

# An Empirical Study of the Influence of Teachers on the Motivation of School Students for Teachers

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## ABSTRACT

*The influence of teachers on the motivation of school teachers is the subject of deep analysis and study. The teacher plays the role of a friend, a teacher and guide to the students. This study was conducted among a random sample of 247 high school students who were administered a questionnaire. The influence of teachers on the motivation of students to give their best at school was noted, a principal component analysis extracted three components which were termed friend, teacher and mentor components. A subsequent principal component regression showed that two of the components that were extracted were significant predictors of student motivation while the third component was not a significant predictor of student motivation. It was seen that when teachers play the role of a friend and a teacher, they are significant motivators to students but as mentors they are not significant predictors of student motivation.*

**Keywords:** *Teachers, Students, Motivation, Professional Roles, Principal Component Regression*

## INTRODUCTION

The word Motivation may be defined as the forces that account for the arousal, selection, direction, and continuation of behaviour (*Biehler and Snowman*,). No human activity can be conducted without a motivating factor which directs its completion. Motivation is often misunderstood as a personal trait which some people have and others don't while the reality is that there is actually no such thing as demotivated. When a person is

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described as being demotivated it just that he or she is not motivated to do what the describer wants the person to do. A demotivated student is oftentimes one who is not motivated to study but is thoroughly motivated to play. Traditionally there are three approaches to the study of human motivation; the behavioural approach, the cognitive approach and the humanistic approach. The Behavioural approach to motivation is based on the concept of reinforce desired behaviour. The works of the American psychologist Burrhus Frederic Skinner (1904-1990) played an important part in the development of the science of behaviourism. However behaviourism came under scathing criticism for limiting humans to just unthinking robots whose actions were merely motivated by an urge to gather rewards and avoid punishments. Thus a new school of psychology or cognitivism was born. Cognitivists like Jean Piaget felt that human behaviour is influenced by individual perceptions. At any given moment of time humans are subjected to push and pulls from different directions. As a consequence the direction of human behaviour depends on the disequilibrium that an individual faces and which the individual feels the need to overcome.

While it is often thought that with the advent of technology in classrooms the role of a teacher has been relegated (in many instances) to being a passive disseminator of information, the reality of classrooms is still quite different. The teacher plays several important roles beyond the realms of academic instruction and oftentimes it is that of the proverbial friend, philosopher and guide. Interestingly, though proverbial, the roles of the teacher as friend, philosopher and guide are very real and tangible, thus they need to be studied in detail. These roles are complex and unique in their own ways and thus their influence on school children also vary. This study explores the roles of the teacher as a mentor, friend and a teacher and studies how these roles influence the motivation of students at work within school systems. The roles of a teacher and the importance of each role in student motivation is thus examined in order to derive an understanding of the present dynamics of the teaching profession.

Thus the study dwells on the key questions as to whether the school teacher is still a potent point of motivation for school students and which of the roles that a teacher plays in school influences student motivation.

## REVIEW OF RELATED LITERATURE

A study of related literature revealed that a number of studies have dealt with the area of the influence of teachers on the motivation of

students. Martin L. Maehr (1984) in his paper on motivation and school achievement posited that if teachers are motivated then their performance at work will improve. Similarly C.J Brumback (1986) explored the relationship between teacher job satisfaction and student academic performance. His study found that there was a strong relationship between motivation levels of teachers and the performance of their students. Jere Brophy (1987) posited that “Student motivation to learn is an acquired competence developed through general experience but stimulated most directly through modelling, communication of expectations, and direct instruction or socialization by others (especially parents or teachers).” Ellen A. Skinner, Michael J. Belmont (1993) in their study involving 14 teachers and 144 students found a reciprocal effect of student achievement on teacher motivation. Thus it meant that if students performed well it in turn motivated teachers Gary Chambers (1999) studied a group of 11 year old students who gave their opinion on why they liked or disliked some specific learning experiences like learning foreign languages. 46 % of the students who were participating in the study reported that teachers played a vital role in developing their interests for learning. Thus according to Chambers teachers play in vital role in the students’ likes or dislikes for a subject and they should handle their responsibility well. Lema (2003) from the Open University of Tanzania looked at the issue of teachers’ influence on students’ motivation from another angle. Lema’s study focused on the teachers’ factors that lead to students’ motivation not to learn. These factors included poor training of teachers on the subject of motivation, teacher’s inability to train students to acquire learning skills , incompetence and poor teaching skills, inability to accept mistakes as an integral part of the learning process and frequent use of harsh punishments. In their study involving 271 college biology students Weins et al (2003) found that females frequently cited a positive influence from a teacher as a reason for their being interested in science education. Sougari & Nicos Sifakis (2006) studied the teachers’ belief of their professional roles. They found that the teachers’ believe that they have the role of facilitators in the teaching learning process. They also believed that they were not the sole regulators of the learners’ motivation and there were other factors involved most notably the educational content. Moreover the teachers in the study believed that they were just executing their duties by teaching the syllabus. Julian Pigott (2008) from the University of Birmingham conducted a study to analyze and study two key areas of classroom motivation: integrativeness and perceived importance. Pigott concluded

that teacher and course orientation are the main factors affecting student motivation. Thoonen et al (2011) conducted a study among 3462 students and 194 teachers. The questionnaires studied well being, academic self efficacy, mastery goal orientation, performance avoidance and intrinsic motivation among students and self efficacy and teaching practice among the teachers. The study showed that a connection to the students' world and co-operative learning methods were related to an increase in student motivation and process oriented instructions led to a decrease in student motivation. Thus the study posited that the teachers' sense of self efficacy has an effect on the teaching as well as the students' motivation to learn.

The present study seeks to explore an uncharted territory, it attempts to explore in detail the various factors related to school teachers and the profession of teaching which influence the motivation of students in schools. The study further strives to empirically categorize these factors with regards to their type of influence and the roles that teachers play as a part of their profession. The study further attempts to analyse the influence of each of these roles on the motivation of school children. It is in this area that this study attempts to be different from the earlier works on the subjects and seeks to add to the existing body of knowledge in the field.

## METHODOLOGY

The study was a descriptive research study and there was no intervention on the part of the researcher. The study consisted of two parts, the first part being a set of focussed group discussions and interviews with students. There was one focus group discussion with 3 teachers, 2 principals of schools and 10 students. This was followed by a set of personal interview sessions with 10 students. The purpose of the focus group discussion and the personal interview sessions was to identify the various factors related to teachers which influence student motivation in schools. These focus group discussions and interview sessions would also provide face validity to the questionnaire that would be administered at the next stage of the study. At the next stage of the study a questionnaire survey was conducted among 247 students in 5 groups. These students were from various schools within the districts of Jalpaiguri and Darjeeling in West Bengal. The questionnaire that was used in the study comprised of 12 questions which the respondents had to rate on a 5 point Likert-type scale. The scale was explained to the respondents and an assurance of confidentiality was also given. The questionnaire had two sections, the first section consisted

of two questions where in the first question the students were asked to rate their efforts to give their best at work every day at school and in the second question the students were asked to rate their experience with their teachers at school. The second part of the questionnaire asked the respondents to rate their experience with the various factors related to the teachers, these factors were; friendliness, helpfulness, knowledge about the subject, fair and just, availability outside classroom, confidence, motivating, makes classes interesting, role model, strict but discipline and rules. These ratings were to be done on the same 5 point Likert-type scale. The scale that was used for Section 1 was as follows; 1 = Terrible, 2 = Not Satisfactory, 3 = Satisfactory 4 = Good 5 = Excellent. The scale followed for section 2 was as follows; 1 = Never 2 = Not common 3 = Sometimes 4 = Mostly 5 = Always.

## FINDINGS

A primary statistical analysis was conducted to check for statistical reliability of the questionnaire. The reliability of the questionnaire was checked through Cronbach’s Alpha. The Cronbach’s Alpha as given by SPSS 17 for the section 1 was .944, the Cronbach’s Alpha for section 2 was .829 and the Cronbach’s Alpha for the whole questionnaire was .877. These values are well within acceptable limits and thus the reliability of the questionnaire was established. The face and content validity of the questionnaire was established by the focus group discussions and interview sessions. The content validity was established through principal component analysis. The fundamental hypothesis that was tested in the study was-

- H<sub>1</sub> The motivation of school students is correlated to their experience with their teachers.
- H<sub>0</sub> The motivation of school students is not correlated to their experience with their teachers.

**Table 1: Correlation Matrix**

Correlations			
		Student Motivation	Experience with teachers
Student Motivation	Pearson Correlation	1	.757**
	Sig. (2-tailed)		.000
	N	247	247

Experience with teachers	Pearson Correlation	.757**	1
	Sig. (2-tailed)	.000	
	N	247	247

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The hypothesis was tested through a bivariate correlation analysis that was conducted between the two variables given in the section 1 of the questionnaire to test if the motivation of students to give their best at school is correlated to their experience with their teachers. The correlation was found to be .757 and significant. The results are provided in Table 1. Thus the null hypothesis was rejected and the alternate hypothesis  $H_1$  was accepted.

**Table 2: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Motivation	247	1.00	5.00	2.5101	1.25867
Experience with teachers	247	1.00	5.00	2.5020	1.24246
Friendly	247	1.00	5.00	2.5101	1.25867
Helpful	247	1.00	5.00	2.5020	1.24246
Knowledge about subject	247	1.00	5.00	2.8745	1.01835
Fair and Just	247	1.00	5.00	2.8826	1.03906
Availability outside class	247	1.00	5.00	2.5628	1.22769
Confident	247	1.00	5.00	2.8907	1.00416
Motivator	247	1.00	5.00	2.7247	1.26118
Makes classes interesting	247	1.00	5.00	2.9069	1.01785
Role Model	247	1.00	5.00	2.7854	1.19216
Strict about Discipline & rules	247	1.00	5.00	2.8745	1.01435
Valid N (listwise)	247				

The descriptive statistics of the study are illustrated in the Table 2. The 5 point Likert-type scale that formed the basis of the questionnaire and the responses ranged from 1 to 5 as illustrated in the table. The mean responses ranged from 2.50 to 2.90 and the number of respondents (N) was 247.

Subsequent to the correlation analysis principal component analysis was conducted with the ten variables which comprised section 2 of the questionnaire. The results of the principal component analysis are presented in Tables 3-5 and in Fig. 1.

**Table 3: KMO and Bartlett’s Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.739
Bartlett’s Test of Sphericity	Approx. Chi-Square	2355.464
	df	45
	Sig.	.000

The KMO test for sampling adequacy tests the adequacy of data for factor analysis. KMO value greater than .7 denotes adequacy of sample. The KMO measure of sampling adequacy was found to be .739 and chi-square was 2355.464 Thus the KMO and Bartlett’s test showed that factor analysis was justified in this case.

**Table 4: Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.354	43.537	43.537	4.354	43.537	43.537	3.467	34.672	34.672
2	1.900	18.997	62.534	1.900	18.997	62.534	2.479	24.792	59.464
3	1.672	16.721	79.255	1.672	16.721	79.255	1.979	19.791	79.255
4	.777	7.769	87.025						
5	.519	5.193	92.218						
6	.455	4.549	96.767						
7	.142	1.423	98.189						
8	.100	1.003	99.193						
9	.043	.426	99.618						
10	.038	.382	100.000						

Extraction Method: Principal Component Analysis.

The principal component analysis brought forth three factors whose Eigenvalues were greater than 1. Cumulatively these three factors explained 79.225% of variance. This is illustrated by the results in Table 4.

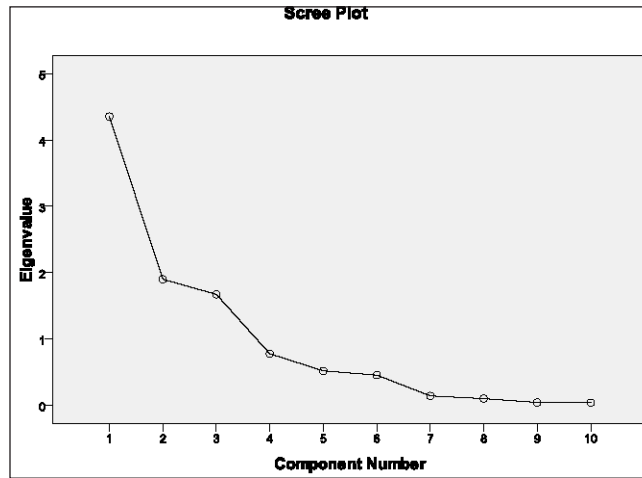


Fig. 1: Screen Plot

The screen plot of Fig. 4 shows that there are three points representing the factors which should be considered before the plot levels off at the 'elbow'.

**Table 5: Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Friendly	.183	<b>.919</b>	.057
Helpful	.234	<b>.896</b>	.031
Knowledge about subject	<b>.877</b>	.264	.114
Fair and Just	<b>.916</b>	.236	.079
Availability outside class	.072	<b>.793</b>	.082
Confident	<b>.905</b>	.233	.072
Motivator	.064	.045	<b>.985</b>
Makes classes interesting	<b>.584</b>	-.033	-.072
Role Model	.051	.102	<b>.981</b>
Strict about Discipline & rules	<b>.773</b>	.103	.078

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

<sup>a</sup>. Rotation converged in 4 iterations.

A principal component analysis of the 10 factors from section 2 of the questionnaire with orthogonal varimax rotation extracted three components. It was seen from the results of the principal component analysis that these three components explained 79.255% of the variances. The factors loading are given in Table 5. The three components that were extracted from the principal component analysis were termed Teacher, Friend and Mentor.

**Table 6: Components Extracted from Principal Component Analysis**

Teacher	Friend	Mentor
Knowledge about subject	Friendly	Role Model
Fair and Just	Helpful	Motivator
Confident	Availability outside class	
Makes classes interesting		
Strict about Discipline & rules		

The Teacher component consisted of 5 factors which were knowledge about the subject, fair and just, confident, makes classes interesting, strict about discipline and rules. The friend component consisted of three factors friendly, helpful and availability outside class. The mentor component consisted of two factors role model and motivator. This is illustrated in Table 6. Following the principal component analysis a principal component regression was conducted using the regression factor scores that were extracted during the principal component analysis. The results of the principal component regression are given in the Tables 7-9 and Fig. 2.

Table 7 shows that the  $R^2$  for the model was .882, thus the model fit was satisfactory. The Durbin Watson statistics was 2.45 thus it could be concluded that there was no significant auto-correlation among the residuals.

Table 8 illustrates that the F value for the regression analysis is significant and thus the overall model can be deemed to be statistically significant.

Table 7: Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.939 <sup>a</sup>	.882	.880	.43534	.882	604.454	3	243	.000	2.452

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 8: ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1. Regression	343.671	3	114.557	604.454	.000 <sup>a</sup>
Residual Total	46.054	243	.190		
	389.725	246			

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 9: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1. (Constant)	2.510	.028		96.618	.000		
REGR factor score 1 for analysis 1	.230	.028	.183	8.291	.000	1.000	1.000
REGR factor score 2 for analysis 1	1.157	.028	.919	41.688	.000	1.000	1.000
REGR factor score 3 for analysis 1	.072	.028	.057	2.600	.010	1.000	1.000

a. Dependent Variable: VAR00001

Table 9 illustrates the collinearity diagnostics and co-efficients for the model. The VIF is 1 indicating that there is no significant multicollinearity in the model. The table shows that while the factors 1 and 2 are significant, factor 3 is a not significant predictor of Student motivation.

The figure 2 shows that the residuals are normally distributed. Thus to sum up the results of the regression analysis, a significant model was presented ( $F_{3,243} = 604.454$ ,  $P < .001$ ,  $R^2 = .882$ ). The Durbin Watson Statistics = 2.452 which is within the accepted range, thus no significant autocorrelation is present among the residuals. The conditionality index was found to be 1 and the VI was 1. Thus there was no significant multicollinearity in the data. The histogram as shown in the Fig. 2 shows that the residuals are approximately normally distributed.

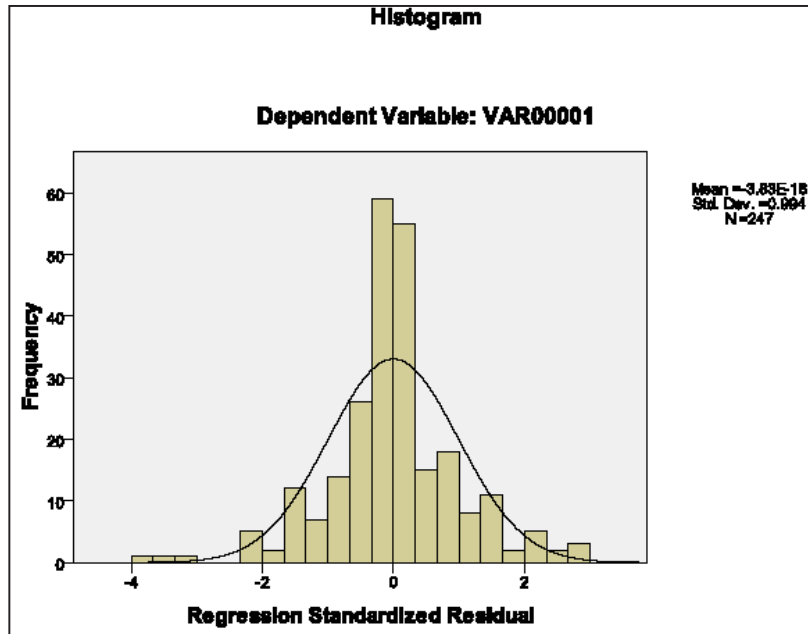


Fig. 2: Histogram for Regression Standardized Residuals

Table 10: B values

Predictor Variable	B -value	p
Teacher	.230	P<.0005
Friend	1.157	P<.0005
Mentor	.072	P>.0005

The results of the principal component regression showed that while teacher and friend roles as played by school teachers are significant predictors of student motivation, the role of a mentor is not a significant predictor of student motivation.

As an adjunct to the main objective it was decided by the researcher to check how the three components viz Teacher, Friend, Mentor predicted the overall experience of the students with the teachers. The results of the regression analysis which was conducted with the responses of the second question of the questionnaire as the predicted variable and the three components which were extracted by the principal component analysis as the predicted variable are given in the Tables 11.

**Table 11: Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.926 <sup>a</sup>	.858	.856	.47073	.858	490.249	3	243	.000	2.029

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: VAR00002

The results of the regression showed that the R2 for the model was .858 and Durbin Watson Statistics was 2.09. Thus the model fit was acceptable and there was no significant auto correlation among residuals.

**Table 12: ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1					
Regression	325.903	3	108.634	490.249	.000 <sup>a</sup>
Residual	53.846	243	.222		
Total	379.749	246			

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: VAR00002

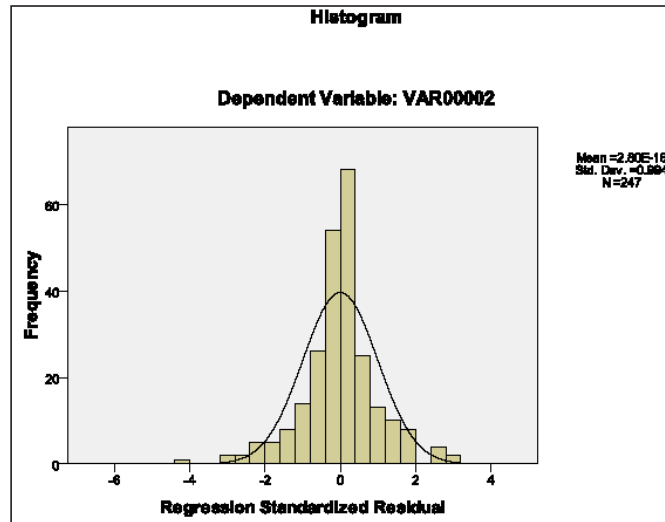
The results of Table 12 shows that F value of the model is significant. Thus the proposed model is deemed to be significant.

**Table 13: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.502	.030		83.534	.000		
	REGR factor score 1 for analysis 1	.291	.030	.234	9.695	.000	1.000	1.000
	REGR factor score 2 for analysis 1	1.113	.030	.896	37.082	.000	1.000	1.000
	REGR factor score 3 for analysis 1	.039	.030	.031	1.292	.198	1.000	1.000

a. Dependent Variable: VAR00002

Table 13 illustrates the coefficients and collinearity diagnostics of the model. The VIF is 1 thus there is no significant multicollinearity among the factors. The coefficients show that while factors 1 and 2 are significant predictors in the model, factor 3 is not a significant predictor.



**Fig. 3: Histogram for Regression Standardized Residuals**

Fig. 3 illustrates that the residuals are normally distributed in the regression model.

**Table 14: B values**

Predictor Variable	B -value	p
Teacher	.291	P<.0005
Friend	1.113	P<.0005
Mentor	.039	P>.0005

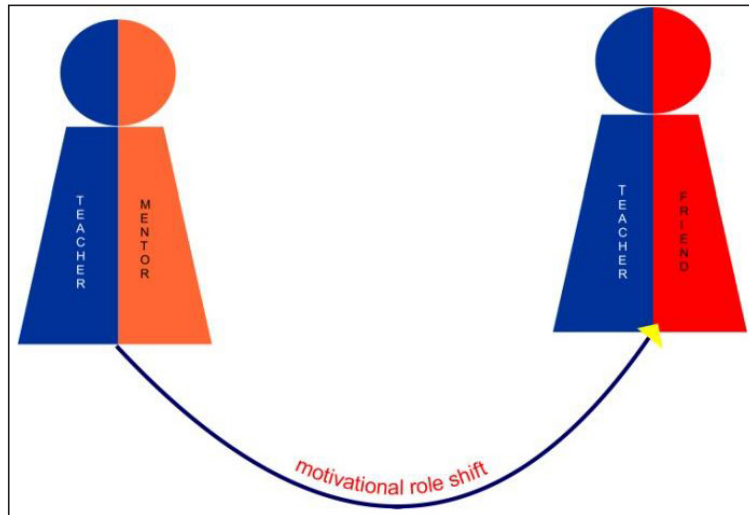
Thus the principal component regression showed that while the teacher and friend roles are significant predictors of the overall experience of students with their teachers, the role of a mentor is not a significant predictor of such experience.

## ANALYSIS AND INTERPRETATION

The results of this study are significant in the context of a changing world environment which is witnessing a paradigm shift in the role of the

teaching profession, especially in schools. It is interesting to note that even a couple of generations ago teachers were considered to be more of gurus and mentors than friends. The relationship was formal and students didn't expect teachers to be very friendly with them. The teachers and students interacted through that hierarchical structure and student motivation was largely a result of the combination of strict tutoring and motivational guidance. Students had access to limited information on subjects within or outside their curriculum and teachers were the primary source of such information. Over the past decade and a half there has been a paradigm shift in the way that knowledge is disseminated in the world and that has resulted in a paradigm shift in the role of the teacher as a motivator of students. However it is the researcher's opinion that despite the onslaught of technology the blackboard will always remain relevant and the teacher will remain important. This is because teaching has a human element and the connection between a teacher and the student is necessary for augmenting the student's drive for achievement. According to the findings of this study students are motivated by a teacher who is a professional and has all the professional qualities of teaching. School students are motivated by teachers who know their subject and are confident, just, make classes interesting and do not compromise on discipline and rules. At the same time the students are motivated by friendly and helpful teachers who are present to help and solve their problems even beyond the classroom hours. Interestingly the study found that the roles of a teacher as motivators or role models are not significant predictors of student motivation. This is where a role-shift in the profession of school teaching has occurred over the decades. While students now feel motivated by great teachers with professional acumen as well as teachers who are friendly and empathic they are not motivated by teachers who play out their roles as mentors. The situation was different around two decades ago when students would be motivated by teachers who had high professional acumen and would be mentors to students by motivating them and acting as role models for them. The reason for this change can be attributed to a number of causes, some being a change in the basic perceptions, priorities and value systems of society at large. While there may be multiple reasons as to why the role of teachers as mentors is not a significant predictor of student motivation one could be that a perception gap exists which leads the teachers to be unaware of the importance of their role as mentors. This lack of awareness leads to the teachers not taking their role of mentoring seriously or professionally. Since high school students are at a critical transient age any

mentoring that is not done properly and without a sensitive approach might have an opposite effect on students. We live in a horizontal society which is not as hierarchical as it was a couple of decades ago when teachers were looked up to and not taken as equals. Thus in today's world a friendly talk has more motivational impact on students than a formal advice coming from higher position of command.



**Fig. 4: Motivational Role Shift**

## CONCLUSIONS

The primary objectives of the study was explore the relationship between teachers and students in the context of the motivation of students. The study found that there is a significant correlation between the motivation of students to give their best in school every day and their experience with their teachers. A principal component analysis conducted on the data extracted 3 components, all of which represented the different roles that teachers play in their workplace interaction with the students. These components were termed as teacher, friend and mentor. A subsequent principal component regression found that while the teacher and friend components were significant predictors of student motivation the mentor role was not a significant predictor of student motivation. Another principal component regression found that the mentor component was not a significant predictor of the students' experience with the teachers either. It was thus concluded that teachers' relationships with their students have

changed to become more horizontal in nature and thus friendly advice from a teacher has more significance in motivating students rather than a top down hierarchical approach of a mentor like role.

A number of studies have dwelled on the dynamics of teacher-student relationships and the change in the role of the teacher over time. Burke and Stets (2009) and Pillen et al had posited that the relationships between teachers and students change over time. Want et al (2017) studied the changes over time in teachers' interpersonal role identity. They had reported that an increase in friendly 'codes' and a decrease in control oriented codes like reprimanding and enforcing in teacher-student interaction over time. This study too has found that the roles of a teacher as a friend and teacher are significant motivators of students while that of a mentor is not. Curious, though as it may seem the researcher feels that one of the significant reasons for this outcome could be the age band of the students. The study was conducted among high school students who were at an age band of 15-17 years. These are adolescent years and the need of an older friend and a teacher seems to be more appealing than that of mentor who will be perceived to be someone who is prone to control through unsolicited and continuous advice.

## **MANAGERIAL IMPLICATIONS**

The study will help to put the role of the teacher in perspective and help the management design interventions to augment the roles that help to motivate students. Further school managements may design awareness programs for teachers to create awareness among the teachers about their roles within and beyond academics. Intervention modules may also be designed to counsel students about the roles of mentors so that mentoring can become a significant predictor of student motivation. In this context teachers should be adequate inputs and training on effective mentoring of students.

## **SCOPE FOR FURTHER RESEARCH**

The study was limited by sample size and the fact that it was conducted in one geographical area. If a follow up study can be conducted with a larger sample size, spread over a larger and more varied area it will yield more information. Further a study on the perceptions of students and parents on the role of teachers will help corroborate the findings of this study.

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