

## The Effect of Professed Teacher Feedback on the Relation of Intrinsic Motivation Regarding University Students' Academic Performance

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**Abstract:** Academic performance is augmented by the students' urge towards study and the degree of teachers' support and feedback to the students. This study attempts to find the relation of teachers' feedback on the intrinsic motivation that affects the students' academic. The sample size of 150 students' studying in the University of Pakistan was selected. Questionnaire comprised of different parts regarding intrinsic motivation and perceived teacher feedback the study delineates that teacher feedback has a positive relationship with the intrinsic motivation of the students'. The study draws attention to the point that teacher feedback is a crucial part of intrinsic motivation of students'. The limitation in this study is the small sample size, while more variables could be inserted in future studies i.e., parental involvement and extrinsic motivation.

**Key words:** Motivation • Academic performance • Perceived teacher feedback • Intrinsic motivation

### INTRODUCTION

A relationship exists between motivation and students academic performance. Motivation is a major factor considered to affect the student performance in their academic life. This study identifies major factors that are responsible for the student's motivation and determines the factors responsible to aid or hamper motivation?

The sector best suited for this study is the educational sector especially at the university level, as the students' are required to be more motivated at the level for building up their career.

Student motivation could be classified into two forms: Intrinsic motivation and extrinsic motivation. Our concern in this study would be with the intrinsic motivation and its relation with the academic performance of the university students'. This study aims find that

how this intrinsic motivation could be improved by the teacher feedback that would act as a mediating factor in the study.

Intrinsic motivation is the source of motivation generated from the inside of the students. Intrinsically motivated students have the eager to study for the pleasure or for the social achievements or for the interest in their subjects. The students with intrinsic motivation tend to perform the tasks that are more challenging to them then the students with the extrinsic motivation. Extrinsic motivation is the external motivational factors that induce someone to study and learn something. In contrast to intrinsic motivation, extrinsically motivated students perform their tasks due to the fear of punishment or the incentives rewarded to them in the form of some gifts, candies, or the pat on the back of the student.

In the academic institutions the role of teachers is very essential. They could influence the students and

could trigger the urge in them to study hard. Teachers could play a role of very powerful input element to students' motivation. The real importance of understanding the different types of motivation and the effect of teacher's feedback on the intrinsic motivation of the students is to determine how much effect it generates on the students' that will ultimately increases the results in the higher academic performance.

The significance of this study is that the effect of teacher feedback on the intrinsic motivation of the students is not determined. Although studies were conducted to see the existence of the relationship between the motivation and students academic performance, but the gap was identified to see how intrinsic motivation can be increased [1].

The study would help the institutions to increase the academic performance of the students' by intrinsically motivating the students' and by also finding the mediating effect of teacher's feedback on the intrinsic motivation [2]. The objective of this research is to find the relation between intrinsic motivation and the students' academic performance and also the effect of teacher's feedback on the enhancement of intrinsic motivation.

**Research Question:** Does perceived teachers' feedback has the strong mediating effect on the relationship of intrinsic motivation and students' academic performance?

**Literature Review:** The factor that directs students towards learning is students' motivation. Many studies are conducted to investigate the relationship between student motivation and students academic performance. For the instance Afzal, Ali, Khan, & Hamid [1] concluded that student motivation has a positive force on the students' academic performance, but this relation is in reciprocal. This means that students who are motivated are expected to perform better and they ultimately become motivated due to their performance, this relation was found by surveying the students of different universities to find their experiences and the factors that caused them to study hard. The limitations in this study are to learn the ways that could increase the intrinsic factors to motivate the students. The study showed the greater effect of intrinsic motivation on the academic performance of the students' as compare to the extrinsic motivation.

This study also focuses its concern with the intrinsic motivational effect on the students' academic performance. Lepper [3] viewed internal motivation

factors as a source of enjoyment, accomplishment and learning to one's ownself.

Intrinsic motivation involves different elements that influences different students' to work harder. For the instance, intrinsic motivation includes the factor of achievement that is the self-exploration. A study conducted in Tehran University, where students were asked to complete the questionnaires also showed that urge to achieve the academic goals which comes from the inside of the student is responsible for the better academic performance. This study measured 8 different types of motivation. The results concluded the positive relationship between the achievement element of motivation and academic performance, while other factors such as competition, effort and society also have the impact on the academic act of the students. The implementation of this study in other universities was the constraint in this [4].

Another factor of motivation that seems to have an impact on the student is the society, as a person have to interact with different people in the society. Phillips [5] also found that students' achievement is influenced by the factors as parental education and social status which was found by conducting a study quantitatively on the students'. An intrinsically motivated student wants to solve the problems of the society and wants to do something remarkable for the outside world. Thus the impact of society also induces motivation in the students.

The relationship of teacher and student also has the effect on the motivation of the students, if it is positive. Students feel more motivated and work harder, if the teachers are supportive with the students. Teachers' emotional support encourages the academic achievement of the students. This is examined by the qualitative study conducted through interviewing. The results concluded that this relationship has the positive effect on the environment of self-exploration for the students [6].

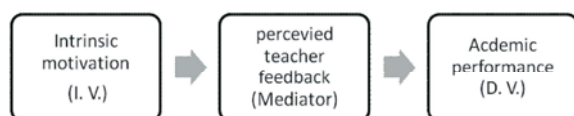
The relationship of teaching is also positively related with the intrinsic motivation, as a study was conducted to check their relationship and they have found that intrinsic motivation is influenced by the teaching quality. This was found by surveying the students in different universities, but different factors showed the contrasting relation between the teaching quality and motivation [7].

In fact, intrinsic motivation of students' is also correlated with the style of teaching i.e., the extent of energy, dynamic and enthusiasm [8]. It is clarified in the study that intrinsic motivation is associated with the benefit that causes the higher academic performances [9].

## Theoretical Framework

**Research Model:** The motivation that affects the student academic performance is the independent variable in this study. While the students' academic performance is termed as dependent variable as the motivational extent in students either increases or decreases the students' academic performance. This increase or decrease is mediated by the factor termed as the perceived teacher feedback, which will be referred as the mediating factor in our study. The operational definitions of these variables are given below

**Research Hypothesis:** In the light of literature review and the theoretical framework formed after the study on the past evidences this could be said that different motivations have effect on the students' academic performance, but our concern is to analyze the upshot of intrinsic motivation on the academic performance of the students' and by which teacher's competency affects the intrinsic motivation of the students'. As we have already seen that intrinsic motivation has some effect on the academic performance of the students. Afzal, Ali, Khan, & Hamid [1] also concluded in their study that intrinsic motivation has the positive, as well as, greater effect on the students' academic performance.



This argument supports the formation of our first hypothesis:

**H1:** Intrinsic motivation has positive effect on the academic performance of the students'.

As the teaching has an influence on the students' motivation the effect of teaching could thus be analyzed on the intrinsic motivation that would ultimately affect the students' academic performance [7]. This leads us toward the formation of second hypothesis;

**H2:** Teacher's feedback positively mediates the relationship of intrinsic motivation and student's academic performance.

**Research Methodology:** The relation between the intrinsic motivation and students' academic performance were analyzed quantitatively in the previous studies that showed the positive relation between these two variables [1]. Some other studies of this context includes: [10]; [11];

[12]. Most studies were conducted outside of Pakistan and none of the study was conducted in Sahiwal, so the quantitative analysis is conducted to examine this.

**Data Collection Method:** The questionnaire was adopted and their reliability values are given in the previous studies [13]; [14]. The questionnaire was self-administered to save time, money and to get the correct data. Items measuring the intrinsic motivation were adopted from the "The University Student Motivation and Satisfaction Questionnaire version 2" (TUSMSQ) [1]. Elements measuring the perceived teachers' feedback were also adopted from "Modified Perceptions of Teacher's Feedback scale (PTF)" by Koka & Hein [2]. The students of Higher Education Institute in Sahiwal were only taken as target population to conduct this research due to time and financial constraints. University level students' were chosen as they are best suitable for measuring the intrinsic motivation and academic performances, as the performances are the most essential at this level. 200 students' were randomly chosen to conduct this study and were given the questionnaire to fill it. Convenience sampling technique was used to collect data for this paper. Sample of 200 students' were taken from the COMSATS Institute of Information Technology, Sahiwal and 150 questionnaires were returned as filled with a response rate of 75%.

**Operationalization of Variables:** Three variables were used in this study. Three different scales were chosen to measure each variable. The academic performance and intrinsic motivation were measured through "The University Student Motivation and Satisfaction Questionnaire version 2" (TUSMSQ) [1]. While the perceived teacher feedback was measured through the scale "Modified Perceptions of Teacher's Feedback scale (PTF)" from Koka & Hein [2]. Instruments are adapted because validity of these instruments had already tested in these studies.

**Academic performance:** Academic performance is the measure of their current level of grade points in university [15].

**Intrinsic Motivation:** Intrinsic motivation is associated with the Self-exploration and Altruism [1].

**Perceived Teacher Feedback:** Perceived teacher feedback is based on three subscales that is; perceived positive specific feedback, perceived positive general feedback and perceived knowledge of performance [2].

Sr. no.	Variables	Dimensions	Elements	References
1.	Academic performance		Grade Point Scale	(Kamarudin, Aris, & Ibrahim, 2009)
2.	Intrinsic motivation	1. Altruism	a. Want to help others. b. Take part in the society c. Solve troubles for the society d. Improve current conditions e. Need to be useful to others.	(Afzal, Ali, Khan, & Hamid, n. d.);
		2. Self-exploration	1. To understand oneself 2. investigation of new ideas 3. Testing to oneself 4. Growth and development 5. keen for learning	
3.	Perceived teacher feedback	1. perceived positive specific feedback	1. Smiles for good work 2. Claps in good performance 3. Praise for hard work 4. Pats on the back 5. Guide during performance	(Koka & Hein)
		2. perceived positive general feedback	I. Often praises II. Often guide the students' III. Often encourages them	
		3. Perceived knowledge of performance.	a. Rolls eyes for bad performance b. Looks angry for bad performance	

**Data Analysis Method:** To measure the sample characteristics of the sample mean, median, mode, standard deviation and variations were used. Correlation was applied to seek the relationship between the three variables, whereas, linear regression model was applied in this paper to measure the relationship between dependent, independent and mediating variables. First, we applied regression model on intrinsic motivation and perceived teacher feedback by keeping intrinsic motivation as independent variable and perceived teacher feedback as dependent variable. Then regression model was applied to measure the relationship between perceived teacher feedback and academic performance by keeping perceived teacher feedback termed as independent variable and academic performance as dependent variable. Linear regression model was used here to measure the relationships because we have only one independent variable.

$$Y = \beta_0 + \beta_1 X_1 + e$$

By this equation, effect of independent variable (intrinsic motivation) on 'Y' mediator (perceived teacher feedback) was measured by considering mediator as a dependent variable.

$$Y = \beta_0 + \beta_2 X_2 + e$$

Through this equation effect of mediator on dependent variable was measured. Here mediator (perceived teacher feedback) was taken as independent variable and 'Y' dependent variable (academic performance) as it is.

## Findings of the Study

**Descriptive Statistics:** Respondents of the study were 53% males and 47% females. Standard deviation and variance of gender type are 50% and 25% respectively. While the standard deviation and variances of ages are 54% and 29% respectively.

## Inferential Statistics

**Reliability:** Instrument used in the study was reliable with cronbach's alpha value 0.823. While the reliability of intrinsic motivation is 0.714 and teachers' feedback is 0.657.

**Correlation:** Pearson correlation technique was used here to discover the relation between the three variables. Intrinsic motivation and perceived teacher feedback shows a positive and significant relationship at 0.000 significant levels with a correlation value of 0.525, the relationship between the intrinsic motivation and academic performance is also positive and significant at 0.000 with a correlation value of 0.471 and the relationship between intrinsic motivation and academic performance is significant at the 0.009 with a correlation value of 0.241 as shown in table 1.

**Regression:** Regression table measures the amount of total variation in dependent variable due to independent variable. The value of R square in table 4 is 0.276. This value indicates that there is almost 27% variation in dependent variable (teachers' feedback) due to independent variable (intrinsic motivation) as shown in table 3.1.

Table 1: Correlations

		Intrinsic motivation	Teacher feedback	Academic performance
Intrinsic motivation	Pearson Correlation	1	.525**	.214**
	Sig. (2-tailed)		.000	.009
	N	149	149	149
Teacher feedback	Pearson Correlation	.525**	1	.451**
	Sig. (2-tailed)	.000		.000
	N	149	149	149
Academic performance	Pearson Correlation	.214**	.451**	1
	Sig. (2-tailed)	.009	.000	
	N	149	149	149

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

Table 3.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.525 <sup>a</sup>	.276	.271	.50331

a. Predictors: (Constant), intrinsic motivation

Table 3.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.214 <sup>a</sup>	.046	.039	1.12383

a. Predictors: (Constant), intrinsic motivation

The F value is 55.93 at 0.000 significant levels which show that our model is good because this value is lower than 0.05.

Moving on the beta value of intrinsic motivation is 0.525 with t value 7.479 ( $t^2 = 55.93 = F$ ). This beta value indicates the amount of change in dependent variable (teacher feedback) due to one unit change independent variable (intrinsic motivation) Table 3.3. Similarly the value of beta in table 3.4 is 0.241. This value of beta indicates that the dependent variable 21.4% variation (academic performance) due to one unit change in independent variable (teacher feedback).

Table 3.3: Coefficients

Model	Un-standardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.777	.236		7.529	.000
Intrinsic motivation	.470	.063	.525	7.479	.000

a. Dependent Variable: teacher feedback

Table 3.4: Coefficients

Model	Un-standardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	2.416	.527		4.585	.000
Intrinsic motivation	.372	.140	.214	2.653	.009

a. Dependent Variable: academic performance

## CONCLUSION

The main idea of this study is to discover the mediating impact of perceived teacher feedback on the relationship of intrinsic motivation and academic performance. Two hypotheses are considered in this study and they both are accepted. Findings of the study revealed that the positive relationship exists between all the three variables at a significant value.

This clearly shows that teacher feedback act as a mediator in the relationship of intrinsic motivation and academic performance, so to increase the academic performance of the students' at the university level teachers should motivate the students' by giving them the necessary feedback. This makes them feel important and worthy among other peers which ultimately motivates them to work harder.

**Limitations and Future Direction:** Sample size of the study was limited and only one mediator was taken. Sample size can be increased for future research and effects of other mediator's e.g. parental involvement could also be used [16]. Furthermore, only the effect of intrinsic motivation was analyzed where extrinsic motivation could also be used.

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