Chapter - 6

SUMMARY

Introduction

Measuring achievement is a major part of the learning process and informs educators of student talent and progress toward educational goals. Today’s modern society expects each one to be a high achiever. It has become an indicator of a child’s future. The world is rapidly changing and the “modern society expects everyone to be a high achiever” (Daulta, 2008). However, “success in any meaningful endeavor is marked by a history of high expectations that provide the challenge and inspiration necessary to press the individual to his/her highest level of performance” (Ozturk & Debelak, 2005) and no matter what the obstacles are, everyone is encouraged to succeed because those who succeed are valued and considered important by society members.

According to Steinberger (1993) “Academic achievement generally refers to the level of success attained in some specific or general area concerning scholastic or academic work. Achievement encompasses the student’s ability and performance. It is a multidimensional and it is intricately related to human growth and cognitive, emotional, social and physical development, it reflects the whole child; it is not related to a single instance, but occurs across time and levels, through a student's life in public school and on into post-secondary years and working life”. Academic achievement is a component of the wider term educational growth. It is unique, prime and perennial responsibility of an educational institution established by a society to promote a wholesome academic growth and development of the child. Achievement means the extent to which learner is profiting from instructions in a given area of learning. It is the outcome of general and specific learning experience. In other words, academic achievement may be defined as the competence students actually show in school subjects in whom they have received instruction (Sing, 2012). The world is becoming more and more competitive; quality of performance has become the key factor for personal progress. Parents desire that their children climb the ladder of performance to as high a level as possible. This desire for a
high level of achievement puts a lot of pressure on students, teachers and schools and in general the education system itself. In fact, it appears as if the whole system of education revolves round the academic achievement of students, though various other outcomes are also expected from the system thus a lot of time and effort of the schools are used for helping students to achieve better in their scholastic endeavors. The importance of scholastic and academic achievement has raised important questions for educational researchers. What factors promote achievement in students? How far do the different factors contribute towards academic achievement (Ramaswamy, 1990).

Factors affecting academic achievement of the students can be grouped into three main categories i.e., personal or individual factor, school factor and socio-cultural factor. Personal factor includes intelligence, motivation, self-concept, study habit, anxiety, interest, level of aspiration, as the determinants of academic achievement; among which intelligence, motivation, study habit and anxiety acquire relevance. School factor includes all the variables directly connected with school i.e. school environment and classroom environment, teacher education, student-teacher relationship, teaching method; etc. In the present study classroom environment and its various dimensions were taken as predictor of academic achievement. Socio-cultural factors include socio-economic status, educational level of parents, income of the family, occupation of the father, occupation of the mother; etc. Keeping in view all the factors that affect student’s academic achievement, present study emphasis on classroom environment as correlates of academic achievement.

Classroom environment has become an important area for educational research because most learning takes place there. The importance of the classroom learning environment has been increasingly recognized internationally over the past 50 years. According to Wilson (1996) classroom learning environment is a place where learners and teachers interact with each other and use a variety of tools and information resources in their pursuit of learning activities. Research in education that focuses on classroom and school-level learning environments has produced promising findings leading to an enhancement of the teaching and learning process. Classroom environment is seen as a major determinant of classroom behavior and learning. Understanding how to establish
and maintain a positive classroom climate is seen as basic to improving schools. The classroom is the basic unit of organization of the educational system. By continuing to increase the knowledge of the interactions that occur within the classroom, the quality of education can be improved with understanding of students’ development, and their perception about learning environment.

Classroom environment encompasses a broad range of educational concepts, including the physical setting, the psychological environment created through social contexts, and numerous instructional components related to teacher characteristics and behaviors. How can we organize the environment in the school and classroom so that such interactions support and enhance both teaching and learning, and where children feel safe, happy and wanted, and which teachers find meaningful and professionally satisfying? Yet not enough attention is paid to the importance of classroom environment for learning. Often classrooms are overcrowded, with no alternative spaces to learn, nor are they attractive, inviting or sensitive towards children’s needs. The learning environment has a big influence on student outcomes and plays an important role in improving the efficiency of learning in all levels of classrooms. Studies consistently have shown evidence of relations between student perceptions of their classroom learning environment and their cognitive and affective outcomes. Students learn better when they perceive their classroom environment positively. Keeping in view the importance of classroom environment in relation to academic achievement of the rural and urban students. The present study aimed to investigate the relationship between classroom environment along with its various sub dimensions, locale and sex with academic achievement. The literature review clearly indicates that there is a greater need for emphasis on the classroom environment that may enhance academic achievement of students

**Problems and Hypotheses**

The first problem of the study was to investigate the relationship of academic achievement to classroom environment along with its various sub dimensions i.e., involvement, affiliation, teacher support, task orientation, competition, order and
organization, rule clarity, teacher control and innovation). It was hypothesized that classroom environment (along with its various dimensions i.e. involvement, affiliation, teacher support, task orientation, competition, order and organization, rule clarity, teacher control and innovation,) would contribute significantly to academic achievement of the student.

The second problem of the study was to see the role of locale to determine the academic achievement of the student in relation to various sub dimensions of classroom environment. It was hypothesized that locale would predict significantly to academic achievement of the student in relation to various dimensions of classroom environment namely, involvement, affiliation teacher support, task orientation, competition, order and organization, rule clarity, teacher control and innovation.

Another problem of the present study was to see the role of sex to determine academic achievement of the students in relation to various dimensions of classroom environment namely involvement, affiliation teacher support, task orientation, competition, order and organization, rule clarity, teacher control and innovation. It was hypothesized that sex would predict significantly to academic achievement of the student in relation to various dimensions of classroom environment.

Sample

Initially a larger number of students studying class X of different higher secondary State government schools of Chhattisgarh region were randomly selected, out of which 941 subjects were retained as final sample. In the present study the sample were selected from two different locales i.e. rural and urban. The age range of the subjects was 15-17 years.
Measures

Classroom Environment Scale: To assess classroom environment, classroom environment scale CES constructed and standardized by Moos and Trickett (1974), adaptation and standardization to suit the Indian conditions in Hindi Joshi and Vyas (1987) was used. CES scale has four dimensions comprising of nine subscales which reflect a conceptualization of the relationships among them. The four Dimensions and the nine sub-dimensions are as follows:

Relationship Dimension: Measures the extent to which students have attentive interest in class activities and participated in discussion do additional work on their own and enjoy the class is considered. The nature and intensity of personal relationship within the environment and the extent to which people are involved in the environment and support one another. This dimension includes Involvement, Affiliation, and Teacher support sub-dimensions.

1. Involvement (I): Involvement measures the extent to which student have attentive interest in the class activities and participate in discussion. The extent to which students do additional work on their own and enjoy the class is considered.

2. Affiliation (A): Affiliation assesses the level of friendship student feel for each other i.e., the extent to which they help each other with home work, get to know each other easily and working together.

3. Teacher Support (TS): Teacher Support measures the amount of help, concern and friendship the teacher directs toward the students.

Personal Development - The basic direction along which personal growth and self-enhancement tend to occur. Factors such as Task orientation and Competition were included in this dimension.
4. Task Orientation (TO): measure the extent to which it is important to complete the activities that have been planned.

5. Competition (C): Competition assesses the emphasis placed on student competing with each other for grades recognition.

**System maintenance** – The extent, to which the environment is orderly, clear in expectation, maintains control and is responsive to change. This dimension included factors such as order and organization, rule clarity and teacher control.

6. Order and Organization (O&O): Order & Organization Assesses the emphasis on student s behaving in an orderly and polite manner and on the overall organization of assignment and classroom activities. The degree to which students tend to remain calm and quite is considered.

7. Rule Clarity (RC): Assess the emphasis on establishing and following a clear set of rules and on students knowing what the consequences will be the extent to which the teacher is consistent in dealing with students who break rules.

8. Teacher control (TC): Measure how strict the teacher is in enforcing the rules and the severity of the punishment for rule infractions. The number of rules and the ease of students getting in trouble are considered.

**System change Dimension**

9. Innovation (Inn): Innovation measures how much student contributes to planning classroom activities and the amount of unusual and varying activities and assignments planned by the teacher. The extent to which the teacher attempts to use new technique and encourage creative thinking in the students is considered.

Classroom environment scale consist of 78 items which cover the almost all the important constitutes of its main dimension, i. e. Involvement, Affiliation, Teacher Support, Task Orientation, Competition, Order and Organization, Rule Clarity, Teacher Control and Innovation.
To assess academic achievement of the student, overall marks and marks obtained by the student in different subjects, viz- Hindi, English, Mathematics, Science, and Social Science in class 10th annual examination was used.

**Design**

The present study is co relational research employing type -s independent variable. The main objective of the study is to find out relationship of academic achievement with classroom environment along with its various sub dimensions, locale and sex. The predictors undertaken in the study are classroom environment along with its nine sub dimensions (i.e. involvement, affiliation, teacher support, task orientation, competition, order organization, rule clarity, teacher control and innovation), locale and sex. The criterion variable is academic achievement of the student. To fulfill the above mentioned objective Pearson s’ product moment coefficient of correlation and stepwise multiple regression analysis technique was applied.

**Procedure**-

After explaining the objectives of the research work permission was obtained from the principles of the selected schools to administer the questionnaires to the students of tenth standard. To establish a good rapport with the subject it was assured that their responses and identities would be strictly kept confidential and not disclose any where, Thus they were made independent to give their answer comfortably and honestly, whatever they felt. In this way subjects were encouraged to give their proper cooperation during the testing.

The classroom environment scale booklets were distributed to the subjects. The printed instructions were explained to the subjects. The subjects were seated in group settings. A response sheet was provided with each booklet for the subjects to mark their responses. The classroom where the test was administered was well organized and the seating arrangement was also made comfortable. After the completion of test booklets were also collected back. The participant students, principal and the staffs of the school were given thanks for their cooperation.
After having administered the test as per procedure laid down and collection of the answer sheets and booklets is to be completed. It must be noted that each item of every scale is on a five point scale of “4 to zero”, There are some negatively framed items for which the scoring is in reverse direction of scoring weightage, i.e. “zero to 4”. The total score of each sub scale has to be obtained by adding score obtained on each respective items of that scale. Thus, for each sub scale total score is obtained and interpreted.

After scoring, the data was organized and put for the statistical analysis. The data was analyzed with the help of appropriate statistical techniques, in order to verify the formulated hypotheses.

Results & Discussion

The findings of the present study showed that students academic achievement results were related in a positive direction with all sub scales of classroom environment namely, involvement, affiliation teacher support, task orientation, competition, order organization, rule clarity, teacher control and innovation. Results showed that among correlated variables to academic achievement affiliation has the highest correlation (r=.282) with academic achievement, after this task orientation, involvement rule clarity, teacher control, competition, order and organization, teacher support, and locale (ruralness) were respectively have significant positive correlation to academic achievement.

Results of stepwise multiple regression analysis for academic achievement showed that the model of regression analysis is significant, as the R square =.108 F= 28.401, p < .01 indicates the strength of model. It is observed that 10.8% variance of i.v. taken in total is contributed significantly in the variation of the criterion variable academic achievement. Affiliation, task orientation, teacher control dimension of classroom environment and locale emerged out to be significant predictors contributing significantly in the variation of criterion variable academic achievement whereas the other remaining variables i.e involvement, teacher support, competition, order and organization, rule clarity and innovation were found to be insignificant in explaining
variance of academic achievement. The beta coefficient of significant variables indicated that the affiliation dimension of classroom environment was the most important variable emerged out and explained alone 7.9% variation in student’s academic achievement. Affiliation assesses the level of friendship student feel for each other i.e. the extent to which they help each other with home work, get to know each other easily and working together. Task orientation was second significant variable with beta coefficient value .118 and it had explained 1.5% variation in the criterion variable. Task Orientation measure the extent to which it is important to complete the activities that have been planned.

The second problem of the study is to see the role of locale in academic achievement in relation to various dimensions of classroom environment. Results of multiple regression analysis showed that locale play significant role in determining the academic achievement, to find out the best predictors in rural area for academic achievement of the students the model of regression analysis for academic achievement of rural students was found to be significant as the R = .386, R Square = .149, F = 32.279, P < .000 which indicated significant strength of the model. Model shows that the significant variables included in the present analysis contributed to 14.9% of variance in determining the academic achievement of the rural students. The affiliation, task orientation and competition, dimension of classroom environment emerge out to be significant predictors contributing significantly in the variation of criterion variable. In urban area students the model of regression analysis showed multiple co relational coefficient for urban students was found to be .301 which was significant with (F = 12.786, p < .01) R square.091 which indicated that significant variables included in the present analysis contributed to 9.1% of variance in determining the achievement of the students. In urban area involvement, teacher control sub dimension of classroom environment and sex emerge out to be significant predictors contributing significantly in the variation of criterion variable.

Another problem of the present study was to see the role of sex in academic achievement. Results of multiple regression analysis showed that sex play significant role to determine academic achievement in urban area, to find out the best predictors in male and female students for academic achievement. The separate stepwise multiple regression
analysis for academic achievement of male and female students was carried out. For male students, analysis of the data reveal that the multiple co relational co-efficient was found to be .361 which was highly significant \( (F = 16.73, P < .01) \) its R square was .130, which indicated that the significant variables included in the present analysis contributed 13.9% variance in the achievement scores of the students. The teacher support, affiliation, competition dimension of classroom environment and locale emerge out to be significant predictors contributing significantly in the variation of criterion variable academic achievement. Whereas remaining variables were found to be insignificant in explaining variance of achievement scores of the students.

For the female students, analysis of the data showed that the multiple co relational co-efficient was found to be .383 which was highly significant \( (F = 28.304, P < .01) \) its R square was .147, which indicated that the significant variables included in the present analysis contributed 14.7% variance in the achievement scores of the students. The task orientation, affiliation, and involvement dimension of classroom environment emerge out to be the significant predictors contributing significantly in the variation of criterion variable academic achievement. Whereas remaining variables were found to be insignificant in explaining variance of achievement scores of the students. Beta coefficient of significant variables indicated that the task orientation was the most important variables emerged out with a value of .149 and it had explained alone 11.0% of variance of achievement.

**Results regarding subject wise achievement in relation to classroom environment, locale and sex**

To investigate the role of different dimensions of classroom environment for subject wise achievement of the students, subject wise regression analysis was carried out. Findings revealed that in Chhattisgarh Region teacher support emerged out as most significant factor for achievement of all subjects. Results also showed that teacher control dimension was important for Mathematics, Science and Social Science achievements. Role of sex was found to be significant for Hindi and Sanskrit subjects while role of locale was found to be significant for English, Math, Science and Social Science subjects.
It showed that in government school of Chhattisgarh achievement of Hindi and Sanskrit Subjects increased with femininity and achievement of English, Mathematics, Science Social Science was more associated with locale/ ruralness.

Results showed that in rural area teacher support was the most important factor emerged out as significant predictor for predicting subject wise achievements. Affiliation was the second important factor emerged out as significant predictor for English, Sanskrit, Science and Social Science achievement. Competition dimension was found to be significant predictor for Mathematics and English Achievement. A Result also showed that for Mathematics subject femininity has the negative role.

For male student teacher support was the most important factor and it had emerged out as significant predictor for subject wise achievement. Affiliation was the second important variable which play important role for subjects such as Sanskrit, Mathematics Science and Social Science and explained significant variance in these subjects. Competition emerged out as significant predictor for Mathematics, English and science subject. Result also shows that locale has the significant role for predicting English Mathematics, Science and Social Science achievement of male students. This shows that male students of rural area tend to achieve higher in English, Mathematics, Science and Social Science while trend was opposite for urban male students. In female student’s affiliation and Task Orientation dimension were more important. Affiliation dimension was significant for predicting English, math, science and Social Science achievement while task orientation dimension was significant for Sanskrit and math subjects.

**Conclusion**

The purpose of the present study was to examine the role of classroom environment along with its various dimensions, locale and sex on academic achievement of the students. The findings of correlation showed that there is a statistically significant positive correlation with all dimensions of classroom environment namely involvement, affiliation teacher support, task orientation, competition, order and organization, rule clarity, teacher control and innovation. Findings of stepwise regression analysis pointed
out that in Chhattisgarh region teacher support, affiliation, task orientation, teacher control and locale were the important factors contribute academic achievement significantly.

The following conclusions were drawn from the study regarding academic achievement in relation to classroom environment, locale, sex.

**Conclusions regarding over all academic achievement**-
- Academic achievement of the student increased with increases in affiliation.
- Academic achievement of the student increased with increases in task orientation.
- Academic achievement of the student increased with increases in teacher control.
- Academic achievement of the student increased in the subjects being from rural area.

**Conclusions regarding subject wise academic achievement**-
- Academic achievement of all subjects i.e. Hindi, English, Sanskrit, Mathematics, Science and Social Science increased with increase in Affiliation.
- Academic achievement of all subjects i.e. Hindi, English, Sanskrit, Mathematics, Science and Social Science increased with increase in Teacher Support.
- Academic achievement of Hindi, Mathematics, Science and Social Science increased with increase in teacher control.
- Academic achievement of Sanskrit increased with increase in teacher support and task orientation.
- Academic achievement of Hindi and Sanskrit increased with increase in femininity.
- Academic achievement of English, Mathematics, Science and social science increased with increase in ruralness

**Conclusions regarding overall Academic achievement of rural students.**
• Academic achievement of the student increased with increase in affiliation.
• Academic achievement of the student increased with increases in task orientation.
• Academic achievement of the student increased with increases in competition.

Conclusions regarding subject wise achievement of rural students
• Academic achievement of all subjects i.e. Hindi, English, Sanskrit, Mathematics, Science and Social Science increased with increase in Teacher Support.
• Academic achievement of all subjects i.e. English, Sanskrit, Science and Social Science increased with increase in affiliation.
• Academic achievement of English, and Mathematics increased with increases in competition.
• Academic achievement of Mathematics decreased with increase in femininity.

Conclusions regarding over all Academic achievement of urban student.
• Academic achievement of the student increased with increases in involvement.
• Academic achievement of the student increased with increases in teacher control.
• Academic achievement of the student increased in the subjects being females.

Conclusions regarding subject wise achievement of urban students
• Academic achievement of Hindi, English, Sanskrit and social science increased with increases in involvement.
• Academic achievement of Hindi, English, Mathematics, Science and Social Science increased with increases in teacher control.
• Academic achievement of Hindi increased with increases in femininity.
• Academic achievement of Mathematics increased with increases in affiliation.

Conclusions regarding over all Academic achievement of Male students
• Academic achievement of the student increased with increases in teacher support.
• Academic achievement of the student increased in the subjects being from rural area.
• Academic achievement of the student increased with increases in affiliation.
• Academic achievement of the student increased with increases in competition.

Conclusions regarding subject wise Academic achievement of male students
• Academic achievement of all subjects i.e. Hindi, English, Sanskrit, Mathematics, Science and Social Science increased with increase in Teacher Support.
• Academic achievement of Sanskrit, Mathematics, Science and Social Science increased with increase in affiliation.
• Academic achievement, English, Mathematics, Science and Social Science increased with increase in competition.

Conclusion regarding over all Academic achievement of female students
• Academic achievement of the student increased with increases in task orientation.
• Academic achievement of the student increased with increases in affiliation.
• Academic achievement of the student increased with increases in involvement.

Conclusion regarding over all Academic Achievement of female students
• Academic achievement of English, Mathematics, Science and Social Science increased with increases in affiliation.
- Academic achievement of Sanskrit and Mathematics increased with increases in task orientation.
- Academic achievement of Hindi increased with increases in involvement.

Implications and Suggestions

Findings of this study may have some implications in educational sector. From the above findings it may be said that teachers and educational administrators may benefit from an increased awareness of the classroom psychosocial environment. Teacher support, affiliation, task orientation and involvement factors may increase the academic achievement of the students. In sum, these findings could provide useful information for those who wish to develop educational programs to improve students' academic achievement.

The study was confined only to Chhattisgarh state, so it cannot be claimed to have comprehensiveness. It is therefore suggested that study may be conducted on other states also to establish the results rationally.

The study was conducted only on class tenth students of the Government schools. It may be conducted on students of Private schools, Technical Institutions and University.

The present study was confined to classroom environment as correlates of academic achievement, more psychosocial correlates should be considered.

Further research is needed to determine relationship between the actual and the preferred classroom climate by the students in addition to quantitative methods, qualitative approaches should be implemented to determine classroom environment perceptions. This study may have been more extensive if both quantitative and qualitative measures of climate had been incorporated. Longitudinal research should be conducted to determine students’ perceptions of classroom climate, perhaps a snapshot of classroom climate early in the year does not offer enough accurate data to compare with achievement test scores.