

A Study of Relationship between Students' Academic Achievement and Socio-Emotional Classroom Climate at Secondary School Level



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Abstract

Academic achievement is the extent to which a student has achieved his short or long-term educational goals. There are many known factors which affect student's academic achievement. For optimum academic achievement it is important that students know there is safety and comfort in the classrooms and that they will be treated humanely when they contribute. Wrong answers should not provoke negative reactions on the part of the teacher, but need to be perceived as part of student's learning process. Objectives of the study were 1. To analyze the socio-emotional class room climate at secondary school level. 2. To study the relationship between student's Academic Achievement and Socio-emotional classroom climate. Tool: Richard L. Ober's Reciprocal Category system was used to observe Socio-emotional Classroom Climate. 2. School report cards for Student's academic achievement. Statistical analysis were done by using parametric technique (Pearson's product moment correlation). Findings revealed a remarkable positive relationship between Student's academic achievement and socio-emotional classroom climate. Also the classroom climate was analyzed in terms of positive and negative. It has been conducted that teachers need to be skillful enough in generating a socio-emotional classroom climate conducive for learning.

Keywords: Student's Academic Achievement, Socio-emotional Classroom Climate

Introduction

Academic achievement is the extent to which a student has achieved his short or long-term educational goals. There are many known factors which affect student's academic achievement. Differences in academic performance are known to be associated with intelligence and personality. Students with higher mental ability tend to achieve highly in academic settings. Children's home learning environment influences a structured learning environment. Early academic achievement enhances later academic achievement. Parent's academic socialization affects students' academic achievement. Physical activity could have an impact on academic achievement by increasing neural activity in the brain. Exercise increases brain functions such as attention span and working memory. Cognitive functions like attention, memory, and reasoning affect academic achievement.

Non-cognitive factors or skills, such as academic self-efficacy, self-control, motivation, expectancy and goal setting, emotional intelligence and determination affect academic achievement.

For optimum academic achievement it is important that students know there is safety and comfort in the classrooms and that they will be treated humanely when they contribute. Wrong answers should not provoke negative reactions on the part of the teacher, but need to be perceived as part of student's learning process. Development of favorable attitudes in the classroom depends on the ability of the teacher to satisfy the social and psychological needs of the students. This may be carried out by the teacher in such activities as listening to the learners, responding to their suggestions, accepting their feelings, involving them in teaching and learning processes and encouraging their efforts. This in turn will create a warm, supportive and positive emotional climate in the classroom. Such a climate enhances emotional security, encourage students to contribute

constructively to the lesson and leads to a high standard of achievement. Some of the components of human relationships which exist in a classroom are open channels of communication, participatory decision making, integrity, friendliness, student leadership, flexibility of syllabus, feeling in groups etc.

Alice Ray (1999) concluded in her findings that critical thinking skills learned in the context of social emotional training, transfer easily to an academic content. Noddings (1995) contends that educators should strive for adequate academic achievement as well as development of caring competent people.

Operational Definition of the Terms Used

Socio-Emotional Classroom Climate

Socio-emotional classroom climate in the present study has been studied in the form of teacher-taught classroom interaction, observed by using Ober's RCS and has been classified in two categories namely positive and negative on the basis of behavior ratios obtained from positive and negative indicators of socio-emotional classroom climate.

Academic Achievement

Academic achievement of students has been recorded in the form of their scores obtained in the examinations conducted by school.

Objectives of the Study

1. To analyze the socio-emotional class room climate at secondary school level.
2. To study the relationship between student's Academic Achievement and Socio-emotional classroom climate.

Hypotheses

In the present study researcher has formulated null hypotheses. The null hypothesis asserts that no relationship or no difference exists between or among the variables.

H_0 "There will be no significant correlation between Student's Academic Achievements and Socio-emotional Classroom Climate at secondary school level."

Review of Related Literature

The researcher has undergone through various studies in the area.

Falsario (2014) aimed at studying the relationship between classroom climate and student's academic performance. The respondents were the 123 fourth year Bachelor of Secondary Education (BSED) and Bachelor of Elementary Education (BEED) students taking the Teaching Profession. The survey method using the Classroom Climate questionnaire adapted from the downloaded instrument was used. Academic performance was their final grade in the teaching Profession. Statistical tools were frequency count, percentage, mean, standard deviation and Pearson's r set at 0.05 level of significance. The BEED students perceived their classroom climate as "Highly Conducive" while the BSED students perceived it as "Most Conducive". As to teacher's leadership in the classroom, the students had the following preference: first "Democratic"; second "Authoritarian and third Laissezfaire". As to students' participation in the classroom, the students had the following preference: first "Collaborative",

second "Individualistic" and third "Competitive". The highest bulk of students had the "Very Good" (85-89) academic performance when taken as a whole and when classified as to curricular program. For BEED students, there was a Low Positive Correlation ($r=0.027$) between academic performance and classroom climate and only 0.07% of classroom climate explains the variance in the academic performance. Academic performance was not significantly correlated to classroom climate. For BSED students, there was a Moderately Low Positive Correlation ($r= 0.434$) between academic performance and classroom climate and only 18.84% of classroom climate explains the variance in the academic performance. Academic performance was significantly correlated to classroom climate. Implications of the findings were classroom climate to a certain extent had some influence on academic performance of students. Teachers could employ the maximum participation of students individually or collaboratively. Teachers could strive to create a conducive classroom climate to help students attain academic success.

Rayes (2012) aimed at examining link between classroom emotional climate (CEC) and academic achievement including role of student engagement as a mediator. Data comprised of 1399 students from 63 fifth and sixth grade classrooms. Study included classroom observations, student reports and report cards. As predicted, multilevel mediation analysis showed that the positive relationship between classroom emotional climate and grades was mediated by engagement, while controlling for teacher characteristics and observation of both the organizational and instructional climate of the classroom, higher levels of student engagement were associated with higher grades. Among Level 2 variables, sixth-grade classrooms had lower scores on CEC and classroom organization than fifth-grade classrooms. Moderate to strong positive correlations were found among the three class domains. Consistent with the hypotheses, direct and indirect links between CEC and academic achievement were found. Student ratings of engagement mediated the relationship between observed CEC and year-end grades after controlling for the influences of school, teacher, student, and other classroom characteristics. Scores on two other observed classroom characteristics (instructional support and classroom organization) were unrelated to student engagement and grades.

Berger (2011) aimed at examining the association between socio-emotional variables and academic achievement among 3rd and 4th graders. This study also aims broadening the evidence of this association by adopting a multilevel perspective that allows integrating both individual and context level variables acknowledging their nested structure. At the individual level, self-esteem, socio-emotional wellbeing and social integration are tested as predictors for academic achievement. At the environmental level, classroom social climate and peer social network features were tested. The guiding hypothesis of this study was that individual social and

emotional variables and contextual socio-emotional features will be positively associated with academic achievement. This study adopted a multilevel perspective to test this association among Chilean elementary students, considering features at individual (socio-emotional well-being, self esteem, and social integration) and social levels (classroom social climate and social network characteristics). The total sample included 674 children (51.5% girls, 56.6% 3rd graders) distributed in 19 classrooms. The self reported Socio-emotional Wellbeing Scale was used to assess Socio-Emotional Wellbeing. Self esteem was assessed through the Self-Esteem Scale, developed in Chile by Marchant, Haeussler and Torretti (2002). Classroom Social Climate was assessed by using the School Climate Scale, developed by Arón and Milicic (1999). Participants' social integration was assessed through the Social Cognitive Mapping (SCM) procedure (Cairns, Perrin, & Cairns, 1985). In order to assess structural attributes of the peer social network, social network analyses were performed using the Simulation Investigation for Empirical Network Analyses (SIENA) program. School records for all participants were collected. Average grade for the whole previous academic year was used to assess academic achievement. Results show that socio-emotional variables, and particularly teachers' ratings of their students' self esteem, were associated with academic achievement. Significant correlations were found between socio-emotional wellbeing, social integration and a positive perception of the school social climate, and academic achievement.

Brame (2007) in a more elaborative manner examined the hypothetical relationship among teachers beliefs, teacher behavior, class-room climate, student engagement and student outcome. Humanistic teachers operated in an atmosphere of student empowerment and high level of student engagement; custodial teachers operated in an atmosphere of students' compliance and low level of students' engagement.

Research Methodology

In the present study Descriptive Survey method has been used. The population for the study constitutes secondary school teachers of Kanpur city. Sampling was done at three stages: selection of school and selection of teacher. Schools were selected by using random sampling. Where as teachers were selected on the basis of availability, through incidental random sampling. Ten randomly selected students from the classes of all selected teachers were also sample.

The sample of the study consists of 100 secondary school teachers and 1000 students from Kanpur city.

The tools used for the study were:

1. Richard L. Ober's Reciprocal Category system was used to observe Socio-emotional Classroom Climate.
2. School report cards of selected students.

Data was collected after prior permission from school administration. Each selected teacher was observed for 20 minutes. Score Chart of 10

students of each selected teacher was prepared from their yearly report cards.

Analysis of Data

A. Analysis of Socio-emotional Classroom Climate

The first objective of the study is to analyze the Socio-emotional Classroom Climate.

Socio-emotional Classroom Climate was observed by using Richard L. Ober's Reciprocal Category System and was analyzed by obtaining the ratio of sum of frequencies of Positive Socio-emotional Classroom Climate and the sum of frequencies of Negative socio-emotional classroom.

Or

Sum of frequencies of 1,11,2,12,3 and 13 columns

$$\frac{\text{(indicators of positive classroom climate)}}{\text{Sum of frequencies of 7,17,8,18,9 and 19 (indicators of negative classroom climate)}} \times 100$$

High ratio (above 100) indicates Positive socio-emotional climate whereas low ratio (100 and Below 100) indicates Negative Socio-emotional Classroom Climate.

Summary of Socio-emotional Classroom Climate of 100 teachers in terms of Positive and Negative has been shown in Table 4.1

Table -1
Socio-Emotional Classroom Climate in Terms of Positive and Negative

Socio-emotional Classroom Climate	Teaching Subject					
	Science (N=49)		Non-Science (N=51)		Total (N=100)	
	Male	Female	Male	Female	N	%
Number of teachers creating Positive Socio-emotional Classroom Climate	13	18	8	17	56	56%
Number of teachers creating Negative Socio-emotional Classroom Climate	11	7	9	17	44	44%
Total	24	25	17	34	100	100%

Table 1 indicates that 56 % teachers have created Positive Socio-emotional Classroom Climate and 44 % teachers have created Negative Socio-emotional Classroom Climate. Percentage of teachers creating Positive Socio-emotional Classroom Climate is higher than that of creating Negative Socio-emotional Classroom Climate.

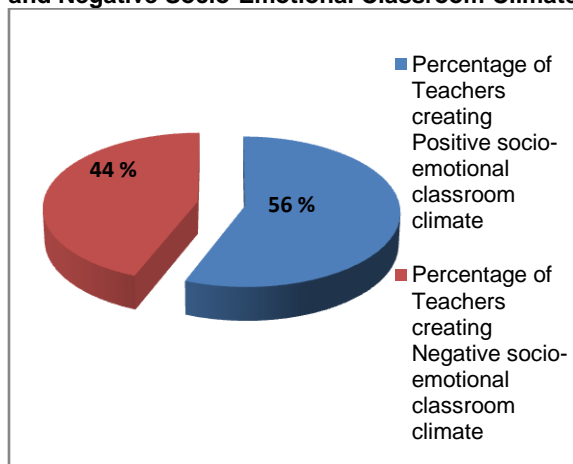
13 Male and 18 Female teachers teaching Science subjects were able to create Positive Socio-emotional Classroom Climate whereas 8 Male and 17 Female teachers teaching Non-Science subjects created Positive Socio-emotional Classroom Climate.

11 Male and 7 Female teachers teaching Science subjects whereas 9 Male and 17 Female teachers teaching non- Science subjects have created Negative Socio-emotional Classroom Climate.

This can be concluded that more teachers are able to create Positive socio-emotional class-room climate rather creating Negative socio-emotional class-room climate.

Graphical presentation of percentage wise distribution of teachers creating Positive and Negative Socio-emotional Classroom Climate is given in Figure1

Figure 1: Graphical Presentation of Percentage Wise Distribution of Teachers Creating Positive and Negative Socio-Emotional Classroom Climate



Results of the study show that 56 % teachers were able to create Positive Socio-emotional Classroom Climate whereas 44 % teachers were creating Negative Socio-emotional Classroom Climate.

B. Analyzing Relationship Between Student’s Academic Achievement and Socio-Emotional Classroom Climate

In order to find degree of correlation between Student’s Academic Achievement and Socio-emotional Classroom Climate, Pearson’s product moment coefficient of correlation was calculated. Obtained value of Coefficient of Correlation between Student’s academic Achievements and Socio-emotional Classroom is given in table 2

Table -2

Coefficient of Correlation between Student’s Academic Achievement and Socio-emotional Classroom Climate

Coefficient of Correlation ‘r’	Level of significance
0.6178	Significant at 0.01 level

Table 2 indicates that value of coefficient of correlation between Student’s Academic Achievement and Socio-emotional Classroom Climate is significant, therefore the null hypothesis H_0 , that ‘there will be no significant correlation between Student’s Academic Achievement and Socio-emotional Classroom Climate’ is rejected and its alternate hypothesis is accepted.

Interpretation of Results and Discussion

The warm categories namely one and eleven and the cool categories nine and nineteen deal with the socio-emotional aspects of the classroom. Use of the warm and cool categories was found to have an effect on the feelings and emotions of students. Warm and cool categories had been used for the situations that obviously involved the feelings or emotions of students either positively or negatively. Some of the teachers have been observed predominantly warm, whereas some have been found cool. Acceptance of students’ idea or contribution was found to be directed towards their behavior and affected their feelings and emotions indirectly, leaving an indirect influence on Socio-emotional Classroom Climate.

It has been observed that the teachers, who were able to create Positive Socio-emotional Classroom Climate, entered the class with a pleasant smile on their face and extended warm wishes to the class and students reciprocated with same enthusiasm.

On the other hand Negative Socio-emotional Classroom Climate was dominated by directing, correcting cooling and formalizing behavior categories (7, 17, 8, 18, 9 and 19).

Teachers who have created Negative Socio-emotional Classroom Climate cooled and formalized the climate. They made statements, intended to modify the behavior of students from an inappropriate to an appropriate pattern that often had created certain amount of tension by exercising authority rejecting or criticizing the opinion or judgment of another. They also have been found to use sarcasm, ridiculed or alienation of student from the group. The findings were in favour of findings of Jayanthi (2005). Education Commission (1964-66) remarked “A teacher is one who possesses a vivid awareness of his mission. He not only loves his subject, but also loves whom he teaches.”

Second objective of the study was to analyze the relationship between student’s academic achievement and Socio-emotional classroom climate. Results show high Positive correlation between student’s academic achievement and Socio-emotional Classroom Climate. Marked relationship has been observed between the two.

Conclusions

On the basis of obtained results following conclusions are drawn:

More teachers were able to create Positive socio-emotional class-room climate rather creating Negative socio-emotional class-room climate Teachers creating Positive Socio-emotional Classroom Climate were having warm attitude, accepted feelings and ideas of students, gave opportunity to students to initiate and released tension. Whereas teachers creating Negative Socio-emotional Classroom Climate have been observed to be cooling and formalizing climate, shown authority and direct behavior.

Socio-emotional class room climate has a positive impact on student’s academic achievement,

therefore there is a need to sensitize teachers towards socio-emotional class room climate.

Educational Implications of the Findings

It is worthwhile to offer certain suggestions in the light of findings of the study conducted. In the present study Socio-emotional Classroom Climate has been analyzed, Positive and Negative indicators of Socio-emotional Classroom Climate are analyzed. Since a positive correlation has been obtained between the Student's Academic Achievement and Socio-emotional classroom climate, there is a need that teachers should be equipped with the skills required to create Positive Socio-emotional Classroom Climate.

1. Skills related to create Positive Socio-emotional Classroom Climate should be given due emphasis in teacher education program.
2. Integration of theory and practice is necessary.
3. In-service programs for teachers should be organized.
4. Effective arrangement of feedback and motivation is required.

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