3.1. Introduction

As discussed in the previous chapter, the main objectives of the present study was to measure the influence of Anxiety Proneness, Emotional Intelligence, Adjustment Problems and Cognitive Styles in relation to Academic Achievement of Pre-University students. Chapter II provided review of related literature essential for design of the study. This chapter is devoted to study the influence of Anxiety Proneness, Emotional Intelligence, Adjustment Problems and Cognitive Styles in relation to Academic Achievement of Pre-University students. The accuracy of results of any research would depend upon the method adopted and the tools used administration of the tools and stratified random sampling technique used are discussed in this chapter.

The hypotheses formulated helped the researcher to frame the methodology of the study.

3.2. Statement of the Problem

The study was undertaken with an intention of making "An Exploratory Study of Anxiety Proneness, Emotional Intelligence, Adjustment Problems and Cognitive Styles in Relation to Academic Achievement of Pre-University Students".

3.3. Objectives of the Study
3.3.1 General Objectives:

The present study is undertaken with the following objectives:
i. To explore the relationship of anxiety proneness, emotional intelligence, adjustment problems, and cognitive style, in relation to academic achievement of Pre-University students.

ii. To study whether there is significant difference between male and female students of Pre-University colleges with respect to anxiety, adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment, emotional intelligence and cognitive style.

iii. To study whether there is significant difference between Arts, Science and Commerce students of Pre-University colleges with respect to their academic achievement.

iv. To study whether there is significant difference between Kannada and English medium students of Pre-University College with respect to anxiety, emotional intelligence, adjustment and cognitive styles and its influence on their academic achievement.

v. To study whether there is significant difference between private, government and Bruhat Bangalore Mahanagara Palike (BBMP) Pre-University college students with respect to anxiety, emotional intelligence, adjustment and cognitive styles in relation to academic achievement.

vi. To study whether there is significant difference between rural and urban Pre-University college students with respect to anxiety, emotional intelligence, adjustment and cognitive styles in relation to their academic achievement.
3.3.2 Specific Objectives

1. To study whether there is significant difference between Male and Female students of Pre-University Colleges with respect to their academic achievement.

2. To study whether there is significant difference between Male and Female students of Pre-University Colleges with respect to anxiety proneness.

3. To study whether there is significant difference between Male and Female students of Pre-University Colleges with respect to emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

4. To study whether there is significant difference between Male and Female students of Pre-University Colleges with respect to total adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

5. To study whether there is significant difference between Arts, Science and Commerce students of Pre-University Colleges with respect to their academic achievement.

6. To study whether there is significant difference between Arts, Science and Commerce subject students of Pre-University Colleges with respect to anxiety proneness and cognitive styles.

7. To study whether there is significant difference between Arts, Science and Commerce students of Pre-University Colleges with respect to emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.
8. To study whether there is significant difference between Arts, Science and Commerce students of Pre-University Colleges with respect to total adjustment problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

9. To study whether there is significant difference between Kannada and English medium students of Pre-University Colleges with respect to their academic achievement.

10. To study whether there is significant difference between Kannada and English Medium students of Pre-University Colleges with respect to their anxiety proneness and cognitive styles.

11. To study whether there is significant difference between Kannada and English Medium students of Pre-University Colleges with respect to emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

12. To study whether there is significant difference between Kannada and English Medium students of Pre-University Colleges with respect to total adjustment problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

13. To study whether there is significant difference between Private, Bruhat Bangalore Mahanagara Palike (BBMP) and Government Pre-University College students with respect to their academic achievement.
14. To study whether there is significant difference between Private, BBMP and Government Pre-University College students with respect to anxiety proneness and cognitive style.

15. To study whether there is significant difference between Private, BBMP and Government Pre-University College students with respect to emotional intelligence and its dimensions like self awareness, self regulation, motivation, empathy and social skills.

16. To study whether there is significant difference between Private, BBMP and Government Pre-University College students with respect to total adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

17. To study whether there is significant difference between rural and Urban Pre-University College students with respect to their academic achievement.

18. To study whether there is significant difference between Rural and Urban Pre-University College students with respect to their anxiety proneness and cognitive styles.

19. To study whether there is significant difference between Rural and Urban Pre-University College students with respect to emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

20. To study whether there is significant difference between Rural and Urban Pre-University College students with respect to total adjustment problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.
21. To study whether there is significant relationship between academic achievement with Emotional Intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills of students of Pre-University Colleges.

22. To study whether there is significant Relationship between academic Achievement with total Adjustment problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment of students of Pre-University Colleges.

23. To study whether there is significant relationship between academic achievement and cognitive style of students of Pre-University Colleges.

24. To study whether there is significant relationship between anxiety proneness with emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills of students of Pre University Colleges.

25. To study whether there is significant relationship between anxiety proneness with total adjustment problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment of students of Pre-University Colleges.

26. To study whether there is significant relationship between anxiety proneness and cognitive style of students of Pre-University Colleges.

27. To study whether there is significant relationship between cognitive styles with emotional intelligence and its dimensions
like self-awareness, self-regulation, motivation, empathy and social skills of students of Pre-University Colleges.

28. To study whether there is significant relationship between cognitive styles with total adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment of students of Pre-University Colleges.

29. To study whether there is significant relationship between total adjustment and its dimensions (i.e. home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment) with emotional intelligence and its dimensions (i.e. self-awareness, self-regulation, motivation; empathy and social skills) of students of Pre-University Colleges.

30. To study whether anxiety proneness, adjustment, emotional intelligence and cognitive styles are not a significant predictor of academic achievement of students of Pre-University Colleges.

31. To study whether home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment are not a significant predictor of academic achievement of students of Pre-University Colleges.

32. To study whether self-awareness, self-regulation, motivation, empathy and social skills are not a significant predictor of academic achievement of students of Pre-University Colleges.

33. To study whether there is significant direct and indirect effect of anxiety proneness, adjustment, emotional intelligence and cognitive styles on academic achievement of students of Pre-University Colleges.
34. To study whether there is significant direct and indirect effect of home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment on academic achievement of students of Pre-University Colleges.

35. To study whether there is significant direct and indirect effect of self-awareness, self-regulation, motivation, empathy and social skills on academic achievement of students of Pre-University Colleges.

3.4. Variables Considered in the Study

The following are the variables considered for the present study.

a) Independent Variables.
   i) Anxiety Proneness
   ii) Emotional Intelligence
   iii) Adjustment problems and
   iv) Cognitive Styles

b) Dependent Variables.
   i) Academic Achievement

c) Moderator Variables.
   i) Types of College (Government, Private and Bruhat Bangalore Mahanagara Palike (BBMP))
   ii) Gender (Male and Female)
   iii) Subject of Pre-University Students - Arts, Science and Commerce
   iv) Medium of Instruction - Kannada and English
   v) Locality - Rural and Urban
The above variables were selected based on the related literature, self-observation and the teaching experience of the investigator in the college of education.

3.5. Hypotheses of the Study

In pursuance of above stated objectives, following hypotheses were formulated:

H₁: There is no significant difference between Male and Female students of Pre-University Colleges with respect to their academic achievement.

H₂: There is no significant difference between Male and Female students of Pre-University Colleges with respect to anxiety proneness.

H₃: There is no significant difference between Male and Female students of Pre-University Colleges with respect to Emotional Intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

H₄: There is no significant difference between Male and Female students of Pre-University Colleges with respect to total Adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

H₅: There is no significant difference between Arts, Science and Commerce students of Pre-University Colleges with respect to their academic achievement.
H₆: There is no significant difference between Arts, Science and Commerce subject students of Pre-University Colleges with respect to anxiety proneness and cognitive styles.

H₇: There is no significant difference between Arts, Science and Commerce students of Pre-University Colleges with respect to Emotional Intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

H₈: There is no significant difference between Arts, Science and Commerce students of Pre-University Colleges with respect to total Adjustment Problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

H₉: There is no significant difference between Kannada and English medium students of Pre-University Colleges with respect to their academic achievement.

H₁₀: There is no significant difference between Kannada and English Medium students of Pre-University Colleges with respect to their anxiety proneness and cognitive styles.

H₁₁: There is no significant difference between Kannada and English Medium students of Pre-University Colleges with respect to Emotional Intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

H₁₂: There is no significant difference between Kannada and English Medium students of Pre-University Colleges with respect to total adjustment problems and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.
H13: There is no significant difference between Private, Bruhat Bangalore Mahanagara Palike (BBMP) and Government Pre-University College students with respect to their academic achievement.

H14: There is no significant difference between Private, BBMP and Government Pre-University College students with respect to anxiety proneness and cognitive style.

H15: There is no significant difference between Private, Bruhat Bangalore Mahanagara Palike (BBMP) and Government Pre-University College students with respect to emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.

H16: There is no significant difference between Private, Bruhat Bangalore Mahanagara Palike (BBMP) and Government Pre-University College students with respect to total adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment.

H17: There is no significant difference between rural and urban Pre-University College students with respect to their academic achievement.

H18: There is no significant difference between Rural and Urban Pre-University College students with respect to their anxiety proneness and cognitive styles.

H19: There is no significant difference between Rural and Urban Pre-University College students with respect to emotional intelligence and its dimensions like self-awareness, self-regulation, motivation, empathy and social skills.
H20: There is no significant difference between Rural and Urban Pre-
University College students with respect to total adjustment 
problems and its dimensions like home adjustment, health 
adjustment, social adjustment, emotional adjustment and 
educational adjustment.

H21: There is no significant relationship between academic 
achievement with emotional intelligence and its dimensions like 
self-awareness, self-regulation, motivation, empathy and social 
skills of students of Pre-University Colleges.

H22: There is no significant relationship between academic 
achievement with total adjustment problems and its dimensions 
like home adjustment, health adjustment, social adjustment, 
emotional adjustment and educational adjustment of students of 
Pre-University Colleges.

H23: There is no significant relationship between academic 
achievement and cognitive style of students of Pre-University 
Colleges.

H24: There is no significant relationship between anxiety proneness 
with emotional intelligence and its dimensions like self 
awareness, self regulation, motivation, empathy and social skills 
of students of Pre University Colleges.

H25: There is no significant relationship between anxiety proneness 
with total adjustment problems and its dimensions like Home 
adjustment, health adjustment, social adjustment, emotional 
adjustment and educational adjustment of students of Pre-
University Colleges.
H26: There is no significant relationship between anxiety proneness and cognitive style of students of Pre-University Colleges.

H27: There is no significant relationship between cognitive styles with emotional intelligence and its dimensions like self awareness, self regulation, motivation, empathy and social skills of students of Pre-University Colleges.

H28: There is no significant relationship between cognitive styles with total adjustment and its dimensions like home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment of students of Pre-University Colleges.

H29: There is no significant relationship between total adjustment and its dimensions (i.e. home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment) with emotional intelligence and its dimensions (i.e. self awareness, self regulation, motivation, empathy and social skills) of students of Pre-University Colleges.

H30: anxiety proneness, adjustment, emotional intelligence and cognitive styles are not a significant predictor of academic achievement of students of Pre-University Colleges.

H31: home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment are not a significant predictor of academic achievement of students of Pre-University Colleges.

H32: Self-awareness, self-regulation, motivation, empathy and social skills are not a significant predictor of academic achievement of students of Pre-University Colleges.
H₃₃: There is no significant direct and indirect effect of anxiety proneness, adjustment, emotional intelligence and cognitive styles on academic achievement of students of Pre-University Colleges.

H₃₄: There is no significant direct and indirect effect of home adjustment, health adjustment, social adjustment, emotional adjustment and educational adjustment on academic achievement of students of Pre-University Colleges.

H₃₅: There is no significant direct and indirect effect of self-awareness, self-regulation, motivation, empathy and social skills on academic achievement of students of Pre-University Colleges.

3.6. Rationale for the Study

Some of the following are the basic reasons for taking up the study by the researcher regarding student adolescents studying in Pre-University Colleges in Bangalore District:

➢ Due to the increased number of depressed students found studying in Pre-University colleges.
➢ Showing lack of interest in studies.
➢ Pressure and a kind of disappointment and mental disturbances.
➢ Feeling of loneliness at home and college environment.
➢ Having the lack of motivation, the lack of proper guidance and counselling for Pre-University students.
➢ Having many emotional problems and tension.
➢ Having the lack of decision making ability and positive attitude.
➢ Having the lack of self-confidence.
➢ Suffering from anxiety proneness, stress and strain.
Unable to face problems due to some kind of pressure either from parents or from teachers.

Having no freedom to choose the subjects as they wish to study in Pre-University Course.

Possessing negative attitude towards life.

Showing irresponsible attitude.

Attending private tuitions by parent’s force.

Increased number of suicide cases amongst in Pre-University College students in Karnataka.

Increased number of dropouts in Pre-University Colleges.

Increased number of failures in Pre-University Colleges.

Problems facing by science students are increasing day to day when they could not cope up with the subject chosen.

Lack of strong will power.

Due to the changes occurred in sexual and emotional development.

Absence of teacher-student inter-relationship in Pre-University Colleges.

Absence of parent-teacher association in Pre-University Colleges.

Due to the increased number of students wasting their time by getting addict to chatting on internet and using mobiles.

Failed in academic achievement due to adjustment problems.

Due to the lack of research studies taken up in relation to academic achievement of Pre-University students in Karnataka.

As many research studies are not been taken up to study about Pre-University students in respect of anxiety proneness, emotional intelligence, adjustment problems and cognitive styles and its effect on academic achievement of P.U. students especially in Karnataka.
Hence, these are the main causes, which made the researcher to take up the present study on Pre-University students.

3.7. Delimitations of the Study

The present study has following limitations.

❖ The study was delimited to 500 Pre-University college students of Bangalore District from Rural and Urban locality.
❖ The study was delimited to assess some Pre-University college students of Bangalore District.
❖ The study was delimited to assess emotional, intelligence, anxiety proneness, academic achievement and cognitive styles based on the self-reporting questionnaires.
❖ The study was delimited to Pre-University college student adolescents from Arts, Science and Commerce subjects.
❖ The study was confined to Government, Private and Bruhat Bangalore Mahanagara Palike (BBMP) Pre-University college students from Kannada and English medium of instruction.

3.8. Limitations of the Study

The present study has following limitations.

➢ The subject does manage to get some insight into what the purpose is. So there is always the factor of social desirability and faking.
➢ The study was limited only to 500 male and female students of some Pre-University colleges. The data from all Pre-University colleges of Bangalore district could have not only increased the sample size, but also could have strengthened certain arguments.
The limitation with respect to the presentation of Thesis is the lack of availability of more recent literature related to anxiety proneness, emotional intelligence, adjustment problems and cognitive styles students in India.

However, it can be claimed that in whatever in short way, the study has brought out some of the emotional competencies, anxiety proneness, adjustment areas and cognitive styles of Arts, Science and Commerce Pre-University students. May be the later investigators can overcome the limitation faced in the present study and advance the research in the field of emotional intelligence and academic achievement of Pre-University students.

3.9. Definition of Operational Technical Terms

Definition of Anxiety

"Anxiety is an aversive emotional state associated with the apprehensive anticipation of more or less likely future dangers. It incorporates somatic symptoms of tension and dysphoric feelings".

The meaning of the terms used in the operational definition are:

Aversion: a dislike
Apprehensive: uneasily fearful; anxious.
Anticipate: be aware of in advance and act accordingly; (anticipated his opponents moves) expect.
Incorporate: form into whole
Somatic: of the body; not of the mind
Dysphoric feelings: abnormal feelings

Emotional Intelligence

Daniel Goleman defined “Emotional Intelligence is comprised of the abilities such as being able to motivate oneself and persists in the
face of frustration; to control impulse and delay gratification; to regulate one’s moods and keep distress from swamping the ability to think; to empathize and to hope”.

**Adjustment**

According to Boring, “Adjustment is a process by which living organism maintain balance between its needs and the circumstances that influence the satisfaction of these needs”.

According to Munn, “Adjustment is a continuous process of satisfying one’s needs rather than something fixed and static and it involves virtually all aspects of human behaviour”.

**Cognitive Styles**

According to Uto (1994), “Cognitive Styles represent dimensions of individual differences in cognitive sphere, where individual remains relatively on a constant position. Those dimensions characterize individual’s variations in a mental activity form. Hence, they are in principle contextually independent of that activity”.

**Academic Achievement**

Academic achievement can be defined as “Excellence in all academic disciplines, in class as well as extracurricular activities. It includes excellence in sporting, behaviour, confidence, communication skills, punctuality, assertiveness, arts, culture, and the like”.

**Pre-University Students**

1. “Students studying before entering into University where the branches of Arts, Science and Commerce are taught and degrees conferred”.
2. “Students studying or preparing for entering into University for higher studies in different branches of Arts, Science and Commerce”.
3.10. **Research Design and Method**

Survey method is used in the proposed study. Inference about relation among variables are made without direct interaction, from concomitant variation of independent and dependent variables.

3.11. **Tools used for Data Collection**

The researcher has used the following tools for collection of relevant and required data for the study.

1. Sinha's Comprehensive Anxiety Test (SCAT)

2. Emotional Intelligence Scale for Adolescents (EISA)
   Developed by the investigator with the help of the research guide.

3. Adjustment Inventory for College Students (AICS)
   Developed by A.K.P. Sinha and R.P. Singh (2009)

4. Minnesota Paper Folding Test (MPFT)
   Developed by Minnesota.

3.12. **Descriptions of the Tools**

Questionnaire technique is the most commonly used method in the field of education and psychology. A questionnaire that deals with factual data in uncomplicated form is useful as means of gathering objective information. Therefore, standardized tests and inventories were used to obtain data on the variables in the study namely, emotional intelligence, anxiety proneness, adjustment problems and cognitive styles in relation to academic achievement of Pre-University students. The data was collected from male and female Pre-University students who had given their consent to participate in the study and who were willing to respond and co-operate in collecting the data. Tools were selected based on the objectives specified in
Details of the tools used for the study and the authors who developed or decided them are discussed below.

**Table - 3.1: Variable Studied/Tools Used and the Authors Devised /Adopted (N=500)**

<table>
<thead>
<tr>
<th>SL No.</th>
<th>Variable</th>
<th>Questionnaire / Inventory</th>
<th>Developed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Emotional Intelligence</td>
<td>EISA Emotional Intelligence Scale for Adolescents (2011)</td>
<td>Investigator</td>
</tr>
<tr>
<td>3</td>
<td>Adjustment</td>
<td>AICS Adjustment Inventory for College Students (2009)</td>
<td>A.K.P. Sinha and R.P. Singh</td>
</tr>
<tr>
<td>4</td>
<td>Cognitive Styles</td>
<td>MPFT Minnesota Paper Folding Test</td>
<td>Minnesota</td>
</tr>
<tr>
<td>5</td>
<td>Academic Achievement</td>
<td>Based on I and II PUC Mid-term Exam Scores of District Level and Annual / Exam Score</td>
<td>Collected by Investigator</td>
</tr>
</tbody>
</table>

**3.12.1 Emotional Intelligence Scale for Adolescents (EISA)**

*a) Note on Available Psychometrically Validated Instruments to Measure Emotional Intelligence*

In recent years, a number of psychometrically validated measures have been developed by the researchers to measure emotional intelligence. Some of them are ability measures while other are self-report ones.

The major efforts made include Multi-Factor Emotional Intelligence Scale (MEIS). Yale university psychologists, John D. Mayer and Peter Salovery, who coined the term emotional intelligence in 1990.
by using it in the journal “Imagination, Cognition and Personality”
developed the scale in 1999; it consists of 12 scales divided into four
branches of abilities including (a) perceiving, (b) assimilating, (c)
understanding, and (d) managing emotions. It is based on actual
performance as opposed to self-reported performance. The sub scales
have generally shown to be reliable (most is > .70). This scale has been
shown to correlate with a number of criterion measures, including
intelligence, empathy, life satisfaction, and parental warmth. It is a
potentially useful instrument, valuable of more extensive evaluation
especially in an Indian setting.

Mayer, Salovey and their recent colleague David Caruso
designed Mayer Salovey Caruso Emotional Intelligence Test MSCEIT in
1999. This scale is designed to resolve some of the problems associated
with the MEIS. It measures the four core emotional abilities defined in
the Mayor Salovey model. It includes many tasks each designed to test
a person’s emotional ability. It consists of 141 items. There is another
version of MSCEIT available for the adolescents.

If Goleman is responsible for popularizing the concept of
emotional intelligence, then Dr. Reuven Bar-on (1997) made a popular
approach to measure emotional intelligence and he developed an
instrument known as the Bar-one’s Emotional Quotient-I (Emotional
Quotient Inventory) to help measure Emotional Intelligence. It
measures “an array of non-cognitive capabilities, competencies and
skills that influence one’s ability to succeed in coping with environment
demands and pressures”. This instrument predicted and assisted in the
success of real people in wide variety of fields. His self report
Emotional Quotient-I generates a total Emotional Quotient score and
five Emotional Quotient composite scales consisting of 15 subscale
scores: (i) Intrapersonal Emotional Quotient, (ii) Interpersonal

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Emotional Quotient, (iii) Stress management Emotional Quotient (iv) Adaptability Emotional Quotient and (v) General mood Emotional Quotient. It is a paper pencil test.

Another popular model of Emotional Quotient was given by Cooper (1997). Various dimensions of Emotional Quotient have been given in different scales of Emotional Quotient. Emotional Quotient in business and life can be understood by this four-corner stone model by Cooper. Emotional literacy, emotional fitness, emotional depth and emotional alchemy are the four cornerstones.

Emotional Competence Inventory (ECI) version 1 and 2 are the other two scales used to measure Emotional Quotient. ECI – 2 consists of 18 competencies grouped into four dimensions: self-awareness, self-management, social awareness and social skills (Hay Group, 2002). ECI is a multi rator instrument that generates self, manager, direct report and peer ratings on a series of behavioral indicators of emotional intelligence.

Goleman (1995) has developed another scale. The scale has various situations and is computed on the basis of responses to these situations.

The above discussion reveals that there are psychometrically valid scales to measure Emotional Quotient at the international level in Israel and the USA. The present investigator has also come across emotional intelligence scales developed by Indians.

Shailendra Singh has developed a measure of emotional intelligence by following Goleman’s (1998) Model of Emotional Intelligence. He has made an attempt to measure core dimensions of emotional intelligence namely; self-awareness, self-regulations, motivation, social awareness, and social skill. There are 12 statements in each dimension and the total no of statements is 60.
Anukool Hyde, Sanjyot Pethe, and Upinder Dhar (2002) have developed EIS consisting of 34 items spread over 10 factors of emotional intelligence namely; self awareness, empathy, self-motivation, emotional stability, managing relations, integrity self-development, value-orientation commitment and altruistic behaviours.

Unfortunately, no attempts have been made to validate the features of the concept of emotional intelligence and its measurement in relation to the academic achievement. This was precisely one of the reasons that the present study was undertaken as a modest effort to construct and standardize one such scale for Indian students.

b) **Note on Goleman’s Model of Emotional Intelligence**

As the present investigator followed Goleman’s model of emotional intelligence, here below, a brief note on The Emotional Competence Frame work as given by Goleman has been given for quick reference.

The emotional intelligence framework as given by Goleman is comprised of personal and social competencies. By ‘competence’ Goleman meant “a learned capability based on emotional intelligence that result in outstanding performance at work”.

Personal competencies determine how we manage ourselves. Social competences determine how we handle relationship. Personal competencies are categorized under three dimensions namely; self-awareness, self-regulation and motivation and the social competencies are categorized under two dimensions namely; empathy and social skills.

I **Personal Competence**

This division is comprised of three dimensions and twelve competencies. They are:
A: **Self-Awareness**: This dimension refers to the ability to know one’s internal states, preferences, resources, and intuitions. This includes three competencies namely: emotional awareness, accurate self-assessment and self-confidence.

A1: **Emotional Awareness**: refers to the competence of recognizing one’s emotions and their effects. People with this competence know which emotions they are feeling and why, they are able to realize the links between their feelings and what they think, do and say. They can recognize how their feelings affect their performance. They have a guiding awareness of their values and goals.

A2: **Accurate Self-Assessment**: refers to the competence of knowing one’s inner resources, abilities and limits. People with this competence are aware of their strengths and weaknesses, reflective, learning from experience, open to candid feedback, new perspectives, continuous learning, and self-development and are able to show a sense of humor and perspective about themselves.

A3: **Self-Confidence**: This refers to the competence of a strong sense of one’s self worth and capabilities. People with this competence present themselves with self-assurance; have “presence”, can voice views that are unpopular and go out on a limb for what is right, are decisive, able to make sound decisions despite uncertainties and pressures.

B: **Self Regulation**: This dimension refers to managing one’s internal states, impulses and resources. This includes five competencies namely; self-control, trustworthiness, conscientiousness, adaptability and innovation.
B1: **Self-Control:** refers to keeping disruptive emotions and impulses in check. People with this competence manage their impulsive feelings and distressing emotions well. They stay composed, positive and unflappable even in trying moments and they can think clearly and stay focused under pressure.

B2: **Trustworthiness:** This competence refers to maintaining integrity and taking responsibility for personal performance. People with this competence of trustworthiness, act ethically and are above reproach, build trust through their reliability and authenticity, admit their own mistakes and confront unethical actions in others. They can take tough, principles stands even if they are unpopular.

B3: **Conscientiousness:** This refers to the competence of taking responsibility for personal performance. People with this competence of conscientiousness, meet commitment and keep promises, hold themselves accountable for meeting their objectives and they are organized and careful in their work.

B4: **Adaptability:** This refers to the competence of being flexible in responding to change. People with the competence of adaptability, smoothly handle multiple demands, shifting priorities, and rapid change, adapt their responses and tactics to fit fluid circumstances and they are flexible in how they see events.

B5: **Innovation:** This refers to the competence of being open to novel ideas and approaches. People with the competence of innovation, seek out fresh ideas from a wide variety of sources, entertain original solutions to problems, generate new ideas, take fresh perspectives and risks in their thinking.
C: **Motivation:** This dimension refers to emotional tendencies that guide or facilitate reaching goals. This includes four competences namely; achievement drive, commitment, initiative and optimism.

C1: **Achievement Drive:** This refers to the competence of striving to improve or meet a standard of excellence. People with this competence, are results-oriented, with a high drive to meet their objectives and standards. They set challenging goals, take-calculated risks, pursue information to reduce uncertainty, find ways to do better and learn how to improve their performance.

C2: **Commitment:** This refers to the competence of aligning with the goals of a group or organization. People with this competence, readily make sacrifices to meet a larger organizational goal, find a sense of purpose in the larger mission, use the group’s core values in making decisions and clarifying choices, actively seek out opportunities to fulfill the group’s mission.

C3: **Initiative:** This refers to the competence of readiness to act on opportunities. People with this competence of initiative, are ready to seize opportunities, pursue goals beyond what’s required or expected of them, cut through red tape and bend the rules when necessary to get the job done, mobilize others through unusual, enterprising efforts.

C4: **Optimism:** This refers to the competence of displaying production-activity and persistence. People with the competence of optimism, persist in seeking goals despite obstacles and setbacks, operate from hope of success rather than fear of failure, see setbacks as due to manageable circumstance rather than a personal flaw.
II. Social Competence

This division is comprised of two dimensions and thirteen competencies. They are:

D: **Empathy:** refers to awareness of others feelings and perspectives. This involves five competencies namely; understanding others, developing others, service orientation, leveraging diversity and political awareness.

D1: **Understanding Others:** This refers to the competence of sensing others feelings and perspectives, and taking an active interest in their concerns. People with this competence are attentive to emotional cues and listen well, show sensitivity and understand others perspectives, help based on understanding other people’s needs and feelings.

D2: **Developing Others:** This refers to the competence of sensing others development needs and bolstering their abilities. People with this competence, acknowledge and reward people’s strengths and accomplishments, offer useful feedback and identify people’s needs for further growth, mentor, give timely coaching and offer assignments that challenges and foster a person’s skills.

D3: **Service Orientation:** This refers to the competence anticipating, recognizing, and meeting customers, needs. People with this competence, Understand customers needs and match them to services or products, seek ways to increase customers’ satisfaction and loyalty. They gladly offer appropriate assistance, grasp a customer’s perspective, acting as a trusted advisor.

D4: **Leveraging Diversity:** This refers to the competence of cultivating opportunities through different kinds of people. People with mis competence, respect and relate well to people from varied
backgrounds, understand diverse world wise and are sensitive to group differences, see diversity as opportunity, creating an environment where diverse people can thrive. They challenge bias and intolerance.

D5: **Political Awareness:** This refers to the competence of reading social and political currents. People with this competence, accurately read key power relationships, detect crucial social networks, understand the forces that shape views and actions of clients, customers, or competitors, accurately read organizational and external realities.

E: **Social Skills:** are related to adeptness at inducing desirable responses in others. These include the competencies namely influence, communication, conflict management, leadership, change catalyst, building bonds, collaboration and co-operation and team capabilities.

E1: **Influence:** This refers to the competence of wielding effective tactics for persuasion. People with this competence, are skilled at winning people over. They fine-tune presentations to appeal to the listener, use complex strategies like indirect influence to build consensus and support, orchestrate dramatic events to effectively make a point.

E2: **Communication:** This refers to the competence of listening openly and sending convincing messages. People with this competence, are effective in give and take, registering emotional cues in attuning their message, deal with difficult issues straightforwardly, listen well, seek mutual understanding, and welcome sharing of information fully. They foster open communication and stay receptive to bad news as well as good.
E3: *Conflict Management:* This refers to negotiating and resolving disagreements. People with this competence, handle difficult people and tense situations with diplomacy and tact, spot potential conflict, bring disagreements into the open and help de-escalate, encourage debate and open discussion.

E4: *Leadership:* This competence is related to inspiring and guiding individual and groups. People with this competence, articulate and arouse enthusiasm for a shared vision and mission, step forward to lead as needed, regardless of position. They guide the performance of others while holding them accountable, lead by example.

E5: *Change Catalyst:* This competence is related to initiating or managing change. People with this competence, recognize the need for change and remove barriers, challenge the status to acknowledge the need for change. They are able to champion the change and enlist others in its pursuit, model the change expected of others.

E6: *Building Bonds:* This competence is related to nurturing instrumental relationships. People with this competence, cultivate and maintain extensive informal networks, seek out relationship that are mutually beneficial, build rapport and keep others in the loop, make and maintain personal friendships among work associates.

E7: *Collaboration and Cooperation:* This competence is related to working with others toward shared goals. People with this competence, balance a focus on task with attention to relationship, collaborate, sharing plans, information, resources, promote a friendly, cooperative climate, sport and nurture opportunities for collaboration.
E8: **Team Capabilities:** This competence is related to creating group synergy in pursuing collective goals. People with this competence, model team qualities like respect, helpfulness, and cooperation, draw all members into active and enthusiastic participation, build team identify, commitment, protect the group and its reputation share credit.

c) **Procedure followed for Developing Emotional Intelligence Scale for Adolescents is as follows**

**Step 1: Collection of Items: (Writing Statements of Items of the Scale)**

As a first step, the investigator made through consultation of a wide variety of sources like authoritative and authentic books, research literatures, journals and periodicals and other resourceful literature related to the concept of emotional intelligence and its parameters namely; self-awareness, self-regulation, motivation, empathy and social skills. The investigator carefully examined the definition of each competence and generated a large item pool of 200 items that are related to these competencies.

**Step 2: Editing of Items:**

Five expert psychologists were requested to check these items for clarity and classify these items into 25 categories and they were further asked to classify 25 categories into 5 major dimensions. Along with the pool of items, Goleman’s definition of Emotional Intelligence and a brief note on emotional competence frame work were also supplied to the experts for the purpose of reference. The items which were considered by experts as ambiguous, abstract, complex, difficult terminology were discarded.
Step 3: Preliminary Administration and Item Analysis

The preliminary pool of remaining items 150 were printed in the form of a self-report questionnaire with a five point scale form (as given below) against each item. The response categories for positively worded items were 5 = Strongly Agree, 4 = Agree, 3 = Undecided, 2 = Disagree and 1 = Strongly Disagree. The response categories for negatively worded items were 1 = Strongly Agree, 2 = Agree, 3 = Undecided, 4 = Disagree and 5 = Strongly Disagree. The Emotional Intelligence scale was administered to a represented sample (N=500) consisting of Pre-University College Students. The students were asked to indicate their response to each statement by encircling one of the categories of agree or disagree using a five point scale as stated above. Each item of the scale was scored using the following method. In scoring the investigator distinguished the positive and negatively worded items.

Table - 3.2: Positively Worded and Negatively Worded Statement Scores (N=500)

<table>
<thead>
<tr>
<th>Items</th>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positively worded</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Negatively worded</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Then the total score of each respondent was obtained by adding his/her scores that he/she received for separate statements.

The next step was that the answer sheets were arranged in the descending order of the total scores. From the 500 answer sheets, the top 27% (top 135 answer sheets) and the bottom 27% (bottom 135 answer sheets) were used for item selection. The ‘t’ value was calculated through SPSS.
Those items which showed higher \( t \) values that is more than 0.6 were selected for the final scale. The items having correlation below 0.6 were deleted. At last with the exclusion of 50 items still 150 items were there. As the investigator found it difficult to get response from students of Pre-University course on such a long scale and on the basis of the feedback that the scale was too long, it was decided to reduce the number of items to 113 only spreading over all the 25 competencies with due weightages to each and while retaining reliability within acceptable limits. Thus the final form of the EISA consisted of 113 items.

**Step 4: Final Version of EISA**

The final EISA was administrated on a sample of 500 Pre-University College students and the scores were used for the purpose of developing norms, estimating the validity of the scale and for estimating the reliability of the scale.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Cor. Coeff</th>
<th>Item No.</th>
<th>Cor. Coeff</th>
<th>Item No.</th>
<th>Cor. Coeff</th>
<th>Item No.</th>
<th>Cor. Coeff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.716</td>
<td>29</td>
<td>0.991</td>
<td>57</td>
<td>0.716</td>
<td>85</td>
<td>0.753</td>
</tr>
<tr>
<td>2</td>
<td>0.823</td>
<td>30</td>
<td>0.852</td>
<td>58</td>
<td>0.823</td>
<td>86</td>
<td>0.684</td>
</tr>
<tr>
<td>3</td>
<td>0.784</td>
<td>31</td>
<td>0.655</td>
<td>59</td>
<td>0.690</td>
<td>87</td>
<td>0.675</td>
</tr>
<tr>
<td>4</td>
<td>0.712</td>
<td>32</td>
<td>0.674</td>
<td>60</td>
<td>0.782</td>
<td>88</td>
<td>0.814</td>
</tr>
<tr>
<td>5</td>
<td>0.863</td>
<td>33</td>
<td>0.684</td>
<td>61</td>
<td>0.611</td>
<td>89</td>
<td>0.907</td>
</tr>
<tr>
<td>6</td>
<td>0.745</td>
<td>34</td>
<td>0.684</td>
<td>62</td>
<td>0.672</td>
<td>90</td>
<td>0.863</td>
</tr>
<tr>
<td>7</td>
<td>0.863</td>
<td>35</td>
<td>0.863</td>
<td>63</td>
<td>0.916</td>
<td>91</td>
<td>0.622</td>
</tr>
<tr>
<td>8</td>
<td>0.942</td>
<td>36</td>
<td>0.675</td>
<td>64</td>
<td>0.826</td>
<td>92</td>
<td>0.655</td>
</tr>
<tr>
<td>9</td>
<td>0.753</td>
<td>37</td>
<td>0.863</td>
<td>65</td>
<td>0.715</td>
<td>93</td>
<td>0.626</td>
</tr>
<tr>
<td>10</td>
<td>0.823</td>
<td>38</td>
<td>0.814</td>
<td>66</td>
<td>0.845</td>
<td>94</td>
<td>0.889</td>
</tr>
<tr>
<td>11</td>
<td>0.814</td>
<td>39</td>
<td>0.706</td>
<td>67</td>
<td>0.659</td>
<td>95</td>
<td>0.674</td>
</tr>
<tr>
<td>12</td>
<td>0.797</td>
<td>40</td>
<td>0.797</td>
<td>68</td>
<td>0.699</td>
<td>96</td>
<td>0.641</td>
</tr>
<tr>
<td>13</td>
<td>0.788</td>
<td>41</td>
<td>0.811</td>
<td>69</td>
<td>0.721</td>
<td>97</td>
<td>0.674</td>
</tr>
<tr>
<td>14</td>
<td>0.786</td>
<td>42</td>
<td>0.889</td>
<td>70</td>
<td>0.658</td>
<td>98</td>
<td>0.855</td>
</tr>
<tr>
<td>15</td>
<td>0.886</td>
<td>43</td>
<td>0.674</td>
<td>71</td>
<td>0.901</td>
<td>99</td>
<td>0.889</td>
</tr>
<tr>
<td>16</td>
<td>0.684</td>
<td>44</td>
<td>0.666</td>
<td>72</td>
<td>0.886</td>
<td>100</td>
<td>0.753</td>
</tr>
<tr>
<td>17</td>
<td>0.697</td>
<td>45</td>
<td>0.674</td>
<td>73</td>
<td>0.659</td>
<td>101</td>
<td>0.684</td>
</tr>
<tr>
<td>18</td>
<td>0.784</td>
<td>46</td>
<td>0.826</td>
<td>74</td>
<td>0.841</td>
<td>102</td>
<td>0.726</td>
</tr>
<tr>
<td>19</td>
<td>0.788</td>
<td>47</td>
<td>0.699</td>
<td>75</td>
<td>0.863</td>
<td>103</td>
<td>0.814</td>
</tr>
<tr>
<td>20</td>
<td>0.922</td>
<td>48</td>
<td>0.901</td>
<td>76</td>
<td>0.684</td>
<td>104</td>
<td>0.706</td>
</tr>
<tr>
<td>21</td>
<td>0.863</td>
<td>49</td>
<td>0.886</td>
<td>77</td>
<td>0.697</td>
<td>105</td>
<td>0.863</td>
</tr>
<tr>
<td>22</td>
<td>0.666</td>
<td>50</td>
<td>0.863</td>
<td>78</td>
<td>0.796</td>
<td>106</td>
<td>0.797</td>
</tr>
<tr>
<td>23</td>
<td>0.709</td>
<td>51</td>
<td>0.675</td>
<td>79</td>
<td>0.784</td>
<td>107</td>
<td>0.655</td>
</tr>
<tr>
<td>24</td>
<td>0.889</td>
<td>52</td>
<td>0.688</td>
<td>80</td>
<td>0.666</td>
<td>108</td>
<td>0.712</td>
</tr>
<tr>
<td>25</td>
<td>0.675</td>
<td>53</td>
<td>0.758</td>
<td>81</td>
<td>0.991</td>
<td>109</td>
<td>0.864</td>
</tr>
<tr>
<td>26</td>
<td>0.726</td>
<td>54</td>
<td>0.865</td>
<td>82</td>
<td>0.852</td>
<td>110</td>
<td>0.889</td>
</tr>
<tr>
<td>27</td>
<td>0.756</td>
<td>55</td>
<td>0.745</td>
<td>83</td>
<td>0.863</td>
<td>111</td>
<td>0.653</td>
</tr>
<tr>
<td>28</td>
<td>0.653</td>
<td>56</td>
<td>0.842</td>
<td>84</td>
<td>0.922</td>
<td>112</td>
<td>0.784</td>
</tr>
</tbody>
</table>
The responses obtained from the pilot testing are used in item analysis. It can be observed from the above table that the calculated value of correlating coefficients for every item of Emotional Intelligence which were found to be significant at 0.01 level of significance. Hence, 113 items of Emotional Intelligence Scale for Adolescents retained for the final version of the EISA details of reliability values of each and every item is given in the above table.
Table - 3.4: Dimension-wise and Competencies-Wise Serial Number of Positively Worded and Negatively Worded Items in Emotional Intelligence Scale for Adolescents (EISA) (N=500)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Competencies</th>
<th>Sl. No. of Positively worded Items</th>
<th>Total No.</th>
<th>Sl. No. of Negatively worded Items</th>
<th>Total</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Self-Awareness</td>
<td>A1-Emotional Awareness</td>
<td>1,2,4,6</td>
<td>4</td>
<td>3,5,7,8</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>A2-Accurate self assessment</td>
<td>9,10,11,12,16,17</td>
<td>6</td>
<td>13,14,15</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>A3-Self confidence</td>
<td>18,20,21,22,23,</td>
<td>5</td>
<td>19,24,25,26,27</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Total of A</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>B Self-Regulation</td>
<td>B1-Self control</td>
<td>29,30,33,34,36,</td>
<td>5</td>
<td>28,31,32,35</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>B2-Trust worthiness</td>
<td>38,39,43</td>
<td>3</td>
<td>37</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>B3-Conscientiousness</td>
<td>40,41,42</td>
<td>3</td>
<td></td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>B4-Adaptability</td>
<td>44,45,48,49</td>
<td>4</td>
<td></td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>B5-Innovation</td>
<td>50,46,47,52</td>
<td>4</td>
<td>51</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total of B</td>
<td></td>
<td></td>
<td></td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>C Motivation</td>
<td>C1-Achievement drive</td>
<td>53,54,55,56,57</td>
<td>5</td>
<td></td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>C2-Commitment</td>
<td>58,59,60,61</td>
<td>4</td>
<td></td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>C3-Initiative</td>
<td>62,63</td>
<td>2</td>
<td></td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>C4-Optimism</td>
<td>64,65,66,67,68</td>
<td>5</td>
<td></td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total of C</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total of A, B and C</td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>18</td>
</tr>
</tbody>
</table>

182
<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Competencies</th>
<th>Sl. No. of Positively worded Items</th>
<th>Total No.</th>
<th>Sl. No. of Negatively worded Items</th>
<th>Total</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D Empathy</td>
<td>D1-Understanding others</td>
<td>69,70,71,72</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D2-Developing others</td>
<td>73,74,75</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D3-Service orientation</td>
<td>76,77,78</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D4-Leveraging diversity</td>
<td>79,80,81</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D5-Political awareness</td>
<td>82</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total of D</strong></td>
<td></td>
<td></td>
<td><strong>14</strong></td>
<td></td>
<td><strong>14</strong></td>
<td></td>
</tr>
<tr>
<td>E Social Skills</td>
<td>E1-Influence</td>
<td>83,84,85,86</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E2-Communication</td>
<td>87,88,90,91,92,93</td>
<td>6</td>
<td>89</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>E3-Conflict management</td>
<td>94,95,96,97</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E4-Leadership</td>
<td>98,99,100,101</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E5-Change catalyst</td>
<td>102,103,104</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E6-Building bonds</td>
<td>105,106,107,108</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E7-Collaboration &amp; Cooperation</td>
<td>109,110</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E8-Team capabilities</td>
<td>111,112,113</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total of E</strong></td>
<td></td>
<td></td>
<td><strong>30</strong></td>
<td></td>
<td><strong>31</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total of D and E</strong></td>
<td></td>
<td></td>
<td><strong>44</strong></td>
<td></td>
<td><strong>45</strong></td>
<td></td>
</tr>
<tr>
<td><strong>G.Total</strong></td>
<td></td>
<td></td>
<td><strong>94</strong></td>
<td></td>
<td><strong>19</strong></td>
<td><strong>113</strong></td>
</tr>
</tbody>
</table>
It can be observed from the above table data that the Emotional Intelligence Scale for Adolescents is consisting of 113 of which 94 statements are positively worded and 19 statements are negatively worded. Positively worded statements can be scored 5, 4, 3, 2 and 1. Negatively worded statements can be scored 1, 2, 3, 4 and 5. The score of the EISA ranges from 113 to 565.

3.12.2 Statistical Property used in the Selection and Elimination of Items Reliability of the Scale

The reliability of the scale was determined by calculating reliability coefficient on a sample of 500 Pre-University Students. The statistical properties of the scale as found out by Chronbach alpha, split half method (Guttmann’s) reliability are given below.

Table – 3.5: Reliability Quotients of EISA (N=500)

<table>
<thead>
<tr>
<th>Reliability Measure</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronback Alpha</td>
<td>0.6824</td>
</tr>
<tr>
<td>Split-half Method (Guttmann)</td>
<td>0.9326</td>
</tr>
</tbody>
</table>

Since we find both reliability coefficients are above 0.6824 and 0.9326 one can definitely say that the tool developed for measurement of Emotional Intelligence is highly reliable. Above reliability quotients which were found to be significant at 0.01 level of significance.

Validity of the Scale:

Besides face validity, as all items were related to the variable under focus, the scale has high content validity. It is evident from the assessment of judges that the items of the scale are directly related to the concept of emotional intelligence. The factor-wise correlations with the total scores as well as between factors are given below.
Table – 3.6: Correlation Matrix on Dimension of Emotional Intelligence Scale (N=500)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Self-Awareness</th>
<th>Self-Regulation</th>
<th>Motivation</th>
<th>Empathy</th>
<th>Social Skills</th>
<th>Total Emotional Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness</td>
<td>1.0</td>
<td>0.416**</td>
<td>0.295**</td>
<td>0.100*</td>
<td>0.183**</td>
<td>0.503**</td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>0.416</td>
<td>1.0</td>
<td>0.423**</td>
<td>0.130**</td>
<td>0.233**</td>
<td>0.637**</td>
</tr>
<tr>
<td>Motivation</td>
<td>0.295**</td>
<td>0.423**</td>
<td>1.0</td>
<td>0.384**</td>
<td>0.268**</td>
<td>0.597**</td>
</tr>
<tr>
<td>Empathy</td>
<td>0.100*</td>
<td>0.130**</td>
<td>0.384**</td>
<td>1.0</td>
<td>0.097**</td>
<td>0.354**</td>
</tr>
<tr>
<td>Social Skills</td>
<td>0.183*</td>
<td>0.233**</td>
<td>0.268**</td>
<td>0.097*</td>
<td>1.0</td>
<td>0.502**</td>
</tr>
<tr>
<td>Total Emotional Intelligence</td>
<td>0.503**</td>
<td>0.637**</td>
<td>0.597**</td>
<td>0.354**</td>
<td>0.502**</td>
<td>1.0</td>
</tr>
</tbody>
</table>

* 0.05 level of significance. ** 0.01 level of significance.
It can be revealed the data from the above table that Emotional Intelligence scale for adolescents has five dimensions – self-awareness, self-regulation, Motivation, Empathy and Social skills which are found to be significantly interrelated each and every dimensions. All the detailed co-efficient of correlations of dimensions of EISA are given in the above table.

**Table –3.7: Interpretation of the Results of Emotional Intelligence Scale for Adolescents (EISA) (N = 500)**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Description</th>
<th>Range of scores (Male and Female)</th>
<th>Percentage of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very poor Emotional Intelligence</td>
<td>Emotionally not intelligent</td>
<td>Below 226</td>
<td>Below 40%</td>
</tr>
<tr>
<td>2</td>
<td>Below average</td>
<td>Below average</td>
<td>226-283</td>
<td>40-49%</td>
</tr>
<tr>
<td>3</td>
<td>Average</td>
<td>Average</td>
<td>283-396</td>
<td>50-70%</td>
</tr>
<tr>
<td>4</td>
<td>Above average</td>
<td>Emotionally intelligent</td>
<td>396-452</td>
<td>70-80%</td>
</tr>
<tr>
<td>5</td>
<td>High Emotional Intelligence</td>
<td>Highly Emotional Intelligent</td>
<td>452-565</td>
<td>80-100%</td>
</tr>
</tbody>
</table>

The norms given above are for the Adolescents age group of 13-19 years in Karnataka State. Other researchers may use the same norms can develop their own norms depending upon the objectives of the study, nature of the sample and the place of the study.

**3.12.3 Limitations of the Scale**

1. This scale has prepared for the age group of 13-19 yrs meant for Adolescents.
2. In all the tests of this nature, the subjects do manage to get some insight into what the purpose is.
3. The scale purports to measure learned optimism of which the subject has some awareness.
4. The data that would be generated may be used for self-reflection and counselling.
5. This scale can be used for exploratory studies.

3.12.4 Importance of Measuring Emotional Intelligence

It is scientifically proved that the success of individuals work is 80 percent dependent on emotional intelligence and only 20 percent on general intelligence quotient.

The present emotional intelligence scale is very useful for the purpose to assess emotional intelligence of students of Pre-University Course. It helps them to understand the emotional intelligence which assists the students to choose educational and vocational career. It helps them to develop adjustment.

It has become an urgent necessity that the present day educational institutions provide healthy emotional modelling, nurturing etc., which would result in making the students, attains moderately high Emotional Quotient.

Students should also be advised to make conscious, deliberate and conscientious efforts to improve their emotional intelligence potential. Schools and colleges should be adequately equipped with necessary learning materials in case of teaching.

The social, academic and emotional climate of the secondary schools have to be improved, thus enabling the students to acquire some abilities which improve emotional intelligence.

Any research effort becomes worthwhile only when it specifies some of the important educational implications. The findings of the present study have certain significant and meaningful educational
implications for psychologist's parents, school guidance workers and counselors and educational administrators.

3.13 Description of the other Tools Used for the Study

3.13.1 Sinha's Comprehensive Anxiety Test (SCAT)

This scale was developed by A.K.P. Sinha and L.N.K Sinha. It consists of 90 questions about the Anxiety related to adolescents.

Development of the Test

Item Construction

The items of the test were largely constructed on the basis of the symptoms of anxiety reported by those who visited the institute of Psychological Research and Service, Patna University for psychological assistance. A few items from the existing tests of anxiety were also incorporated after such modifications as were considered necessary. Thus initially 315 items were prepared in Hindi. These items were given to five judges (all engaged in counselling and psychological testing work for examining the merit of each item for inclusion in the test of anxiety. They were also asked to score out those items which they thought were redundant. On the basis of 100% agreement among the judges, 70 out of 315 items were eliminated.

Item Analysis:

Before undertaking the work of item analysis, the remaining 245 items were tried out on smaller samples several times and necessary modifications made in them to ensure that the items were intelligible to the students. Finally, the test was administered on 100 college students who approached for psychological assistance complaining of one or several symptoms of anxiety. No time limit was imposed. The subjects were required to respond to each item in terms of 'Yes' or 'No'. The
'Yes' response to any item was indicative of anxiety and was given score of one. A score of zero was given to a 'No' response. For item analysis, the point biserial correlations were computed. The criterion of a coefficient of correlation, being significant at 0.001 level was fixed for the inclusion of an item in the final test. Out of 245 coefficients of correlation, 90 were significant at or beyond 0.001 level. Consequently, those 90 items which fulfilled the criterion constituted the test in its final form.

**Reliability:**

The coefficient of reliability was determined by using the following two methods:

1. The test-restests method (N=100) was employed to determine the temporal stability of the test. The product moment corelution between the test and retest scores was 0.85.

2. The internal consistency reliability was ascertained by adopting odd-even procedure (N=100). Using the Spearman Brown formula, the reliability coefficient of the test was found to be 0.92. Both the values ensure a high reliability of the test.

**Validity:**

The co-efficient of validity was determined by computing the co-efficient of correlation between scores on Comprehensive Anxiety Test and on Taylor’s Manifest Anxiety Scale. It was 62, which is significant beyond 0.001 level of confidence.

**Instructions for Administration:**

1. The instructions printed on the test form should be made clear by test administrator to the testee.

2. No time limit is fixed for completing the test. However, usually an individual takes 15 to 20 minutes in completing the test form.
3. It should be emphasized that there is no right or wrong response to the statements. They are designed to study individual's reactions to different situations.

4. It should be pointed out that each item has to be responded in either positive or negative terms, i.e., Yes or No, and that no statement should be left out.

5. It is undesirable to tell the testee about the aim of the test.

**Scoring:**

The inventory can be scored accurately by hand and no scoring key or stencil is provided so far. For any response indicated as 'Yes', the testee should be awarded the score of one, and zero for 'No'. The sum of all the positive or yeas responses would be the total anxiety score of the individual.

**Norms:**

Norms for the test have been prepared on a sample of 400 college students of B.A. classes consisting of both the sexes - 200 boys and 200 girls. Percentile norms are provided in table 1 for boys and girls separately. These should be considered as a reference points for interpreting the test scores. However, it is advisable to large scale of the test to develop their own norms based on their own population.

The individual may be classified into five categories on the basis of scores obtained on the inventory. An individual with an extremely high score or above the 75th percentile may be regarded as hyper-anxiety individual. His personality is complicated and he may be in need of counselling and psychotherapy. The extremely low scores, below 25th percentile, may indicate the person as under motivated and sluggish. The middle group of scores would represent essentially normal individuals.
Table - 3.8: Interpretation of Scores on Anxiety Level and Percentile Equivalents of Test Scores (N=500)

<table>
<thead>
<tr>
<th>Percentiles</th>
<th>Scores</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>99</td>
<td>69</td>
<td>71</td>
</tr>
<tr>
<td>95</td>
<td>42</td>
<td>41</td>
</tr>
<tr>
<td>90</td>
<td>35</td>
<td>36</td>
</tr>
<tr>
<td>80</td>
<td>30</td>
<td>29</td>
</tr>
<tr>
<td>75 (Q3)</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>70</td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>60</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>50 (Md)</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>40</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>30</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>25 (Qi)</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>20</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>N</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Mean</td>
<td>22.30</td>
<td>23.05</td>
</tr>
<tr>
<td>Median</td>
<td>19.94</td>
<td>22.86</td>
</tr>
<tr>
<td>S.D.</td>
<td>12.40</td>
<td>10.90</td>
</tr>
</tbody>
</table>

3.13.2 Adjustment Inventory for College Students (AICS)

This scale was developed by A.K.P. Sinha and R.P. Singh. It consists of 102 statements about the adjustment and its areas.

3.13.3 Minnesota Paper Form Board Test (MPFBT)

Minnesota paper form board test was designed to measure the cognitive styles of the student. It consists of 3 sub-test embedded figures, paper folding and card rotation tests. The testee has to identify the figure embedded in the problem he has to imagine the folding and
unfolding of pieces of paper and to see the difference in figures on rotation. Out of 3 sub-tests the investigator has selected and administered only sub-test has the concurrent validity.

3.13.4 Description of Paper Folding Test (PFT)

This is a test designed by Minnesota to measure the cognitive styles of the adolescents. Test consists of 2 parts, part-1 of items and part-2 of 10 items. The instructions for each test are provided suitably.

General instructions given as following:

i. Do not open the booklet before you are told to do so.

ii. You will have exactly 6 minutes to do the whole test.

iii. Study the given examples carefully.

iv. Try and answer all questions.

v. Mark for the correct answer in the space given.

Note: Your answers will be kept confidential and will be used for research purpose only.

The number of responses given by the id was counted. For each correct response 01 score awarded and with the help of scoring key, interpretation of the same and the level of cognitive styles were recorded.

Table -3.9: Scoring Key

| Item No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| Answer   | A | D | D | D | B | E | B | C | D | B | C | B | A | C | C | B | D | C | B | B |

Table - 3.10: Interpretation of the Scores on Cognitive Styles

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Scores</th>
<th>Category on Level of Cognitive Styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9 and Below</td>
<td>Low Cognitive Style</td>
</tr>
<tr>
<td>2</td>
<td>10 - 11</td>
<td>Average Cognitive Style</td>
</tr>
<tr>
<td>3</td>
<td>12 and above</td>
<td>High Cognitive Style</td>
</tr>
</tbody>
</table>
Method of Scoring: Higher the score shows higher cognitive style and lower the scores show low cognitive style.

3.14 Sample of the Study

The population for the present study was all those Pre-University students who were studying in Arts, Science and Commerce at Government, Private and Bruhat Bangalore Mahanagara Palike (BBMP) Pre-University colleges in Bangalore District from Rural and Urban locality studying in Kannada and English medium classes.

Stratified random sampling was done in order to get Pre-University college representation and student representation. Thus the present study includes 269 male students and 231 female students of Pre-University colleges.

Distribution of Sample:

Table-3.11: Showing Breakup of Sample in Terms of Variables (N=500)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Variable</th>
<th>Breakup</th>
<th>No. of Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of Management of Pre-University College</td>
<td>Government, Private and BBMP</td>
<td>200 138 162</td>
<td>500</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>Male</td>
<td>269</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>231</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Subject studying</td>
<td>Arts</td>
<td>164</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science &amp; Commerce</td>
<td>165 171</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Medium</td>
<td>Kannada</td>
<td>65 435</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>English</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Locality</td>
<td>Rural</td>
<td>75 425</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urban</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.15 Method of Data Collection/Data Gathering Technique

The investigator visited different Government, Private and BBMP Pre-University colleges from Rural and Urban locality selected both male and female students of Kannada and English medium colleges and consulted the respective Principals and taken the permission, administered the tests by using the tools and the investigator gave the instructions to the Arts, Science and Commerce students. And after filling the questionnaires by the students, investigator collected the questionnaires.

Students were assured of confidentiality and asked to consult the investigator whenever they come across some problems, related to their studies as well of their personal problem and guidance related to their career.

Scoring procedure:

Tests and scales were scored for each respondent manually. Based on the student responses and with the help of manuals scores were calculated.

Data Processing:

Processing, cleansing and scoring of the collected data were carried out under the following stages.

✓ The data were collected from the 269 Male students and 231 Female students of Government, Private and BBMP Pre-University Colleges.

✓ Then the data pertaining to all the four variables was scored.

✓ I PUC Annual Examination and II PUC Mid-term exam marks were collected to test on their Academic Achievement.

✓ After scoring data was coded and inferred into the computer using MS-Excel.
Analysis of data SPSS-Package, 11.0 were used to perform appropriate statistical methods to analyze and interpret the data.

3.16 Statistical Techniques Used

The data were collected from 500 students were analyzed with reference to the objective stated and hypothesis formulated.

The following statistical techniques were used for this purpose.

*Descriptive Statistics* – such as Mean and Standard Deviation, t-test, ANOVA were used to study the significant difference among the mean scores of the group.

*Correlation Analysis* – was used to investigate the relationship between independent variables and dependent variables. Karl Pearson correlation technique was applied and simple relationships were obtained.

*Multiple Regression Analysis* – was used to analyze the group of data on variables.

*Path Analysis* – was used to find out the direct and indirect influence of independent variables on the dependent variables.