CHAPTER 11
CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND FUTURE SCOPE

This chapter is devoted to conclusions drawn from interpretation of observations and findings, recommendations for EI Training Programme for faculty members and students to understand the role of EI and its competencies in teaching-learning process. Suggestions are also given to future researchers.

11.1 Conclusions

Efficient teaching and good learning are the two most important factors for success in academia. The most accepted criterion for measuring good teaching is the amount of student learning that occurs. The literature on teaching is full of well researched ways that teachers can present content and skills that will enhance the opportunities for students to learn. As, teaching and learning are integrated process, understanding learner variables is equally important along with subject expertise for effective teaching. However, the emotional aspects of learning in higher education are generally overlooked (Mortiboys, 2005). Especially in professional education like, medical and technical education emphasis is only on IQ, the EQ part is mostly ignored. Therefore, this study was conducted with a systematic approach to understand the significance of EI in medical and technical education giving special emphasis on incorporating students’ emotional variables in teaching performance of faculty members as the courses related to these two fields are considered to be the most stressful and according to Lazarus (1999) stress and emotions are interlinked.

With this aim, the current study specifically involved: (1) Assessing anxiety among medical and engineering students, (2) Evaluation of the relationship between anxiety, optimism, ach-mot and academic-ach of the students, (3) Exploration of ach-motivation factors among these students, (4) Measuring EI, Occupational Stress and teacher effectiveness (both self-reported and students-rated) among faculty members teaching these students, (5) Exploration of OS Factors among faculty members, (6) Assessment of the relationship between EI, Occupational Stressors and Teacher Effectiveness (both self-reported and students-rated), 7) Proposing a well researched EI Training Programme based on the
findings of this study. A series of bivariate and multivariate analyses were undertaken at each stage in order to assess the hypotheses based on the aforementioned objectives. The conclusions drawn after interpreting the results of the study are given below.

**i. Level of Anxiety** among the students was considerably high with medical students reporting even higher. Students’ anxiety showed a significant negative influence on their academic-ach, whereas, a significant positive relationship was found between optimism, ach-motivation and academic-ach. Also, optimism and ach-motivation showed negative relationship with students’ anxiety.

**ii. Achievement Motivation Factors and Academic Achievement:** Out of nine ach-motivation factors assessed in this study, *Self Determination* showed the highest correlation with overall ach-motivation among students. Future Goals, Relevance of college, Academic Motivation and Self Determination emerged as the most significant predictors for academic-ach. Meaningfulness of Task, Work Methods, Competency Beliefs and Social Goals were also significant but their strength was relatively less. Co-curricular activities, sports and adventure were not significant as predictor for academic-ach, although they contributed significantly for overall ach-motivation. This was probably because most of the students irrespective of their academic performance had expressed interest in these activities.

**iii. Occupational Stressors among faculty members:** Only 16% of the faculty members reported high levels OS, whereas, 69% reported moderate stress. *Under Participation* emerged as the strongest predictor of OS among the faculty members. Other major stressors were Intrinsic Impoverishment, Role Conflict, Role Overload, Strenuous Working Conditions, Group Pressure and Role Ambiguity, collectively accounting for maximum variance in overall OS. The predictive significance of the remaining factors i.e., powerlessness, unprofitability, interpersonal relationships, low status and responsibility for persons was relatively less. Therefore, by managing the seven most significant stressors may help considerably in reducing the perception of overall OS among the faculty members.

**iv. EI and its Competencies among faculty members:** Only 14% faculty members reported high level of EI, whereas 70% reported average EI. Out of ten EI competencies incorporated in the study, Emotional Stability revealed highest correlation with the overall EI and Self-motivation emerged as the best predictor; grouped with Emotional Stability, Managing Relations, Empathy and Self-awareness it accounted for maximum variance in overall EI
among faculty members. Remaining four competencies, self-development, commitment, value orientation and altruism were relatively low in their significance as predictors for overall EI. Hence, it can be asserted that focusing on the six most significant EI competencies may help substantially in enhancing the overall EI among faculty members.

v. **Relationship between EI, OS and Teacher effectiveness:** The hypothesis that OS would be negatively related to teacher effectiveness was supported in this study. EI among faculty members revealed negative relationship with OS and a positive relationship with teacher effectiveness (both self-reported and students-rated). Therefore, it can be concluded that the better the EI, the better will be the stress coping ability and teacher effectiveness among faculty members.

vi. **Relationship between EI Competencies and OS:** Managing Relations, Self Motivation and Commitment followed by Self Awareness, Emotional Stability and Empathy were collectively found to be valuable competencies in dealing with OS among faculty members. Integrity, self development, value orientation and altruism were relatively less significant.

vii. **Relationship between EI Competencies and Teacher Effectiveness:** Results supported the existence of a positive relationship between all ten competencies of EI and teacher effectiveness (both self-reported and students-rated). Emotional stability revealed the highest correlation with both types of teacher effectiveness. It also emerged as the best predictor for self-reported teacher effectiveness, whereas, Self Motivation was the best predictor of students-rated teacher effectiveness. Competencies for Managing Relations, Self Awareness, Empathy and Integrity were also quite significant as predictors for teacher effectiveness. Thus focusing on these six most significant EI competencies would help considerably in enhancing teacher effectiveness among faculty members.

viii. **EI Training Programme for students and faculty members:** Collectively the results of the study provide a promising insight into the role of EI in medical and technical education. The proposed EI training programme focuses on two aspects. Firstly, awareness about EI, as awareness is the prerequisite for incorporating anything in practice. Moreover, informal interaction with the faculty members during data collection revealed that majority of them were not aware about EI and in case of students there were none. Secondly, techniques to develop specific EI competencies like self awareness, understanding others emotions, managing emotions (self and others; anger, anxiety and frustration), self
motivation and motivating others, optimism and empathy. The techniques used in the proposed programme are self reflection exercises, activities, role-play, shared experiences and group interaction within specific learning framework.

Along with the primary objectives mentioned above, this research also included some secondary objectives and the findings are discussed below.

i. **Difference between Self-reported and Students-rated Teacher Effectiveness:** Although a moderate correlation existed between self-reported and students’ rated teacher effectiveness but there was a large difference in the two scores. The self-reported teacher effectiveness was much higher than what students had rated. This could be because of social desirability or due to general human tendency of being unaware about our own flaws. Quite often we are not able to understand our flaws unless we get a genuine feedback from others. Therefore, informal direct feedback from the students by the faculty members would be more useful than the formal feedback about faculty members from the students.

ii. **Difference in EI, OS and Teacher Effectiveness between medical and engineering faculty members:** EI and self-reported teacher effectiveness of engineering faculty was found to be higher than that of medical faculty. However there was no difference in the overall OS between the two groups except for low status where engineering faculty members reported higher score. No significant difference was found in students-rated teacher effectiveness of the two groups. This shows that students consider faculty members more as teachers than as doctors or engineers.

iii. **Gender Differences in EI, OS and Teacher effectiveness among faculty members:** No significant gender difference was found in any of the variables under study. Even in different EI competencies male and female faculty members did not show any difference. In the perception of different occupational stressors female faculty members reported higher feelings of Role Ambiguity and Unprofitability as compared to males.

iv. **Gender Differences in Anxiety, Optimism, Achievement Motivation and Academic Achievement among medical and engineering students:** No significant gender differences were found in anxiety, optimism and academic achievement. However, female students reported higher achievement motivation than their male counterparts.
v. Difference in Anxiety, Optimism, Achievement Motivation and Academic Achievement between Medical and Engineering students: Anxiety among medical students was comparatively higher, whereas optimism and academic achievement of engineering students was found to be higher than those of medical students. However, there was no significant difference in achievement motivation of the two groups probably because to get admission in medical and engineering colleges students need to have a substantial level of ach-mot.

11.2 Recommendations

As the world is advancing technologically and various job opportunities are opening globally, the need for adequate educational preparation has become vital. Due to tough competitions, a focus on educational success has permeated every society. With this drive to achieve, many psychological aspects have become apparent in the field of education. The more that is known about why one succeeds or fails in academic situations the better one can change cognitively or behaviourally to achieve optimum individual success. Based on the findings of this study and its implications the following recommendations are highlighted:

i. **EI Training Programme for students:** The current study indicated a high level of anxiety among medical and engineering students. The study also revealed that anxiety has a negative influence on academic-ach of the students. Optimism and ach-motivation, two important EI competencies, showed a positive relationship with academic-ach, whereas they were negatively related to students’ anxiety. Therefore, an EI Training Programme for these students focusing on skills like self awareness, managing emotions, positive self talk, self control and motivation is strongly recommended. This will help them in managing anxiety and other emotional aspects of learning.

ii. **EI Training Programme for faculty members:** Since effective teaching is important for good learning, qualities of effective teaching need to be developed. The findings of this study indicate that the better the EI of faculty members, the better would be their coping with stress and teacher effectiveness. Low EI, especially low emotional stability of faculty members not only reduces their own teaching efficiency but also creates anxiety, stress and frustration among students. Qualitative data collected from the students suggests that along with subject expertise the teachers need to be understanding, approachable, interactive and encouraging. Therefore, a well developed EI Training Programme for faculty members
enhancing their EI skills is recommended. This will facilitate not only a better insight of their own-selves but also a better understanding of their students.

iii. Awareness about Achievement Motivation Factors among students and faculty members: Results from the study provide an insight into the complex interrelationship between various factors that mediate with students’ ach-motivation, which is consistently found to be most predictive of academic performance (Green et al., 2006). Awareness about these factors will help students to remain focused and assist educators to incorporate appropriate strategies to enhance students’ motivation because when students express lack of interest in the subject, it affects the way they react or listen to the teacher, and as a consequence, the teacher is also affected (Aremu, 1998).

iv. Need for Direct Informal Feedback from the students by faculty members: There are conflicting views about students’ evaluation of teacher effectiveness and it is evident that most of the teacher evaluation systems currently in use are not able to provide meaningful feedback to teachers or serve as a basis for professional development (refer to chapter 3, section 3.5.2). Feedback from students’ evaluation is generally not taken in a positive stride by the faculty members. Therefore, this research recommends an informal direct feedback by the faculty members from their students. It can be oral or in writing; anonymous or with names. This kind of feedback will be mutual, more genuine and free from the drawbacks of official feedbacks.

v. Overcoming Gender Biases: The gender stereotype that males have a better understanding of science and mathematics based subjects, whereas, females are better at languages and social sciences is generally prevalent in many societies. However, with the changes in socio-cultural norms, this gender stereotype is gradually reducing and females are becoming equally competent in science and math related jobs (Else-Quest, Hyde & Linn, 2010). The results of the present study are convergent with this view. Therefore, it is recommended that gender biases in staff appointments and allocating responsibilities need to be avoided.

vi. Relevance of college and competent faculty: An interesting fact revealed in this study was the relevance of college towards better academic-ach. Majority of the students, especially engineering, irrespective of their academic results felt that their teachers need to
be more competent. This suggests that the management and the authorities must take care of this factor as students’ perceived relatedness with teachers directly influences academic engagement and teacher involvement is a strong predictor of students’ motivation (Tucker et al., 2002).

**vii. Collective Effort:** The best results are obtained when students, faculty and management collectively take steps to become more emotionally self-aware and socially intelligent. EI competencies among students make them better learners and EI of faculty members make them better teachers whereas EI of administrators influences their leadership skills and consequently the job satisfaction and job productivity of the faculty (Wagon, 2006). Therefore, this study recommends a collective effort for enhancing EI among students, staff and administrators.

### 11.3 Limitations

As no research work is free from limitations, this work is no exception and has certain limitations which are discussed below.

**i. Design of the Scale:** The design of EI scale, with only 34 questions may limit the thorough assessment of EI competencies in various real life situations. However, it is generally recommended to keep the questionnaires short as the return rate of lengthy ones is very low (Singh, 2002).

**ii. Social Desirability:** The study was based on self-report measures and social desirability often comes into play in such measures. However this effect could have happened only to some extent and only in some of the measures. For example, anxiety scale did not have any such problem because the scale is based on symptoms of anxiety and an individual is not able to correlate them with desirable or undesirable attributes. There were direct questions in ach-motivation scale and some of them were sensitive, like significance of teachers, college and studies, even then, it was observed that most of the students were honest in their response, probably because these issues were discussed with them while data collection and the questionnaires were collected directly by the researcher. To cater for social desirability factor in self-reported teacher effectiveness, students’ rating was also taken. On analyzing the responses to OS questionnaire the response from faculty members seemed to be quite
honest even in the matters like satisfaction with the salary, conflicting instruction from various authorities and efforts being not rewarded. Moreover, the majority of empirical research on occupational stress tends to use self reports of stressors assuming that subjective perception is of primary importance in understanding the stressors.

iii. Geographical and Organizational Constraints: As the functioning and selection of the students and staff in private medical and engineering colleges differs from that of government colleges, the sample was restricted only to private institutions. Also, there were some sensitive issues in the study like rating of teacher effectiveness by the students, hence it was necessary for the researcher to interact with the students and approachability to other states was physically and economically strenuous for the researcher, therefore the data collection was limited to the colleges of Uttar Pradesh only. Considering this, the present research had geographical constraints as well. However, a separate study was conducted by the researcher on a sample of SMIT students and faculty members which revealed that the major findings of both the studies were convergent, showing only minor differences in correlation and predictive strength of the variables under study. This means that organization and culture do have some influence on some of the variables to some extent, but the overall significance of EI and its competencies are relevant in all organizations irrespective of cultural and geographical aspects.

iv. Duration of EI Training Programme: As the concept of EI is very vast and there is a large amount of material for participants to learn, absorb and practice in a relatively short period of time (12 hours), could be a potential limitation of this program. However, repeating the programme at regular intervals will have more effect than having a single programme of longer duration because this will help the participants to revise the things and analyse how much they learnt from the earlier sessions of EI training programme.

v. No Cause-effect Relationship: The present report is based on correlations; therefore no causal relationship should be drawn from the study.

Although being limited in a number of ways, the results of the study are valuable and provide an insight into the role of EI in medical and technical education that has been previously unexplored. The EI Training Programme proposed in this thesis may be limited in many ways but its importance in dealing with emotions in teaching and learning cannot be underestimated. The limitations in this study are common to most of the studies in social
sciences, however, as emphasised by Spector (1994), despite the weakness of the design of cross-sectional self report methodology, it can be useful in providing a picture of how people feel about their jobs, and provide the researchers with inter-correlations among various feelings and perceptions.

11.4 Future Scope and Suggestions

1. Experimental research is also recommended in the future to establish cause-effect relationships between the variables under study in this thesis.

2. Future researchers could conduct this type of study with students and faculty members at government colleges as well, and also in other states, countries and cultures, to provide more evidence to generalize findings from this study.

3. Relationship between self control (an important EI competency) and academic performance among medical and engineering students also needs to be explored as the informal interaction with the students during data collection revealed that quite often students have difficulty in controlling their certain temptations like computer games, chatting and misuse of mobile phones.

4. Future research can focus on quantitative evaluation of the EI Training Programme proposed in this thesis. However, qualitative feedback is more useful in assessing effectiveness of such programmes.

5. A qualitative study is also suggested to have in depth understanding of the variables considered in this research specially EI because purely quantitative based approach in studying EI is sometimes unable to provide answers to the complex problems faced in human functioning.

6. A longitudinal study exploring the role of EI in medical and technical education will provide a better understanding of long term benefits of EI.

It is hoped that this work which is an outcome of in-depth study of last four years may be useful to future researchers who are interested in understanding the role of EI in professional education especially medical and technical. The findings of this study will serve as resource materials for students, faculty members, college authorities and significant others who are concerned with the overall academic progress of the students.