dependent variable which was the motivation of the teachers to give their best at work in school could be satisfactorily predicted by the component scores from the three components that were extracted by the principal component analysis while adhering to all the assumptions of a multiple regression analysis on model fit, autocorrelation, multicollinearity and normality of residuals.

The resultant model that emerged inferred that the motivation of the teachers are predicted by the esteem, comfort and security factors that were intrinsically present in the job of teaching. This may be due to a number of reasons .The job of teaching

has some inherent attributes which motivate people to join the profession and then remain in it. Broadly it is safe profession with security of tenure, there are paid holidays during the year when the school is closed and the work hours are more or less fixed. Teachers now draw a comfortable salary with regular increments and many schools have an appraisal, recognition and reward model. The most important appraisal and recognition and rewards however come from the students. As professionally managed schools emerge and the importance of school education is recognized teachers now have attractive future prospects with multiple options. The future growth options are not only in teaching but also in school management, education consultancy, research and higher learning, curriculum development and design as also in IT enabled teaching areas. The organization structures in schools vary from strictly hierarchical and rigid in traditional schools to horizontal and flexible in many modern and experimental schools. However in all kinds of set up the teacher has a near complete freedom in the classroom and that is the most important aspect of the job of teaching. Another important dimension or feature of school teaching is the job satisfaction that one gets from teaching young minds and watching them grow and become successful. It is this connection between the students and teachers that intrinsically motivates teachers through job satisfaction.

The findings show that schools should provide a safe working environment for teachers with a security of tenure . Schools also have to ensure adequate pay with optimal working hours . There should be mechanisms for identifying talent among teachers and hone those talents , care should be taken to recognize good performance and reward them. A competent , just and empathetic school leader is required to lead the school . An adequate organizational structure should be designed to ensure optimal motivation. Mostly schools should employ teachers who are intrinsically motivated by

## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

the work of teaching and are satisfied with the choice of job or career. Augmenting these intrinsic characteristics of he job of teaching will go a long way to ensure that the work itself acts as a system to motivate the teachers.

The findings of the study can be represented in the form of a system model . The figure 4 represents the model wherein the three components ; comfort , security and esteem represent the subsystems of the work-attribute motivational system for teachers. These four subsystems in turn consist of the various sub-sub systems that work in sync to create a systemic model for each sub system.

# SUMMARY AND CONCLUSION

In conclusion it is pertinent to summarize the results and align them in the context of the objectives that this study set out to achieve.

The first objective of the study was to broadly identify the factors that constitute the inherent attributes of the job of teaching. This objective was fulfilled by a detailed study of related literature as well as through a series of five interview sessions with heads of schools, school education experts and teachers. A set of 10 factors were identified and shortlisted for the purpose of further study. These

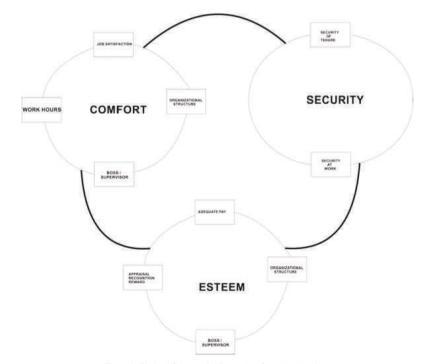


Figure 4: Work-attribute motivation system for school teachers





were 1. Job Satisfaction 2. Adequate Pay 3. Work Hours 4. Appraisal, recognition and rewards 5. Boss/ Supervisor 6. Security of Tenure 7. Safety at work 8. Organizational Structure 9. Merit based promotions 10. Future Prospects.

The second objective of the study related to ascertaining whether the work of teaching itself actually influences the motivation of school teachers. This objective of the study was fulfilled by the correlation analysis between the motivation to give ones best at work everyday and the experience of the teachers with the work itself and its features. The study showed that there was a significant positive correlation between the experience of a teacher with the features of the work of teaching and their motivation to give their best at work everyday.

The third objective of the study was to classify and categorize the different attributes of the job of teaching based on the nature of their influence on the motivation of teachers. This objective was fulfilled by a principal component analysis which divided the factors into three components which were comfort, security and esteem.

The fourth objective of the study was to ascertain the influence of each component on the motivation of school teachers. This was done through a principal component regression analysis using the component scores as predictor variables. The principal component regression analysis showed that all the components viz.comfort security and esteem were significant predictors of the motivational levels of the school teachers.

The fifth objective of the study was to develop a system model using the results and create a work-attributemotivational system for school teachers . This was done and is represented in Figure 4.

The present study explored the impact of the intrinsic characteristics of the work itself on the motivation of school teachers . This study was a descriptive research survey which was conducted among a random sample of 111 teachers from the

districts of Darjeeling and Jalpaiguri in North Bengal. Primarily it was noted that the motivation of teachers to give their at work in school had a positive correlation with their experience with the intrinsic characteristics of the work of teaching. A principal component analysis extracted three components which were subsequently named Esteem factors. comfort factors and Security factors. A subsequent principal component regression showed that all the three factors were significant predictors of teacher motivation. A system model was drawn up using these factors and their impact on the motivation of teacher. The present study is a comprehensive vertical study which analyzed the influence of the various factors related to the work itself on the motivation of school teachers. The motivation of teachers is very important for student performance (Brumback, 1986). In the modern world scenario where tough competition ensures that the motivation of students are a priority it is also recognized that motivated teachers are very important for effective school performance. Thus the very work of teaching in a school has to be developed and designed as a system to ensure optimal teacher motivation. School systems built around this core construct can develop into motivating systems wherein the systems have an automatic intrinsic nature to motivate organizations without any further interventions.

In order that such a system is developed and the efficacy of the teaching -learning process in the schools in optimized it is important that the very work of teaching is designed to motivate teachers. This paper provides a groundwork to design such systems.

The study however had its limitations. It had limitations of size in terms of a relatively small sample size, and was restricted to only two districts in India. There might have bias during translation and respondents might have had some inherent bias of their own. A wider study with a larger sample size is thus proposed for further research in the area.



## An Empirical Study of the Influence of the Work Itself on the Motivation of School Teachers

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