

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

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ABSTRACT

In the present study, an attempt was made to explore motivational beliefs and learning strategies as predictors of academic achievement of prospective teachers. The data were collected from 300 prospective teachers of different districts of Punjab through self-constructed socio-demographic sheet and Motivational Strategies for Learning Questionnaire (MSLQ). The results of the study revealed out of 6 dimensions of motivational beliefs, task value has positive significant correlation relationship between motivational beliefs and academic achievement while test anxiety dimension of motivational beliefs emerged to be a significant and negative contributor of academic achievement. However, intrinsic goal orientation, extrinsic goal orientation, control of learning beliefs and self-efficacy for learning and performance have insignificant and no correlation relation between motivational beliefs and academic achievement. There were five dimensions of learning strategies, out of which elaboration was positively related but not significant correlation with academic achievement of prospective teachers and rehearsal, organization, critical thinking, meta-cognitive self-regulation were all negatively non-significant. Resource management strategies has four dimensions, peer learning and help seeking were significant but peer learning emerged to be a positive contributor of academic achievement. Educational Implications of the results have been discussed.

Keywords: *Motivational Beliefs, Learning Strategies, Academic Achievement, Prospective Teachers*

The academic achievement is day by day, attracting the attention of educators because it has been taken as a criterion for selection in various walks of life. Good academic achievement is one of the benchmarks for any higher learning institutions. Over the years, student with a good academic achievement is closely related to two correlated psychological component, motivational beliefs and self-regulation. Therefore, it has been becoming more and more pressing for the individual to have good academic achievement. Naderi (2009) viewed that each individual student is unique and has his or her own educational needs. The accomplishment of these needs is vital for an individual's Endeavour and pursuit to achieve the academic excellence. Understanding of these needs can help educators and parents to handle students' psychological problems in a better way.

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Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

Academic success plays an important role in determining appropriate opportunities for teacher trainees in their future life. Too many factors are responsible for falling them behind in academic success to their peer counterparts. Sunitha (2005), Sharma and Tahira (2011) have investigated relationship between numerous predictors and academic achievement. Presently the prediction of academic success in teacher trainees has become a large-scale operation. There has been considerable number of scientific investigations in the area of academic achievement in order to recognize stable determiners of teacher trainees' success. Some attempts have been fructified in establishing the direct relationship between certain variables and academic achievement while some are still under investigation.

Motivational Beliefs

Motivational beliefs are cognitive mediational variables that are constructed by the child through his/her success/failure expectation and are influenced by the adults, who interact with him/her and influence subsequent effects in similar act (Skinner & Belmont, 1993). According to Franken (1994), motivation is the arousal, direction and persistence of behavior. Motivation as definition given earlier is the simulation of action towards a particular objective where previously there was little or no attraction to the goal (Stipek, 1988). Motivation also affects the learning strategies and cognitive processes individuals employ (Eccles & Wigfield, 1993). Motivation is the study of why people think and behave as they do. It is also the study of what pushes or pulls an individual to start, direct, sustain and finally end an activity. For example, achievement activity such as studying for an exam. Motivation researchers would want to examine what the person is doing; the choice of behavior; how long it takes that person to get started, how hard the individual actually works at the activity (the persistence; or the cognitions and emotional reactions that accompany behavior (Wolters & Rosenthal 2000). Linnenbeink & Pintrich (2002) studied different dimensions of motivation. They state that self-efficacy attribute, intrinsic motivation and goals are significant for student's motivation. Research in motivation has focused on this dimension of motivation called motivational beliefs. Motivation refers to those factors which increase and decrease the vigor of an individual's activity. In education, motivation is called effort. In terms of effort, the study of student motivation searches for those factors which increase the student effort to make desirable response. In the present study motivation consists of value component of intrinsic goal and extrinsic goal orientation along with task value.

Learning Strategies

Learning strategies are defined as the process we use to activate and sustain our thoughts, behavior and emotions in order to reach our goals. When the goal involves learning we talk about learning. Zimmerman (2002) extends this definition highlighting that learner regulate and control their cognition, motivation and behavior to obtain set goals guided and constrained by both personal characteristics and the contextual features in the environment. Learners also differ from each other in more subject specific aptitude for learning e.g., some being better at verbal than numerical things, others vice versa. Blackmore (1996) suggested that one of the first thing educators can do to aid, the learning process is to simply be aware that there are diverse learning styles in the students. There are probably as many ways to teach as to learn. Learners have different preferences for how, when, where and how often to learn has defined learning styles as personal qualities that influence a student ability to acquire information, to interact with peers and the teachers and otherwise, participate in learning situation. Learning strategies assessed by the Motivated Strategies and Learning

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

Questionnaire (MSLQ) are rehearsal, elaboration, organization, critical thinking and meta-cognitive regulation.

Mathew (1991) argues that students have more positive attitudes towards school and colleges to achieve more knowledge and skills when taught, counseled or advised through their natural or primary style rather than a style that is secondary or underdeveloped, particularly when adjusting to a novel and new situation that creates such as beginning situation in higher education. Generally cognitive styles are more related to theoretical or academic research, while learning styles are more related to practical application. Robothom (1999) considered that the students will develop a way or style of learning and refine that style in response to three groups of factors. Unconsciousness personal intervention by the individual, consciousness intervention by the learners themselves and interventions by some other external agents leads to learning. Learning strategies are important in today's world or lifelong learning environment. Today's society is facing up technological revolution where technology and information constantly changing. Berger et al. (2011) indicated that student motivation and use of learning strategies are related. There is insufficient understanding, however, about their reciprocal effects whether motivation affects strategy use, the converse, or whether the effects are bidirectional and which components of motivation and strategies are involved.

Significance of the study

Motivation and learning strategies has always been concerned to academic achievement of education institutions. This study is significant because academic achievement is the unique responsibility of all educational institutions established by society to promote a whole sum scholastic development of the students (Bala, 2013). In this work, we adopt the view that motivational beliefs and learning strategies should be stated as part of an integrated whole to successfully interpret leaning outcomes in students' achievement. Hence, only peer learning dimension is the significant academic achievement of teacher trainees.

REVIEW OF RELATED LITERATURE

The study attempted by Tanriseven et. al (2013) on the predictive relationship between motivational beliefs and self-regulated learning strategies revealed that motivational beliefs were significant predictor of self-regulated learning strategies. Savoji (2013) indicated motivational strategies can predict more variance of academic achievement in virtual group than traditional. In traditional group, task value and self-efficacy in virtual group test anxiety had significant role in predicting academic achievement. Test anxiety had a negative correlation with academic achievement. Tavakoli et.al (2020) aimed to investigate the relationship between motivational beliefs and self-regulation learning with students' academic performance in kerman university of medical sciences. The results showed that there was a direct and significant relationship between self-regulation learning and academic performance of students at university of medical sciences as the student academic performance improved with self-regulation learning. Also, there was a significant relationship between motivational beliefs and student academic performance. Lim & Yeo (2021) concluded that motivational constructs such as self-efficacy, intrinsic goal orientation, task value and control of learning beliefs were positively and significant related to self- regulated learning while task anxiety was negatively and insignificantly related to self-regulated learning. Almoslamani, Y. (2022) revealed that learning strategies were a significant predictor of students' achievement.

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

Objectives of the study

- To study the motivational beliefs of prospective teachers in relation to academic achievement.
- To study the learning strategies of prospective teachers in relation to academic achievement
- To study the motivational beliefs and learning strategies as predictors of academic achievement of prospective teachers.

Hypotheses of the study

- There will be no significant relationship between motivational beliefs and academic achievement of prospective teachers.
- There will be no significant relationship between learning strategies and academic achievement of prospective teachers.
- Motivational beliefs and learning strategies will not emerge as significant predictors of academic achievement of prospective teachers.

METHOD AND PROCEDURE

The study was conducted through descriptive method of research.

Participants

A stratified random sampling of 300 prospective teachers were selected from B.Ed. colleges of Fatahgarh Sahib, Patiala and Sangrur districts of Punjab.

Instruments

- **Self-Prepared Socio-Demographic Sheet:** It was prepared by investigator herself and was used in order to seek the information about the personal variables such as name, gender, locale(urban/rural), academic achievement in terms of percentage of marks obtained in graduation of prospective teachers were taken for the analysis.
- **Motivational Strategies for Learning Questionnaire:** The Motivational Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. (1991) was used as a research tool in order to collect data for present study. MSLQ is a self-report instrument designed to assess teacher trainees' motivational orientations and their use of different learning strategies for a college course. There are 81 items on the 1991 version of the MSLQ. The scale was employed to assess the motivational beliefs and learning strategies of the teacher trainees. Each item has a seven-point response-Not at all true of me to very true of me. The questionnaire assessed the motivational beliefs and learning strategies over the following 15 dimensions viz. Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Value, Control of Learning Beliefs, Self-Efficacy for Learning and Performance, Test Anxiety, Rehearsal, Elaboration, Organization, Critical Thinking, Meta-cognitive Self-Regulation, Time and Study Environment, Effort Regulation, Peer Learning and Help Seeking.

RESULTS AND DISCUSSION

Correlation analysis was used in order to study the relationship between academic achievement and motivational beliefs and learning strategies of prospective teachers. Regression analysis was used to study motivational beliefs and learning strategies as predictors of academic achievement of prospective teachers.

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

I. Motivational Beliefs in relation to Academic Achievement of prospective teachers

Table I: Motivational Beliefs in relation to Academic Achievement of prospective teachers

S. No.	Dimensions	Academic Achievement
1.	Intrinsic Goal Orientation	-.095
2.	Extrinsic Goal Orientation	-.061
3.	Task value	.134*
4.	Control of Learning Beliefs	-.096
5.	Self-Efficacy for Learning and Performance	-.016
6.	Test Anxiety	-.184**

* $p < 0.05$; ** $p < 0.01$

The perusal of table I shows that coefficient of correlation between ‘task value’ dimension of motivational beliefs and achievement of prospective teachers came out to be .134 which was significant at 0.05 level of significance. There was positive significant correlation between ‘task value’ dimension of motivational beliefs and academic achievement of prospective teachers. It means that prospective teachers perceive the course material as interesting, important and useful for them which leads to their high academic achievement.

The table I shows that coefficient of correlation between ‘test anxiety’ dimension of motivational beliefs and academic achievement of prospective teachers came out to be -.184 which was negatively significant at 0.01 level of significance. There was negative significant correlation between ‘test anxiety’ motivational beliefs and academic achievement of prospective teachers. This was because ‘test anxiety’ has been found to be negatively related to expectancies as well as academic performance that disrupt their performance.

The table I further shows that coefficient of correlation between ‘intrinsic goal orientation’, ‘extrinsic goal orientation’, ‘control and learning beliefs’, ‘self-efficacy for learning and performance’ dimensions of motivational beliefs and academic achievement came out to be -.095, -.061, -.096 and -.016 respectively which were not even significant at 0.05 level of significance. There was no significant correlation between ‘intrinsic goal orientation’, ‘extrinsic goal orientation’, ‘control and learning beliefs’, ‘self-efficacy for learning and performance’ dimensions of motivational beliefs and academic achievement.

II. Learning Strategies in relation to Academic Achievement of prospective teachers

Table II: Learning Strategies in relation to Academic Achievement of Prospective teacher

S. No	Dimensions	Academic Achievement
7.	Rehearsal	-.068
8.	Elaboration	.007
9.	Organization	-.079
10.	Critical Thinking	-.044
11.	Meta-cognitive Self-Regulation	-.041

The table II depicts that coefficient of correlation between ‘rehearsal’, ‘organization’, ‘critical thinking’ and ‘meta-cognitive self-regulation’ dimensions of learning strategies and academic achievement came out to be -.068, -.079, -.044 and -.041 respectively which were

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

not even significant at 0.05 level of significance. There was no significant correlation between ‘rehearsal’, ‘organization’, ‘critical thinking’ and ‘meta-cognitive self-regulation’ dimensions of learning strategies and academic achievement. The coefficient of correlation between ‘elaboration’ dimension of learning strategies and academic achievement came out to be .007 which was not even significant at 0.05 level of significance and positively related.

III. Resource Management Strategies in relation to Academic Management of prospective teaches

Table III: Resource Management Strategies in relation to Academic Achievement of prospective teachers

S. No	Dimensions	Academic Achievement
12.	Time and Study Environment	-.023
13.	Effort Regulation	-.102
14.	Peer Learning	.134*
15.	Help Seeking	.129*

* $p < 0.05$

The perusal of table III shows that coefficient of correlation between ‘peer learning’ and ‘help seeking’ dimensions of resource management strategies and achievement of prospective teachers came out to be .134 and .129 which was significant at 0.05 level of significance. There was positive significant correlation between ‘peer learning’ and ‘help seeking’ dimensions of resource management and academic achievement of prospective teachers. This means that collaborating with one’s peers has been found to have positive effects on achievement and peer help, peer tutoring, and individual teacher assistance facilitates their achievement.

The table III shows that coefficient of correlation between ‘time and study environment’, and ‘effort regulation’ dimensions of resource management strategies and achievement of prospective teachers came out to be -.023 and -.102 which was not significant at 0.05 level of significance. There was negative significant correlation between ‘time and study environment’ and ‘effort regulation’ dimension of resource management strategies and academic achievement of prospective teachers.

IV. PREDICTORS OF ACADEMIC ACHIEVEMENT OF PROSPECTIVE TEACHERS

In order to find the predictors of academic achievement among the prospective teachers, the data were subjected to step-wise multiple regression analysis.

Motivational Beliefs as predictor of academic achievement of prospective teachers

The findings of regression analysis to study motivational beliefs as predictors of academic achievement of prospective teachers depicted in the table IV as:

Table IV: Results of Regression Analysis of Motivational Beliefs as Academic Achievement of prospective teachers

Model	Predictors	R	R ²	Adjusted R ²	% Variance	F-value
1.	Test Anxiety	.184	.034	.031	3.1%	10.461*

0.01*

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

The table IV shows that out of ‘intrinsic goal orientation’, ‘extrinsic goal orientation’, ‘task value’, ‘control of learning beliefs’, self-efficacy for learning and performance’, and ‘test anxiety’ dimensions of motivational beliefs only ‘test anxiety’ dimension emerged to be significant and negative contributor accounting for 3.1% of the variance in academic achievement of prospective teachers.

Learning Strategies as predictor of academic achievement of prospective teachers

Out of ‘rehearsal’, ‘elaboration’, ‘organization’, ‘critical thinking’, and meta-cognitive self-regulation’ dimensions of learning strategies, none of the variables entered the regression equation. Therefore, ‘rehearsal’, ‘elaboration’, ‘organization’, ‘critical thinking’, and meta-cognitive self-regulation’ dimensions of learning strategies none of the variables emerged as the significant predictors of academic achievement of prospective teachers.

Resource Management Strategies as predictor of academic achievement of prospective teachers

The findings of regression analysis to study resource management strategies as predictors of academic achievement of prospective teachers depicted in table v as:

Table V: Results of Multiple Regression Analysis of Resource Management Strategies as predictors of Academic Achievement of prospective teachers

Model	Predictors	R	R2	Adjusted R2	% Variance	F-value
1.	Peer Learning	.13	.02	.02	2.0%	5.44*

$P > 0.05^*$

The table V shows that out of ‘time and study environment’, ‘effort regulation’, ‘peer learning’ and ‘help seeking’ dimensions of resource management strategies only peer learning emerged to be the significant and positive contributor accounting for 2.0% of the variance in academic achievement of prospective teachers.

Educational Implications

- The study suggested that ‘test anxiety’ appeared to be significant predictor of motivational beliefs. The training in the use of effective learning strategies and test-taking skills should help to reduce the degree of anxiety.
- The study recommended that task value has a positive and significant dimension of motivational beliefs and academic achievement. High task value should lead to more involvement in one’s learning. Prospective teachers can perceive the course material as interesting, important and useful which leads to their high academic achievement.
- Elaboration dimension of learning strategies have a positively related with academic achievement. It can help learners store information into long term memory by building internal connections between items to be learned. These can help the learner integrate and connect new information with prior knowledge.
- Peer learning and help seeking dimensions of resource management strategies have a positive and significant correlation with academic achievement of prospective teachers. It suggested that collaborating with one’s peer learning has been found to have positive effects on achievement and learners must learn to manage is the support of others. Asking for peer help in obtaining favorable grades in exams, it is necessary for the students to apply this information from peers in real-life context.

Motivational Beliefs and Learning Strategies as Predictors of Academic Achievement of Prospective Teachers

- The teachers should be trained in pre-service and in-service programs so that they can provide proper motivational beliefs and learning strategies to prospective teachers to enhance their performance.

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Conflict of Interest

The author(s) declared no conflict of interest.

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