CHAPTER 6  
MAIN FINDINGS, CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

In the previous chapter discussions of result have been given. Based on the results, findings were thrashed out. Keeping in view the major findings, implications of the study have been looked into. But these findings and implications do not in shape in all corners of the study, so the suggestions have been given for further research. In the light of the interpretation of the results of the present investigation, the following are the main findings. In the end suggestions for further research are also given.

6.1 MAIN FINDINGS

The statistical data of the study reveals the following main findings:

6.1.1 Findings Based on Coefficient of Correlations

1. There exists significant and positive relationship between academic achievement and metacognition of 10+1 students.
2. There exists significant and negative but low relationship between academic achievement and self-confidence of 10+1 students.
3. There exists significant and positive relationship between academic achievement and family environment of 10+1 students.
4. There exists significant and positive relationship between academic achievement and relationship dimensions of family environment of 10+1 students.
5. There exists significant and positive relationship between academic achievement and personal growth dimensions of family environment of 10+1 students.
6. There exists significant and positive relationship between academic achievement and system maintenance dimensions of family environment of 10+1 students.

6.1.2 Findings Based on Factor Differences among Different Variables

(A) Comparison of Male-Female, Rural-Urban and Government-Private School students on Academic Achievement.

1. There exists significant difference between academic achievement scores of male and female 10+1 students. Both have high academic achievement scores but the
academic achievement of female students is found to be higher than those of the male students.

2. There exists no significant difference between academic achievement scores of rural and urban 10+1 students. Both rural and urban students have high academic achievement scores.

3. There exists significant mean difference between academic achievement scores of students studying in government and private schools. Academic achievement of students studying in private schools is higher than that of students studying in government schools.

(B) Comparison of Male-Female, Rural-Urban and Government-Private School students on Metacognition.

1. There exists significant difference between mean scores of male and female 10+1 students on metacognition. Both male and female students have average score on metacognition but mean scores of female students are higher than those of male students. This indicates that female students have higher metacognition than their male counterparts.

2. There exists significant difference between metacognition mean scores of rural and urban 10+1 students. Both the groups fall in the average level of metacognition but rural students possess higher score on metacognition as compared to urban students.

3. There exists no significant difference between students studying in government and private schools on metacognition. The mean scores on metacognition of students studying in government and private schools are average.

(C) Comparison of Male-Female, Rural-Urban and Government-Private School students on Self-Confidence.

1. There exists significant difference between mean scores of male and female 10+1 students on self-confidence. Both male and female students have average level of self-confidence but male students have higher self-confidence than female students.

2. There exists no significant difference between mean scores of rural and urban students on self-confidence. The mean score of urban students is slightly higher
than the mean score of rural students but the difference is not significant, which shows that rural and urban students do not differ in their self-confidence both have average level of self-confidence.

3. There exists significant difference between students studying in government and private schools on self confidence. Students studying in private schools are more self confident as compared to students studying in government schools.

(D) **Comparison of Male-Female, Rural-Urban and Government-Private School students on Family Environment.**

1. There exists significant difference between mean scores of male and female 10+1 students on family environment. Both male and female students have average score on family environment but mean scores of female students are higher than those of male students. This indicates that female students have favourable family environment than male students.

2. There exists significant mean difference between family environment of rural and urban students. When the results are compared in the context of the mean scores, it was found that mean scores of urban students is lower than rural students. It indicates that rural students have better family environment than urban students.

3. There exists no significant difference between students studying in government and private schools on family environment.

(E) **Comparison of Male-Female, Rural-Urban and Government-Private School students on Relationship Dimensions of Family Environment.**

1. There exists significant difference between mean scores of male and female 10+1 students on relationship dimensions of family environment. Both male and female students have average score on subscales i.e. cohesion, expressiveness, conflict; and acceptance and caring of relationship dimensions. Significant difference was found between male and female 10+1 students on cohesion. The mean value of females on cohesion is higher than that of males. No significant difference was found between male and female students on the factor expressiveness and conflict. Significant difference was found between male and female students on the factor acceptance and caring. The mean value of females on factor acceptance and caring is higher than that of males.
2. There exists significant difference between mean scores of rural and urban 10+1 students on relationship dimensions of family environment. Both rural and urban students have average score on subscales cohesion, expressiveness, conflict; and acceptance and caring of relationship dimensions. Significant difference was found between rural and urban students on all the subscales. The mean value of rural students on the subscales cohesion, expressiveness, conflicts and acceptance and caring is higher than that of urban students.

3. There exists no significant difference between students studying in government and private schools on relationship dimensions of family environment. There exists significant difference between students studying in government and private schools on the subscales cohesion and expressiveness. Students studying in government schools are on higher side of both the subscales than students studying in private schools. No significant difference was found between students studying in government and private schools on the subscales conflict and acceptance and caring.

(F) **Comparison of Male-Female, Rural-Urban and Government-Private School students on Personal Growth Dimensions of Family Environment.**

1. There exists significant difference between mean scores of male and female 10+1 students on personal growth dimensions of family environment. Both male and female students have low score on the factors independence and average score on active recreational orientation. Significant difference was found between male and female students on independence. The mean value of females on the factor independence is higher than that of males. Significant difference was found between male and female students on the factor active recreational orientation. The mean value of females on factor active recreational orientation is higher than that of males.

2. There exists no significant difference between mean scores of rural and urban students on personal growth dimensions of family environment. Both rural and urban students have low score on the factors independence and average score on active recreational orientation. No Significant difference was found between rural and urban students on the subscale independence. Significant difference was
found between rural and urban students on the factor active recreational orientation. The mean value of rural students on factor active recreational orientation is higher than that of urban students.

3. There exists no significant difference between students studying in government and private schools on personal growth dimensions of family environment. No significant difference was found between students studying in government and private schools on the subscales independence and active recreational orientation.

(G) **Comparison of Male-Female, Rural-Urban and Government-Private School students on System Maintenance Dimensions of Family Environment.**

1. There exists significant difference between mean scores of male and female 10+1 students on system maintenance dimensions of family environment. Significant difference was found between male and female students on subscale organization. The mean value of females on organization is higher than that of males. Significant difference was found between male and female students on the subscale control. The mean value of females on subscale control is higher than that of males.

2. There exists no significant difference between mean scores of rural and urban 10+1 students on system maintenance dimensions of family environment. No significant difference was found between rural and urban students on subscale organization. Significant difference was found between rural and urban students on the subscale control. The mean value of rural students on subscale control is higher than that of urban students which shows high degree of limit setting within the family of rural students.

3. There exists no significant difference between students studying in government and private schools on system maintenance dimensions of family environment. No significant difference was found between students studying in government and private schools on the subscales organization and control.
6.1.3 Findings Based on Interactional Analysis among Different Factors

(A) Effect of Gender, Locale and Type of School on Academic Achievement

1. The two-way interaction effect between gender and locale is significant. Urban female students have highest mean score on academic achievement and rural male students have lowest mean score on academic achievement.

2. The two-way interaction between gender and type of school is significant. Female students studying in private schools have highest mean score on academic achievement and male students studying in government schools have the lowest mean score on academic achievement.

3. There exists no significant interactional effect between locale and type of school with respect to academic achievement.

4. The three-way interaction among gender, locale and type of school is significant with respect to academic achievement. Female urban students studying in private schools have highest mean academic achievement and male rural students studying in government schools have the lowest mean academic achievement.

(B) Effect of Gender, Locale and Type of School on Metacognition

1. The two-way interaction effect between gender and locale is significant. Female rural students have highest mean metacognition and female urban students have the lowest mean metacognition.

2. The two-way interaction effect between gender and type of school is significant. Female students studying in private schools have highest mean score on metacognition and male students studying in private schools have the lowest mean score on metacognition.

3. There exists no significant interaction effect between locale and type of school with respect to metacognition.

4. The three-way interaction among gender, locale and type of school is not significant with respect to metacognition.

(C) Effect of Gender, Locale and Type of School on Self Confidence

1. There exists no significant interaction effect between gender and locale, gender and type of school and locale and type of school on self-confidence. Also, there
exists no significant interaction among gender, locale and type of school with respect to self-confidence.

(D) Effect of Gender, Locale and Type of School on Family Environment
1. The two-way interaction effect between gender and locale on family environment is significant. Female rural students have highest mean score on family environment and urban male students have the lowest mean score on family environment.
2. The two-way interaction effect between gender and type of school is significant. Female students studying in private schools have highest mean score on family environment and male students studying in private schools have the lowest mean score on family environment.
3. There exists no significant interaction effect between locale and type of school with respect to family environment.
4. The three-way interaction among gender, locale and type of school is not significant with respect to family environment.

(E) Effect of Gender, Locale and Type of School on Relationship Dimensions of Family Environment
1. There exists no significant interaction effect between gender and locale with respect to relationship dimensions of family environment.
2. The two-way interaction effect between gender and type of school is significant. Female students studying in private schools have highest mean score on relationship dimensions of family environment and male students studying in private schools have the lowest mean score on relationship dimensions of family environment.
3. There exists no significant interaction effect between locale and type of school with respect to relationship dimensions of family environment.
4. The three-way interaction among gender, locale and type of school is not significant with respect to relationship dimensions of family environment.
(F) Effect of Gender, Locale and Type of School on Personal Growth Dimensions of Family Environment

1. There exists no significant interaction effect between gender and locale, gender and type of school and locale and type of school on Personal Growth Dimensions of family environment. Also, there exists no significant interaction among gender, locale and type of school with respect to this dimension.

(G) Effect of Gender, Locale and Type of School on System Maintenance Dimensions of Family Environment

1. The two-way interaction effect between gender and locale is significant with respect to system maintenance dimensions of family environment. On this dimension rural female students have highest mean score and rural male students have lowest mean score.

2. The two-way interaction effect between gender and type of school is significant with respect to system maintenance dimensions of family environment. Female students studying in private students have highest mean score and male students studying in private schools have lowest mean score on system maintenance dimensions of family environment.

3. There exists no significant interaction effect between locale and type of school with respect to system maintenance dimensions of family environment.

4. The three-way interaction among gender, locale and type of school is not significant with respect to system maintenance dimensions of family environment.

6.2 CONCLUSIONS

By way of inference, 10+1 students of Haryana have been found to be high in their academic achievement but average in their metacognition, self-confidence and family environment. It may be concluded from the findings of the present study that metacognition, self-confidence and family environment are significantly related with the academic achievement of the students. From the factor differences among different variables we can conclude that female students perform better in their academic achievement, metacognition, and family environment, but male students are more self-confident. Rural students are better in metacognition and family environment as compared to urban counterparts but no significant differences were observed on academic
achievement and self-confidence. Also, in academic achievement and self-confidence private school students surpass government school students but no significant differences were observed between government and private school students on metacognition and family environment. Female urban students studying in private schools have highest mean academic achievement and male rural students studying in government schools have the lowest mean academic achievement. No significant three-way interactional effect of gender, locale and type of school was observed with metacognition, self-confidence, family environment and dimensions of family environment.

6.3 IMPLICATIONS OF THE STUDY

The purpose of educational research is not only to contribute new facts to the field of education for the sake of knowledge alone but it should yield some recommendations for the improvement in educational process and practices. The results of the present investigation reaffirmed the importance of the variables viz. Metacognition, Self-confidence and Family Environment in the determination of Academic Achievement. Thus, the present study has certain implications of major importance. This study may be of immense use for the prediction of academic achievement of pupils. The knowledge of the variables and factors which promote academic achievement and which are hindering it is of great importance in developing curriculum and designing educational programs to suit the needs of the students with varied backgrounds. The study of these variables assumes special significance in view of their implications on the part of the classroom teachers.

In light of the above, the findings of the present investigation were examined and the following implications are traced out:

(i) The study has established significant relationship of academic achievement with metacognition, self-confidence and family environment. The findings of the study have implications for the teachers who can develop a proper teaching learning environment. An awareness of the know-how of the metacognitive skills can play a vital role through turning actual classroom situations into a metacognitive way. The in-service training can include effective training in developing metacognitive skills for teacher-students during pre-service training. Teachers play critical role in making students become aware of what makes a
skillful learner, how s/he can take the responsibility of his/her learning, and learn the knowledge with well developed understanding.

(ii) The students can also be benefited from the study. Those students, who are aware of their own cognitions or thoughts processes, will be more responsible of their own learning processes. The students can make conscious decision about their role as a learner, about their existing knowledge on the course they are currently undergoing and what they want to learn about from that class.

(iii) Guidance workers can encourage teachers to initiate and develop activities that are sensitive to the diversity of students which can help in fostering healthy traits among the students. They can also play a role in enhancing the self confidence of students, develop resilience among them and allow them to refocus on an ability to try again finding alternative means to accomplish the goals.

(iv) The present study also has implications for parent community. This study can help parents to become aware about various home environmental factors effecting overall academic achievement of children. The parents can investigate the reasons for low performance of students and encourage them to improve it. They can also encourage their children to use different thinking strategies in problem solving. It has also been found that there exists significant difference between male and female students’ Academic Achievement. Female students surpass male students in this study. Therefore, parents must find out the causes of poor performance of boys and should encourage them to improve their performance.

(v) Policy makers can also make use of the findings of the present study. From findings of the present study we can say that students can learn better by using metacognitive strategies, hence there is a need to change the teaching methods and strategies adopted in higher secondary level. Text books should be designed by raising meaningful and interesting questions and emphasizing applications and problem solving which can help students to develop self-confidence among them and hence academic achievement. Metacognitive strategies should be incorporated in text-book. The existing curricula will not be able to cope with
the present needs of the students. So the curricula must be modified accordingly.

To summarize, the present research presents a predictive instrument of academic achievement that can be utilized by parents, teachers, policy makers and guidance personnel for substantially enhancing the academic performance of students, especially for those studying in senior secondary schools.

6.4 SUGGESTIONS FOR FURTHER RESEARCH

Academic achievement is the central concept in the area of education. Therefore, immense importance is placed on academic achievement and the factors involved therein. The present study has thrown some light and insight into the relationship between metacognition, self confidence, family environment and academic achievement of senior secondary school. Some broad suggestions on the lines on which further research studies can be conducted are given below:

(i) The present investigation was carried out on 800 students, studying in class 10+1 of the senior secondary schools of HBSE, Haryana. Similar study can be carried out on a larger sample to get better and more authentic results.

(ii) A similar study can be carried out upon the students of different educational levels and different age groups.

(iii) A comparative study of similar type may be carried out in different states to study certain regional variations.

(iv) The variables used in this study viz. metacognition, self-confidence and family environment, can be studied in relation to other variables like creativity, aspiration levels, personality etc.

(v) Apart from metacognition, self-confidence and family environment other variables like intelligence, creativity, study habits, mental health, socio-economic status, emotional intelligence, school environment etc. which affects academic achievement can be explored in further research.

(vi) Similar study can be carried out stream-wise.
(vii) Standardized tool may be developed to measure academic achievement of students.

(viii) Different schools as Kendriya Vidyalayas, Navodaya Vidyalayas can be taken for comparative study with same variables.