

Relationship between Intrinsic Motivation and Students' Academic Achievement: A Secondary Level Evidence

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Abstract

The study was aimed to find out relationship between teacher motivation and students' academic achievement at secondary school level. A sample of 950 secondary school teachers using population proportionate to sample technique was taken out of 3168 secondary school teachers teaching in high schools of five districts of Lahore Division in Punjab. Survey technique was used to collect data through a questionnaire Motivational Orientation for Teaching Survey (MOT-SIII). The academic achievement of the students was measured by taking two year results of grade 10 students in the annual examinations conducted by Board of Intermediate and Secondary Education Lahore (BISE). The collected data was analyzed by using mean; standard deviation and Pearson r . It was found that intrinsic motivation of teachers was having strong correlation with academic achievement of the students. It was recommended that in-service teacher training programs can serve as better source for the enhancement of intrinsic motivation level of teachers.

Keywords: Motivation, intrinsic motivation, academic achievement, Secondary School Teacher (SST)

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Introduction

Excellence and quality of an education system directly relates to the performance of its teachers. Professional competencies, skills, teaching methodologies, hard work, devotion and zeal of teachers enhance the performance and leads towards desired excellence and quality of education. Though the professional components are of great importance yet the psychological aspects that make a teacher competent and confident at work place cannot be ignored. As in organizational psychology it is focused that not only the ability of a person but also the motivation plays very vital and effective role in improving the performance of an employee (Compbell, 1976).

Motivation is the driving force that directs the behavior of a human being in personal and professional contexts. In case of professional context, the employees who are motivated are found to be displaying higher integrity at workplace as well as increased output in comparison to the employees with low level of motivation (Gagne & Dcci, 2005; Kuvaas, 2006). In academic intuitions, motivated workforce can be seen in the form of faculty and instructors who handle the responsibilities of knowledge acquisition among the students. Teachers play a pivotal role in facilitating the learning of students. The interaction between teacher and students, adoption of teaching practices, attitude towards the challenges encountered in the classroom are some of the key elements on which motivation level of a teacher can have strong influence (Reeves, 2004).

Researchers have argued that teachers who feel are motivated to perform their job-related responsibilities are able to depict better outcomes as reflected through their capability to maintain adequate level of motivation among the students (Ames, 1990). Davidson (2007), in a study conducted in Tanzania, has asserted that lack of motivation among the instructors can have negative impact on the performance of students. Moreover, the lack of motivation can result in the adoption of a teacher centered learning style. This can inevitably result in the restricted learning and educational development of the students, which is likely to be reflected from their exam scores. Bishay (1996) has proclaimed that the impact of teacher motivation on the output displayed by students in exams and test can't be ignored. The quality of teaching students receive in the context of classroom directs the process of their cognitive development, thus motivation of teachers and student achievement in school are strongly interlinked factors.

The term motivation has evolved out of the Latin word '*movere*', which means to move. The earliest definition of motivation considered it to be a set of "psychological processes that cause the arousal, direction and persistence of behavior" (Mitchell, 1982). Further investigators have highlighted the importance of the behavior being focused on some specific goal, thus emphasizing the element of goal directed behavior, and voluntary participation in activities that facilitate towards the achievement of certain goals (Kreitner & Kinicki, 2006). In addition to this, scholars have made efforts to classify various elements that drive the goal directed behavior among humans and animals, thus resulting in the identification of the factors of needs, motives, drives, goals and incentives as the key psychological processes (McKenna, 2000, p. 89) which were considered to be at the core of the goal directed behavior or motivation.

Motivation can be regarded as the basic part of human experience. From infancy till old age, the behavior of people is directive by some underlying motives or needs which propel them to behave in certain manner. An individual who is motivated is likely to feel greater level of commitment in performing a task as compared to a person who has low level of motivation. The psychological factor of need can propel a person to work towards the fulfillment of his needs by engaging in certain behaviors. Motives, on the other hand are viewed as 'inner states' of an individual which can encourage the engagement in voluntary or goal directed behavior. Similarly, incentives trigger interest among people, facilitating them to participate in particular activities, thus depicting manifestation of the phenomenon of motivation (McKenna, 2000).

Motivation is a multifaceted phenomenon, as individuals can experience different levels of motivation as well as feel motivated due to different factors. Based on this backdrop, the researchers have investigated into the identification of types of motivation, suggesting the existence of two main categories of motivation namely: intrinsic and extrinsic motivation. Both of these types of motivation can encourage the employees to deftly participate in work related activities and improve their work performance (Amabile, 1993).

The influence of extrinsic motivation is reflected in the behavior where the employees focus on tangible outcomes of performing certain activities. On the contrary, intrinsic motivation arises out of the internal feelings of the employees, thus denoting the influential position of personal satisfaction in driving goal directed behavior of personnel (Ryan & Deci, 2000). Researchers have noted that there are individuals who are engaged in behaviors despite the absence of any tangible rewards, or evident lack of any external source of incentives. Such behavior can be explained through the phenomenon of intrinsic motivation, whereby the behavior is triggered and sustained as the sense of satisfaction a person derives out of the activity serves as the incentive in this context (Benabou & Tirole, 2003).

The influence of extrinsic and intrinsic motivation on long term performance of employees has been explored by various scholars (Deci, Koestner, & Ryan, 1999; Kreps, 1997; Lin, 2007). Earlier researchers such as Deci (1972) considered monetary compensation as a form of extrinsic motivator had the potential to decrease the impact of intrinsic forms of motivation. In a study comprising undergraduate students, has also found that verbal encouragement boosted the level of intrinsic motivation. In further studies, Ryan and Deci (2000) have obtained similar findings. Moreover, it has also been asserted that intrinsic origins of motivation produced more positive results for the individual in terms of performance, perception of personal competence, feelings of interest in the job etc. On the other hand, people who focus more on external sources of motivation such as compensation may find the interest in work short term.

Research Objectives

This study has the following research objectives:

- To find out the relationship between intrinsic motivation of teacher and students' academic achievement at secondary school level.
- To find out the relationship between the intrinsic motivation of male teacher and students' academic achievement at secondary school level.
- To find out the relationship between intrinsic motivation of female secondary school teacher and students' academic achievement at secondary school level.

Hypotheses of the Study

The following null hypotheses were formulated to achieve the objectives of the study:

H₀₁: There is no significant relationship between intrinsic motivation of teacher and students' academic achievement at secondary school level.

H₀₂: There is no significant relationship between intrinsic motivation of male teacher and students' academic achievement at secondary school level.

H₀₃: There is no significant relationship between intrinsic motivation of female teacher and students' academic achievement at secondary school level.

Methodology

The study was descriptive in nature and survey method was used for the purpose of data collection. Since the study was also aimed to establish the relationship between intrinsic motivation of secondary school teachers (SSTs) and students' academic achievement, therefore, the nature of research was also co-relational.

A survey was conducted to collect the data to find out relationship between intrinsic motivation of teacher and students' academic achievement at secondary school level. A sample of 950 secondary school teachers was selected for the purpose of data collection. The sample of 950 teachers included 586 male teachers and 364 female teachers. Target population comprised 3168 secondary school teachers teaching secondary classes in high schools of five districts of Lahore division in Punjab. Sample of 950 teachers was selected through population proportionate sampling technique as there was different number of teachers in five districts of Lahore division. The research instrument named Motivational Orientation for Teaching Survey (MOT-SIII) was used to measure the motivation level of secondary school teachers. The instrument was adapted and the permission was granted by Dr. Cathrine Cinclair, that was developed on five point likert scale from strongly disagree to strongly agree. The number of items in the questionnaire was 17 which were related to five factors of intrinsic motivation. This instrument was validated through experts' opinion. The reliability of the tool was ensured through pilot testing taking a sample of 100 teachers. The reliability was calculated by using **Chronbach's** alpha which was 0.73. The academic achievement of the students was measured by having the results of the students in the annual Secondary School Certificate examination conducted by BISE Lahore.

Data Analysis

Data was analysed using Statistical Package for Social Sciences (SPSS-15). Descriptive analysis was used for data analysis and Mean and Standard deviation were calculated to find out the level of intrinsic motivation of the teachers. Pearson “*r*” was used to find out the relationship between intrinsic motivation of teachers and students' academic achievement. Tables show the details in this regard.

Table 1

Mean and Standard Deviation of Factors of Intrinsic Motivation, (n=950)

Factors of Intrinsic Motivation	Minimum	Maximum	<i>M</i>	<i>SD</i>
Working with Children	5	25	13.75	4.53
Intellectual Stimulation	6	30	21.25	4.46
Altruism	3	15	11.32	2.44
Authority and Leadership	3	15	10.16	2.78
Self- Evaluation	5	20	17.05	2.60
Personal and Professional Development	2	10	8.44	1.63
Intrinsic Motivation	34	115	81.96	11.87

Table 1 presents the details regarding the mean and standard deviation of intrinsic motivation factors. Maximum value of mean ($M= 21.25$, $SD=4.46$) was for the factor intellectual stimulation and minimum value of mean ($M=8.44$ $SD=1.63$) for personal and professional development. It was concluded that factor intellectual stimulation existed at high level in the intrinsic motivation of teachers as compared to the other factors.

Hypothesis No. 1: Relationship between Teachers' Motivation and Students' academic achievement. To address the relationship between intrinsic motivation of teacher and students' academic achievement Pearson “*r*” was calculated and the hypothesis was tested.

First the hypothesis “There is no significant relationship between intrinsic motivation of male teachers' and students' academic achievement at secondary school level” was tested by applying Pearson Correlation Coefficient and the results are shown in table 2.

Table 2

Relationship between Intrinsic Motivation of Male Secondary Teachers and Students' Academic Achievement (n=586)

Factors of Intrinsic Motivation	1	2	3	4	5	6	7	8
Working with Children	-							
Intellectual Stimulation	.575**	-						
Altruism	.436**	.494**	-					
Authority and Leadership	.337**	.346**	.337**	-				
Self- Evaluation	.472**	.573**	.374**	.347**	-			
Personal and Professional Development	.475**	.555**	.390**	.447**	.472**	-		
Intrinsic Motivation	.779**	.829**	.648**	.619**	.730**	.770**	-	
Students' Academic Achievement	.342**	.330**	.278**	.283**	.307**	.330**	.426**	-

** $p < .01$

Table 2 reflects the relationship between intrinsic motivation of male teachers and their students' academic achievement. To find out the relationship Pearson coefficient correlation "r" was calculated. It was found that factor working with children ($r=.342, p<.01$), intellectual stimulation ($r=.330, p<.01$), altruism ($r=.278, p<.01$), authority and leadership ($r =.283, p<.05$), self- evaluation ($r =.307, p<.01$), personal and professional development ($r =.330, p<.01$) and intrinsic motivation of teacher ($r =.426, p<.01$) were having statistically significant positive relationship with students' academic achievement. Hence, it was concluded that intrinsic motivation of male secondary school teachers was having statistically significant positive relationship with students' academic achievement.

Hypothesis No.2: "There is no significant relationship between intrinsic motivation of female teachers and students' academic achievement at secondary school level".

Pearson "r" was calculated and the hypothesis was tested. The results are presented in table 3.

Table 3

Relationship between Intrinsic Motivation of Female Secondary School Teachers and Students' Academic Achievement (n=364)

Factors of Intrinsic Motivation	1	2	3	4	5	6	7	8
Working With Children	.							
Intellectual Stimulation	.640**	-						
Altruism	.459**	.478**	-					
Authority and Leadership	.299**	.303**	.236**	-				
Self- Evaluation	.544**	.594**	.389**	.273**	-			
Personal and Professional Development	.485**	.543**	.378**	.370**	.466**	-		
Intrinsic Motivation	.337**	.378**	.306**	.175**	.391**	.257**	-	
Students' Academic Achievement	.337**	.378**	.306**	.175**	.391**	.257**	.423**	-

** $p < .01$

Table 3 explains the relationship between intrinsic motivation of female teachers and students' academic achievement. To find out the relationship Pearson coefficient of correlation " r " was calculated. It was found that factors of intrinsic motivation, working with children ($r = .337$, $p < .01$), intellectual stimulation ($r = .378$, $p < .01$), altruism ($r = .306$, $p < .01$), authority and leadership ($r = .175$, $p < .01$), self-evaluation ($r = .391$, $p < .01$), personal and professional development ($r = .257$, $p < .01$) and intrinsic motivation ($r = .423$, $p < .01$) of female teachers were having statistically significant positive relationship with students' academic achievement. It was inferred that intrinsic motivation of female secondary school teachers was having statistically significant positive relationship with students' academic achievement.

Hypothesis No.3: Finally to test the third hypothesis "There is no significant relationship between intrinsic motivation of teachers' and students' academic achievement at secondary school level" Pearson " r " was calculated and the results are presented in table 4.

Table 4

Relationship between Intrinsic Motivation of Secondary School Teachers and Students' Academic Achievement (N=950)

Factors of Intrinsic Motivation	1	2	3	4	5	6	7	8
Working with Children	-							
Intellectual Stimulation	.601**	-						
Altruism	.321**	.330**	-					
Authority and Leadership	.321**	.330**	.293**	-				
Self- Evaluation	.499**	.581**	.375**	.321**	-			
Personal and Professional Development	.478**	.550**	.379**	.419**	.470**	-		
Intrinsic Motivation	.797**	.833**	.645**	.585**	.733**	.761**	-	
Students' Academic Achievement	.333**	.347**	.273**	.240**	.336**	.302**	.419**	-

** $p < 0.01$

Table 4 reflects the relationship between intrinsic motivation of teachers and students' academic achievement. To measure the relationship Pearson coefficient of correlation " r " was calculated. It was found that factors working with children's ($r = .333, p < .01$) intellectual stimulation ($r = .347, p < .01$), altruism ($r = .273, p < .01$), authority and leadership ($r = .240, p < .01$), self-Evaluation ($r = .336, p < .01$), personal and professional development ($r = .302, p < .01$) and intrinsic motivation ($r = .419, p < .01$) were having significant positive correlation with academic achievements of the students. Hence, it was concluded that intrinsic motivation of secondary school teachers was having statistically significant positive relationship with students' academic achievement.

Discussions

It was concluded that intrinsic motivation of secondary school teachers was having statistically significant positive relationship with students' academic achievement and intrinsic motivation of male secondary school teachers was having statistically significant positive relationship with students' academic achievement. It was inferred that intrinsic motivation of female secondary school teachers was having statistically significant positive relationship with students' academic achievement. Researchers have proved that individuals engaged in behaviors despite the absence of any tangible reward can be explained through the phenomenon of intrinsic motivation, whereby the behavior is triggered and sustained as the sense of satisfaction a person derives out of the activity serves as the incentive in this context (Benabou & Tirole, 2003).

The concept of this study that intrinsic motivation of teachers has strong relationship with better teaching and ultimately the better performance of students in examinations has also been strengthened in a study comprising undergraduate students (Ryan and Deci, 2000). It was elucidated that intrinsic origins of motivation produced more positive results for the individuals as well as enhanced the performance, competence and feeling of interest of job.

Almost identical conclusions have also been inferred in a number of researches that the factors related to intrinsic motivation play very vital role in enhancing the interest of instructors towards their terrific performance for excellence in results of their students. In a research Malmberg (2006) has also inferred that the level of self-determination plays an important role in shaping the attitude of an instructor towards his or her task related responsibilities. The pattern of interaction between teacher and students is also affected because of such sort of intrinsic motivation. It has also been observed that due to personal motivation i.e. intrinsic motivation teachers are triggered towards positive behaviors in classrooms.

The present study also resembles with the study of Dornyei (2003) who has linked teacher motivation and students' performance, suggesting that behavior of teacher can either encourage the students towards competence or discourage them from gaining excellence.

Recommendations

On the basis of conclusions and discussions, following recommendations have been presented:

1. In service teacher training programs have always been considered an effective source for inculcation of innovative concepts to bring behavioral and professional improvement in teachers. For motivation of teachers with the aim of maximizing their output in the form of students' success, policy makers and planners should plan to engage trained resource persons having expertise in the field of motivation. This will be helpful in motivating in service teachers during the training.
2. Selection of teachers in public sector should not only be based on their academic excellence but their level of intrinsic motivation to gauge their inclination towards the profession of teaching should also be measured using various means.
3. For the purpose of enhancement of intrinsic motivation level, seminars, workshops and conferences should be arranged on regular basis.

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