

Impact of the learning environment on affective learning outcomes

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ABSTRACT

Miller (2005) noted that affective learning outcomes are pervasive in education, and is concerned with how learners feel while they are learning, as well as with how learning experiences are internalized so they can guide the learner's attitudes, opinions, and behavior in the future. The purpose of the present study was to assess the affective learning outcomes of the higher secondary students and to identify the impact of classroom learning environment in this regard. The sample comprised of the class XII students of the West Bengal Council of Higher Secondary Education. Cluster sampling technique was used to select 11 schools and the size of sample was 763. Standardized questionnaires were administered to assess classroom learning environment, attitude towards classroom activities, motivation in learning their academic subjects and motivated strategies for learning. In this Correlational research, Descriptive Statistics, Correlation and Regression Analysis, were computed in SPSS – 17. The findings revealed that the majority of the students had positive attitude and high motivation for acquiring their academic subjects. But their motivation for learning strategies was low. The correlation and regression analysis indicated that classroom learning environment significantly predicted all the affective outcomes. So the study implies that classroom learning environment facilitates development in the affective domain. Since affective factors are predictors of success in higher education, the findings of the study can be used to identify which supports are necessary for the individual student. Additionally, affective outcomes might identify how faculty can engage with students in the classroom for different courses and curricula.

Key Words : Affective learning, Learning environment, Attitude, Motivation

INTRODUCTION

Educators and researchers have recognized the value and importance of the affective domain in the taxonomy of educational objectives. Affective Domain Taxonomy was first published in 1973 and in this taxonomy Krathwohl, Bloom and Masia ordered the objectives according to the principle of internalization. Internalization refers to the process whereby a person's affect toward an object passes from a general awareness level to a point where the affect is internalized and consistently guides or controls the person's behaviour. In spite of its role in determining student success, over the next decades affective domain taxonomy has

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been least applied (Furst, 1981; Martin and Reigeluth, 1992; Griffith and Nguyen, 2006). This is, perhaps, because the affective domain reflects the world of feelings, values, appreciation, motivation, and attitudes - factors much more difficult to understand and assess.

A shift toward the affective domain began in the early 1990s, when in United States a Commission on Achieving Necessary Skills released *What Work Requires of Schools* (SCANS, 1991), which described the cultural, industrial, and sociological changes that required students to learn a different set of skills, particularly to be effective in the workplace. Special emphasis was given on the development of the soft skills reflective of the affective domain, including factors such as interpersonal skills and personal qualities (e.g., responsibility, self-esteem). Affective factors have also been added to the list of key inputs, or predictors of success, in higher education. Several large, meta-analytic studies in the last decade have shown the importance of these domains (Poropat, 2009; Robbins *et al.*, 2009; Robbins *et al.*, 2004; Richardson *et al.*, 2012).

Beane (1985) has described the affective domain as that area of human nature and conduct that deals with emotions, feelings, values, attitudes, predisposition, and morals. By analyzing different definitions we understand that affective domain contains learning skills that are predominantly related to emotional (affective) processes. The learning processes in the affective domain include being open to experience, engaging in life, cultivating values, managing oneself, and developing oneself. Thus Affective Learning outcomes involve Attitudes and Motivations. The expression of these often involves statements of opinions, beliefs, or an assessment of worth (Smith and Ragan, 1999). Affective learning is concerned with how learners feel while they are learning, as well as with how learning experiences are internalized so they can guide the learner's attitudes, opinions, and behavior in the future (Miller, 2005).

By reviewing researches in this area we find that Himsl and Lambert (1993) conducted a comprehensive study and examined the Signs of Learning in The Affective Domain. Olson (2010) suggested evaluation of the following as affective learning targets- attitudes, interests, values, preferences, academic self-concept, self-esteem, locus of control, opinions, motivation, social relationships, emotional development, altruism, and moral development. The positive attitudes towards each of this area have been also specified by the author. Perkins (2013) reported that the affective domain, according to current educational literature, is essential for learning. Yet, it receives little attention from most teachers.

A number of studies have examined attitude towards different subjects and motivation for learning. Lamar (2013) examined the attitude of Higher Secondary Students towards Mathematics and found significant difference between male and female students. Sekar *et al.* (2013) found significant difference between rural and urban higher secondary students in attitude towards science. DeLong and Winter (2001) stated that learning requires motivation. Student learning will occur in proportion to the effort that a student puts into learning. Berger and Karabenick (2011) by using a cross-lagged structural model found that students' self-efficacy in mathematics and value predicted their reported use of learning strategies. Gaspar (2013) examined relationship between Classroom Climate and Academic Achievement of Higher Secondary Students in Salem District, Tamilnadu. From the findings he concluded that with proper training, the teacher can guide and motivate the students for better academic

achievement and for successful completion of the tasks undertaken by them. Achievement of students in the class is influenced by positive classroom climate.

Some studies have attempted to find out the influence of classroom environment on affective domain. Hussain (2010) found a positive correlation between classroom learning environment and attitude towards the learning of English. Results showed that learning environment may be made favorable by fostering better pupil-teacher relationship in order to develop positive attitude to learn a foreign language. Ahmad *et al.* (2014) concluded that democratic classroom environment plays an important role in the behavioral, emotional and cognitive engagement of students in the teaching and learning process.

It is evident from the foregoing discussion that there is paucity of researches in examining affective learning comprehensively and there is need for research in order to develop teaching approaches that will help in raising the profile of affective learning objectives in school lessons. Against this backdrop the present study tried to assess the affective outcomes of the Higher Secondary students of West Bengal Board and determine the effect of learning environment on these outcomes.

Objectives :

- To assess the affective outcomes (attitude towards classroom learning, motivation for learning their academic subjects and motivated strategies for learning) of the higher secondary students.
- To determine the learning environment experienced by the students in the classroom.
- To find out if there is any relationship between the learning environment and the three outcomes of affective learning.

METHODOLOGY

Hypotheses:

- There is significant relationship between the learning environment and attitude towards classroom learning.
- There is significant relationship between the learning environment and motivation for learning academic subjects.
- There is significant relationship between the learning environment and motivated strategies for learning.

Sample :

The target population of this study was all the students who studied in the Class XI and XII under the West Bengal Board / Council of Higher Secondary Education. The sample was drawn randomly by Cluster Sampling Technique. 11 Schools (4 Boys, 5 Girls and 2 Co-Education) of three districts - Kolkata, North 24 Parganas and Hooghly were selected. The size of sample was 763, among them 370 were boys and 393 were girls.

Tools :

Standardized questionnaires were administered to assess classroom learning environment and the affective factors. Learning Environment Scale developed by Rivera and Ganaden

(2001) was used to assess classroom experiences. Out of the 76 items in the original scale, 30 items were selected and translated into Bengali. The reliability obtained from the pilot study was found to be 0.62.

In order to measure Attitude towards Learning, Motivation for Learning Academic Subjects and Motivated Strategies for Learning, a questionnaire with 3 sub-tests was developed from 3 different standardized scales. The subtests were the following :

Attitude towards Learning:

22 items were selected from the Learner Empowerment Measure by Frymier and Shulman (1996) and it measured the internal condition or feeling of being empowered that an individual experiences during learning.

Motivation for learning academic subjects:

30 items were selected and adapted from Science Motivation Questionnaire by Glynn and Koballa (2006). The items assessed six components of motivation - intrinsic motivation, extrinsic motivation, relevance to personal goals, responsibility, confidence, and anxiety about learning the academic subjects.

Motivated Strategies for learning:

30 items were developed from the Self-Report Instrument of Motivated Strategies for Learning by Pintrich *et al.* (1991). The items assessed students' motivational orientations and their use of different learning strategies.

This questionnaire was a 5-point Likert type and the total number of items was 82. All these items were translated into Bengali and the Cronbach's alpha reliability was computed and it was found to be 0.684.

Procedure:

A preliminary study was conducted with 100 higher secondary students of two schools. Findings of the pilot study revealed that the students were able to respond to the questionnaires developed for the study. The reliabilities of the questionnaires were computed on this data. Moreover the independent and the dependent variables were significantly associated in some respects. Then final data were collected from the students of the selected schools with the permission of the authority concerned. All the standardized questionnaires were administered in groups in the classrooms with proper instructions. The investigator was present while they were responding and provided help for any kind of difficulty. Generally the data collection could be completed within two periods from each school. After data collection the responses were scored and then subjected to statistical analysis. Descriptive Statistics, Correlation and Regression Analysis were computed in SPSS - 17.

RESULTS AND DISCUSSION

The present research has been undertaken with the primary purpose of assessing the different outcomes of affective learning of the Higher Secondary students of West Bengal Board and determining the influence of learning environment on these outcomes.

Table 1 shows that the students have positive attitude towards school learning and are highly motivated to learn their academic subjects, but their use of motivated learning strategies is comparatively low. The standard deviation values show a moderate homogeneity for all the variables.

All the dependent variables are significantly correlated with classroom learning environment. All the three hypotheses of the study are accepted. Hussain (2010) also found a positive correlation between classroom learning environment and attitude towards the learning. Gasper (2013) has concluded that through positive classroom environment teacher can motivate the students.

Regression equations have been generated using learner attitude, motivation for learning,

Table 1 : Descriptive statistics of the scores on the Dependent Variables					
Dependent variables	N	Minimum	Maximum	Mean	Std. Deviation
Attitude towards learning	763	64	149	116.02	13.918
Motivation for learning academic subjects	763	29	118	91.33	12.578
Motivated strategies for learning	763	35	116	75.96	11.069

Table 2 : Correlations between learning environment and attitude towards learning, motivation for learning, motivated strategies for learning.				
Variables	Learning environment	Attitude.	Motivation	Motivated strategies
Learning environment	1	0.318*	0.213*	0.210*
Attitude	0.318*	1	0.390*	0.390*
Motivation	0.213*	0.390*	1	0.473*
Motivated Strategies	0.210*	0.390*	0.473*	1

* $p < 0.01$

Table 3 : Results of regression analysis including learning environment as predictor on the dependent variables							
Independent variable	Dependent variables	R	R Square	Adjusted R square	Std. error of the estimate	F	Sig.
Learning environment	Attitude	0.318	0.101	0.100	13.204	85.623*	0.000
	Motivation	0.213	0.045	0.044	12.298	36.198*	0.000
	Motivated strategies	0.210	0.044	0.043	10.829	35.165*	0.000

Table 4 : Co-efficients of regression analysis						
Independent variable	Dependent variables	Un-Standardized co-efficient (s)		Standardized co-efficient Beta	t	Sig.
		B	Std. Error			
Learning environment	Attitude	0.443	0.048	0.318	9.253*	0.000
	Motivation	0.268	0.045	0.213	6.017*	0.000
	Motivated strategies	0.233	0.039	0.210	5.930*	0.000

* $p < 0.01$ level

motivated strategies for learning as dependent variables and learning environment as the predictor variable. The learning environment accounts for 10.1% variability in attitude, 4.5% in motivation for learning academic subjects and 4.4% in motivated strategies for learning. The standardized beta weights indicate that the relative contribution of the independent variable in predicting the criterion variables is significant. However, R^2 values are less than 10% in case of motivation for learning and motivated strategies for learning which mean that the predictive value of learning environment is quite low for these variables.

The overall findings are consistent with previous researches in precisely acknowledging the importance of classroom learning environment. A classroom is a unique interpersonal relationship involving the teacher student relationship and the peer relationship. The teacher plays a crucial role in a classroom, and when the relationship between the teacher and the learner is friendly, maximum learning takes place and learning becomes an enjoyable experience to the learner. Hanrahan (1998) has suggested that both intrinsic and extrinsic motivation which could lead to deep involvement in learning is constrained by a preponderance of teacher-centered methods of instruction. Gould (2001) and Gano-Phillips (2009) have reported similar findings. Ahmad *et al.* (2014) also concludes that classroom environment plays an important role in the behavioral, emotional and cognitive engagement of students in the teaching and learning process.

Conclusion :

The higher secondary students of West Bengal Board perpetuate highly positive attitude towards learning, high motivation for leaning their academic subjects but they do not have adequate motivation for using different learning strategies. Learning environment has significant correlation with all the three affective variables considered in this study - Attitude towards Learning, Motivation for Learning, Motivated Strategies for Learning. Its prediction of these variables is significant only for Attitude towards Learning. The present study implies that if the environment of student's classroom is friendly, harmonious, humane, and supported, then the students develop positive attitude towards learning. This positive attitude facilitates high motivation for learning the chosen academic subjects and inspires them in using different learning strategies. So, efforts might be made to create pleasant, encouraging, and favorable affective learning environment for better teaching-learning process that will help them to know different learning strategies. Further, schools should provide innovative, effective learning environment through counseling programmes, co-curricular activities, regular instruction and assessment which help them to shape into a better person.

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