CHAPTER V

GENERAL CONCLUSIONS, EDUCATIONAL IMPLICATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

5.1 GENERAL CONCLUSIONS

On the basis of analysis of data and interpretation of results, following conclusions were drawn:

1. Almost negligible (0.397%) high school students and very few (7.23%) students possessed very high and high level of emotional intelligence respectively. About one half (47.74%) high school students possessed moderate level of emotional intelligence. On the other extreme, nearly 41.78% and few high school students (2.86%) possessed low and very low level of emotional intelligence respectively.

2. Few high school students (11.52%) possessed extremely high academic anxiety and 22.64% high school students were found to have high level of academic anxiety. About one fourth (24.78%) high school students possessed moderate academic anxiety level. On the other hand, 24.31% and 16.76% high school students possessed low and very low level of academic anxiety respectively.

3. Almost negligible high school students (1.91%) have shown very high academic achievement and only few students (13.89%) reflected high academic achievement. Large majority of high school students (68.38%) possessed average academic achievement. On the other extreme, few high school students (15.56%) and almost negligible number of students (0.32%) have shown low and very low academic achievement respectively.

4. There existed significant difference among high school students in terms of their brain hemispheric functioning. It was concluded that large majority of high school students (74.42%) used right
hemisphere of their brain to a greater extent for processing different sorts of information and only few students made greater use of left hemisphere of their brain (14.85%). Integrated hemispheric functioning for processing different types of information was possessed by 10.73% students.

5. There existed no significant gender difference in intra-personal awareness, inter-personal awareness, intra-personal management and inter-personal management components of emotional intelligence as well as on overall emotional intelligence.

6(i). High school students possessing different styles of learning and thinking differed significantly from each other on intra-personal awareness component of emotional intelligence. The weighted mean scores for intra-personal awareness component of emotional intelligence of high school students with right hemispheric dominance or integrated hemispheric functioning were found to be 14.94 and 14.64 respectively which were significantly higher than the weighted mean of intra-personal awareness score (14.08) of students possessing left hemispheric dominance. However, no significant difference in intra-personal awareness component of emotional intelligence was witnessed among high school students possessing right hemispheric dominance and integrated hemispheric functioning.

6(ii). High school students possessing different styles of learning and thinking i.e. right hemispheric dominance, left hemispheric dominance and integrated hemispheric functioning did not differ significantly on inter-personal awareness, intra-personal management and inter-personal management components of emotional intelligence.

6(iii). High school students possessing different styles of learning and thinking differed significantly from each other with respect to overall emotional intelligence. The weighted mean scores of overall emotional intelligence of high school students possessing
right hemispheric dominance or integrated hemispheric functioning were found to be 61.85 and 62.79 respectively which were significantly higher than the overall weighted means of emotional intelligence of students with left hemispheric dominance (60.03). However, no significant difference was observed in overall emotional intelligence among high school students possessing right hemispheric dominance and integrated hemispheric functioning.

7. Gender and styles of learning and thinking did not interact significantly with regard to intra-personal awareness, inter-personal awareness, intra-personal management and inter-personal management components of emotional intelligence as well as on overall emotional intelligence.

8. High school students belonging to different social categories i.e. general, scheduled caste and other backward classes did not differ significantly on intra-personal awareness, inter-personal awareness, intra-personal management and inter-personal management components of emotional intelligence as well as on overall emotional intelligence.

9. Social category and styles of learning and thinking did not interact significantly with regard to intra-personal awareness, inter-personal awareness, intra-personal management and inter-personal management components of emotional intelligence as well as on overall emotional intelligence.

10. There existed no significant difference in academic anxiety of high school boys and girls.

11. There existed no significant differences in academic anxiety of high school students possessing different styles of learning and thinking i.e. right hemispheric dominance, left hemispheric dominance and integrated hemispheric functioning.
12. Gender and styles of learning and thinking did not interact significantly with regard to academic anxiety of high school students.

13. There existed no significant differences in academic anxiety of high school students belonging to different social categories i.e. general, scheduled caste and other backward classes.

14. Social category and styles of learning and thinking did not interact significantly with regard to academic anxiety of high school students.

15. High school boys and girls differed significantly from each other with respect to their academic achievement. Girls were found to have significantly higher mean of academic achievement scores (435.79) than boys (414.65).

16. There existed no significant differences in academic achievement of high school students possessing different styles of learning and thinking i.e. right hemispheric dominance, left hemispheric dominance and integrated hemispheric functioning.

17. Gender and styles of learning and thinking did not interact significantly with regard to academic achievement of high school students.

18. High school students belonging to different social categories i.e. general, scheduled caste and other backward classes do not differ significantly from each other with respect to their academic achievement and they possessed almost similar level of academic achievement.

19. Social category and styles of learning and thinking did not interact significantly with regard to academic achievement of high school students.
5.2 EDUCATIONAL IMPLICATIONS

Every study has its utility or implications in some or other areas of education. The findings of present study have following implications for teachers, curriculum designers, educational administrators and policy making organizations:

1) The findings of the study revealed that about one half (47.74%) high school students were of moderate emotional intelligence level and 44.64% students possessed low emotional intelligence level. So, in order to improve the emotional intelligence of high school students, it is required that the students should be provided with adequate opportunities to interact with their fellows during various curricular and co-curricular activities in school campus. It may help them in understanding their own as well as others’ emotions and develop the ability to express their feelings. To improve the level of emotional intelligence of students, teachers as well as parents should try to promote feelings of belongingness, sharing, co-operation, adjustment and team spirit by organizing various group activities and providing opportunities to take their own responsibilities. Workshops, seminars, games, discussions, debates, NSS camps, NCC programmes, special classes of meditation and yoga should be organized by concerned school authorities as these activities serve as gateway for flourishing of emotions and energies of the individuals.

2) Although, there existed no significant gender-wise and social category-wise differences among high school students in different components of emotional intelligence, yet the parents and teachers can employ following strategies for creating a healthy environment at home and school for cultivating emotional intelligence among children:
   • Productive activities like NSS camps, project work, NCC programmes, social awareness campaign etc. should be
organized at school and home to develop sense of responsibility among students so that they can improve their capabilities in understanding their own as well as others’ emotions.

- The parents should keep a balanced check on television and movie viewing of their children. Media stories, movies, TV shows etc. containing lot of violence and cruelty should be avoided and parents and teachers should encourage children to read and view emotionally literate books, films etc. This will assist the children in developing positive attitude which will be beneficial for them to correctly perceive the feelings of both, in one self and others.

- In order to promote intra-personal management among students, school administrators and teachers should organize such programmes where students could work cooperatively to accomplish the assigned task and where maximum opportunities could be made available for improving inter-personal relationships. Such activities may include project works, campus beautification, public awareness programmes, celebration of days of national and international importance and socially useful productive work for the welfare of society etc.

- Group activities emphasizing team work should be encouraged that can help children to develop control over their emotions and to handle their relationships in an effective and efficient manner.

- Through observation, children acquire many characteristics of their role models. The teachers, parents and elders are role models to imitate for children during the initial stages of schooling. Hence, parents and teachers should behave in a good manner and reflect those behaviours in their daily routine activities that may be easily and willingly accepted and imbibed by the children.
• There should be provision of special classes and lectures on human relations in the school. A child psychologist or counsellor should be appointed in every school so that regular assessment of students’ socio-emotional behaviours and skills could be made. It will be helpful in gaining an insight into child’s emotional issues and delineating the strategies for resolving the same.

• For preventing emotional imbalance and maladjustment among students, praise, reinforcement and encouragement should be provided for good works of students publically. The students should be encouraged to develop the qualities of a good listener for understanding their own and others’ feelings. Criticism and punishment should be avoided as far as possible.

• Teachers and parents should adopt measures for proper development of social skills, communication skills and interpersonal relationships. They should devote more time and efforts for developing affective skills among students so that they can specifically learn the art of managing their own as well as others’ feelings and emotions.

• Teachers and parents must show recognition, affection, protection and devotion in hearing the child. They should help the children to have habits of regularity which may assist them to develop a positive attitude towards self.

• For improving emotional intelligence among students, it is of vital significance that teacher should also be emotionally intelligent. An emotionally intelligent teacher can emphasize on responsible behaviour on the part of his/her students by placing himself/ herself as a role model and through generalizing the classroom activities in a proper way. For this, emotional intelligence training workshops, orientation classes, career upliftment programmes and virtual classes can be organized to provide in-depth information about emotional
intelligence skills which can make the teachers more effective in understanding their pupils’ concerns, needs, abilities and feelings.

- The schools should emphasize on organization of those curricular, co-curricular and outreach activities which focus on various issues of social, national and international importance such as; social discrimination, child rights, human rights, women empowerment, environmental degradation, value crisis, extinction of animal species, conservation of natural resources etc. Such activities may help the students in becoming sensitive to other people and their needs and in imbibing an element of 'humanity' which is currently lacking in youngsters and youths of today.

3) Although, it was found that there existed no significant gender-wise and social category-wise differences in academic anxiety among high school students. However, the findings of the present study also pointed out that approximately one third (34.16%) high school students possessed high level of academic anxiety. In order to reduce the academic anxiety among students, the teachers should act as a guide and helper during the course of their studies. Moreover, the courses should be divided into smaller units and at the end of each unit, formative tests should be administered. This may prove to be helpful in reducing anxiety among students in various learning situations. The phobia about some subjects like Mathematics, Science, English etc. can be removed by developing positive attitude among students by sympathetic and friendly attitude of teachers. The teachers should employ interesting and innovative methods and strategies by ensuring active participation of students for reducing anxiety among the students. Such efforts of teachers can have motivating effects on the students and can be helpful in providing feedback as well as reinforcement to reduce anxiety among students in particular academic subjects. The continuous and comprehensive
evaluation system adopted at elementary stage of education has largely contributed towards reducing academic anxiety among children. Such evaluation procedure may also be followed at secondary and senior secondary stages of education. Following steps may be undertaken to reduce academic anxiety among students:

- The curriculum designers and examination authorities should bring necessary modifications in the existing secondary school curriculum and loading the curriculum with student-oriented activities.
- The teachers should try to create democratic and interactive environment in the classroom to reduce anxiety among students. Teachers should be impartial, polite and democratic so that students can easily share their academic queries/worries with teachers and find the solutions.
- Excessive home-work and extra academic burden should not be imposed on the students.
- Students should not be compared unnecessarily with other students. Rather, they should be compared with certain set criterion determined on the basis of individual student’s abilities.
- Before examinations, school authorities should orient the students and organize the workshops so as to acquaint them with ways and means of coping up with anxiety during examination time. The students must be imparted necessary suggestions for better preparation for examinations, improving study habits and developing self-confidence.
- The role of family in reducing academic anxiety among high school students is equally important. Parents should encourage and motivate their children to carry forward their studies with ease and confidence. Encouraging words of parents may give them confidence to excel in their studies.
Home coaching by parents may also prove to be helpful in reducing academic anxiety among students.

4) The findings of the study indicated that about 85% high school students had shown either average or below average academic achievement level. This is not a healthy sign of any effective educational system. This calls for initiating immediate steps by the concerned authorities for improving academic outcomes of students. Hence, in order to do so and to meet out every student's instructional requirements, the teacher should be acquainted to use various audio-visual teaching aids, making practical demonstrations, employing innovative teaching strategies namely, mastery learning, personalized system of instruction, use of computers in teaching-learning process etc. In this context, it is essential that special seminars and workshops should be organized to make the teachers well-acquainted with latest teaching-learning technologies and pedagogical practices. Teachers should orient the students in the art of taking examinations with the emphasis on writing best qualitative material in the examination.

5) It was also observed that girls have exhibited higher academic achievement as compared to boys. Various examinations as well as previous researches also substantiate this result. This indicates that different schemes and policies of government for raising the level of girls’ education are achieving their aims. Contrary to this, low academic achievement of boys is a point of concern which needs to be addressed urgently. The need is to continue the programmes of girls’ education with more zeal and energy in future and initiate speedy measures to bring the achievement level of boys at par with their female counterparts so as to realize the aim of inclusive growth. Following steps can be initiated to raise the level of academic achievement of high school students:
• Remedial instruction should be provided to low achievers by paying individual attention.

• Low achievers should not be criticized and punished but special tutorial services should be provided by the teachers to such students for removing the difficulties faced by them in various academic courses. Teachers and parents should set realistic targets for these children and necessary assistance should be provided to them during the course of achievement of targets.

• Proper infrastructure facilities as well as library facilities should be provided for students. The teachers should make efforts to develop proper habits among students to use library facilities and inculcate proper reading habits among them. The parents should earmark separate place at home for undertaking studies by the child. This place should look like study place exclusively which may help in developing positive attitude among child towards studies.

• Teachers should be provided with appropriate training in use of various teaching-learning strategies and equipments so that they can employ these in school situations. This can contribute towards improving academic achievement of students. Hence, the need is to design in-service teacher training programmes in a way that focus on such modern innovative teaching-learning strategies and use of modern technological devices in classroom situations.

6) It was revealed that large majority of high school students (74.42%) used right hemisphere of their brain to a greater extent for processing different sort of information and only a few students (14.85%) either used left hemisphere. Only 10.73% students possessed integrated hemispheric functioning. Moreover, students possessing left hemispheric dominance were significantly poor in terms of intra-personal awareness and
overall emotional intelligence as compared to the students with right hemispheric dominance or integrated hemispheric functioning. Hence, it is required that the student should be encouraged and trained in making use of both hemispheres of their brain. This will not only be helpful in the improvement of their cognitive abilities but may also lead to sound affective development in terms of better emotional intelligence and social skills. For improving the functioning of left hemisphere of the brain or stressing on integrated hemispheric functioning, teacher should provide opportunities to the students to learn through observations and apply their reasoning power to analyse the learning situations. Teachers should employ inductive learning approaches, assign project works, organize field trips and provide various problematic situations to teach the instructional material and to foster the use of left hemisphere of brain among students. The teachers should make efforts to eliminate the barriers to learning by working with the hemispheric preference of the learners as well as providing opportunities for activating the functioning of non-dominant hemisphere. This may help the students to become more integrated learners with better processing skills employing both hemispheres of their brain. Following instructional procedures or strategies can be undertaken in schools to activate right hemisphere of students’ brain:

- Films, charts, maps, diagrams, graphs and cartoons etc., may be used in teaching. Incomplete stories based on the pictures shown to students can be completed as exercises.
- Learning by doing may be encouraged at all levels in schools and colleges. Students should be given opportunities to work on simple projects and should be assisted in taking them to completion.
• Role playing should form a technique in teaching of history, language and also in science subjects. In the classrooms, divergent questions may be asked, so that students can think and answer in different ways.

• Problems on specific issues may be given to students and they may be asked to solve problems in different ways. Students may be encouraged to record their ideas and write stories, essays, plays, dialogues, stage talk etc.

• Children may be encouraged to play with words, numbers and interest can be created among them for preparing models and construction of buildings using cubes and blocks.

• Besides arts and music, games and sports should be organized specifically for the purpose to develop concept of causal-relationship, the power to discriminate, to make judgements, to analyze and synthesize and to imagine. This will give opportunities to the students to use imagination, make believe, fantasy and creativity to activate the right hemispheric functioning of their brain.

• Excursions and field trips can be arranged to encourage and satisfy pupil’s curiosity and sense of observation.

Following strategies can be adopted in schools to improve the left hemispheric functioning of students’ brain:

• In the classroom, new concepts should be introduced in an analytical manner with verbal emphasis and importance can be given to the expression through the language.

• Students may be asked to recall and repeat abstract speeches heard on radios, televisions, public meetings and symposium.

• Students may be given training in analyzing and identifying different speech sounds and encouraged to give logical reasoning and examples for unknown activities or functions without experimenting in general.
• Discussions may be arranged on general problems, world affairs and socially raised issues from the reading of daily newspapers and magazines. The students can be encouraged in writing non-fiction essays and scientific explanations in plain language.

• Teachers should write an outline of the lesson on the board, discuss vocabulary words and make cross puzzle on various learned concept.

• Teachers should assign individual assignments to the students.

• Mental health exercises, brain storming exercises, brain training exercises, workout exercises, concentration, meditation and physical exercises should be included in their daily routine work.

7) The findings of the study revealed that high school boys with integrated hemispheric functioning possessed somewhat higher level of intra-personal awareness, intra-personal management and overall emotional intelligence. Similarly, high school girls with integrated hemispheric functioning have shown higher level of inter-personal awareness, intra-personal management and overall emotional intelligence. Hence, to improve the emotional intelligence level of high school students with right or left hemispheric dominance, the teachers and parents should make efforts to involve them in such activities which require the use of both hemispheres of their brain. These activities may include; seminars, group discussions, workshops, symposia, special classes of meditation and yoga etc.

8) It was observed that scheduled caste students with integrated hemispheric functioning possessed better intra-personal awareness, inter-personal awareness, intra-personal management and overall emotional intelligence as compared to general and other backward classes category students possessing integrated hemispheric functioning. Similarly, other backward
classes category students with left hemispheric dominance have shown comparatively higher intra-personal management. These findings indicate that high school students belonging to deprived sections of society are better on certain dimensions of emotional intelligence as compared to general category students. This is a healthy sign reflecting mainstreaming of such students. This must be further strengthened by the school teachers and there is an additional need to provide more curricular and co-curricular opportunities to general category students so that their emotional intelligence can be enhanced. For this, the teachers should arrange those academic and co-academic activities that call for the use of both hemispheres of their brain.

9) Girls with left hemispheric dominance possessed somewhat higher level of academic anxiety. Apart from this, girls as well as general category students with right or integrated hemispheric functioning have witnessed comparatively higher academic achievement as compared to their respective counterparts with left hemispheric dominance. Therefore, it is essential that teachers should employ those teaching-learning methods in the classrooms which emphasize on employment of both right as well as left hemisphere of students’ brain. This will assist in reducing the academic anxiety among students with left hemispheric dominance and improving their academic achievement. These teaching-learning methods may include the use of films, charts, maps, models, learning by doing, assigning individuals projects, symposium, individual assignments, mental health exercises, brain storming exercises and physical exercises etc.

At last, it can be concluded that if proper education, opportunities and efforts are made by parents and teachers for the training of emotions, social skills and morals among the students right from their childhood, only then it is possible to cultivate a child into a fully developed and well-balanced personality. The aforesaid ways, means and strategies put a great responsibility on the teachers. Hence,
it is of crucial significance that teachers must be provided with adequate opportunities for their professional development and they should not be involved in other non-academic tasks by the government authorities.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

Research in any branch of human knowledge is never a closed chapter. There is always a need of finding solution to new problems and testing a veracity of the solution to the older problems. In the light of delimitations and findings of present study, following suggestions may be laid down for undertaking future research studies:

1) The present study was conducted on high school students. Similar research studies may be carried out by taking larger sample of students as well as replicating such studies at other levels of education.

2) A comparative study may be designed to investigate the differences in emotional intelligence, academic anxiety and academic achievement of high school students studying in government and private schools or pursuing vocational and non-vocational courses.

3) The present study was conducted to assess the emotional intelligence, academic anxiety and academic achievement of high school students in relation to their styles of learning and thinking. Similar researches may be carried out by taking other dependent or independent variables viz. creativity, locus of control, mental health, aggression, self-concept, achievement motivation, certain family-related and school-related factors etc.

4) An investigation may be carried out to ascertain the relationship between styles of learning and thinking of students with teaching styles, competence and self-efficacy level of teachers.

5) A comparative investigation of styles of learning and thinking of intellectually gifted, creatively gifted, academically gifted,
musically/artistically and scientifically gifted students may be taken up.

6) Investigations may be carried out to identify the factors associated with emotional intelligence and academic anxiety of students so as to chalk out the strategies for improving the emotional intelligence and reducing academic anxiety among students.

7) Researches may be carried out to find out the reasons for less use of left hemisphere of brain by the students and delineating the ways and means to improve the functioning of left hemisphere of brain. In this regard, experimental studies may be undertaken to ascertain the effect of traditional and innovative teaching-learning strategies for improving left hemispheric functioning among the adolescents.

8) Investigations may be carried out to find out the impact of curricular and co-curricular programmes on the learning and thinking styles and other psychological characteristics of the students.

9) The effect of latest teaching technologies on student’s styles of learning and thinking, emotional intelligence and academic anxiety may be studied through experimental studies.

10) Case studies may be conducted to reveal some significant personality characteristics which uniquely and specially contributed towards cognitive and non-cognitive development of students using right or left hemisphere of their brain.

11) Research studies may be designed to ascertain the psychogenic needs of students possessing different styles of learning and thinking. Such studies may prove to be useful in identifying the ways and means to activate the functioning of non-dominant hemisphere of child’s brain.