CHAPTER III

METHODOLOGY
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STATEMENT OF THE PROBLEM

Students' personality, attitudes, interest and perceptions of inner and outer academic environment relate to each other and change from one year to another during undergraduation.

ASSUMPTIONS

1. Education was one of the principal means available to students to acquire/ foster a deeper and harmonious form of human development individually in the given environment. Each university/college had unique characteristics which attracted students with personality, attitudes and interest etc. of certain type. Universities were known to have better student input, teaching departments, library facilities, good professors, administration, study environment, communication facilities and the student output, in comparison to colleges. Therefore it was assumed that university students may differ from college students in terms of personality, attitudes, interest and perceptions of inner academic environment.

2. Females had in general reduced family support for education, and low career orientation in comparison to their male counterparts. Since early childhood, the socialization processes and role expectations for females and males operated differently. In recent years the process of urbanization, rising rate of female literacy and the need for their employment and empowerment, particularly in metro cities, led to some changes in their goals, role and choices, and thus in personality and attitudes. Therefore it may be assumed that female students may
differ from males on personality, attitudes, interest, and on perceptions of inner academic environment during the period of undergraduation.

3. The major focus of the time spent in the academic departments of university/college was to encourage students to acquire competency, sustain knowledge, continuous and comprehensive self evaluation and to demonstrate intrinsic motivation for gaining the maximum from education. Successive years spent in academic institution were expected to help in the development of the personality, attitudes and interests of students. Therefore, it was assumed that students' personality, attitudes, interest and perceptions of inner academic environment may differ at different time points during undergraduation.

4. Societal conditions or operating external environment in the society, such as political, economic, law and order related conditions affected the development of students' personality, attitudes, interest and the perceptions of inner academic environment of educational institutions. It may thus, be assumed that the students' perceptions of outer academic environment may be related to their personality, attitudes, interest and perceptions of inner academic environment at three time points during undergraduation.

5. Students having different needs, dispositions, values and personality in different academic institutions, showed certain predominant attitudes, choices and perceptions. Extraverts were basically persons of action rather than thought, finding value in objects and persons rather than in their own psyche. Neuroticism as a dimension of personality was however, characterized by incomplete insight into the nature of the difficulties in daily life, conflicts, and anxiety reactions. Extravert and stability attributes of personality were thus expressed by students in
engaging differently in college activities, in social interactions with teachers and students, than those high on neurotic attributes. Therefore, it was assumed that students have the extravert/introvert and/or neurotic/stable attributes may relate differently to their attitudes, interest and to the perceptions of inner and outer academic environment at different time points.

6. Students entered college with different expectations from persons, place, and even from themselves, such as, life goals. These were often modified as they interacted with people different in nature, interests and ideology. Students increasingly became critical of the system with increased maturity, familiarity, interest in inner and outer political, economic events and under the influence of student union etc. It had thus, been assumed that -

(a) students' preferred life goal may relate differently to their perceptions of inner and outer academic environment over the three years of undergraduation.

(b) students' sense of freedom to criticize authority may relate differently to perceptions of inner and outer academic environment over the three years of undergraduation.

7. Students' interests in different vocations were reflected in their career orientations. Their choices to enroll themselves in specific courses showed their specific job orientations at entry. These were however, found modified over time, as new technological developments opened up new job avenues, and different professional courses were offered in emergent areas. Their interactions with teachers, seniors, and peers made them rethink/revise their future vocational choices. Therefore, it may be assumed that the students' choice of vocations may
relate to their perceptions of inner and outer academic environment over the three years of undergraduation.

OBJECTIVES

1. To find out the institution, gender and temporal differences on personality, attitudes and interest.
2. To examine the institution, gender and temporal differences on the perceptions of inner and outer academic environment.
3. To identify the relationships among students personality, attitudes and interest over three years separately.
4. To identify the relationships of student personality dimensions, attitudes and interest with perceptions of inner academic environment in three years separately.
5. To identify the relationships of student personality dimensions, attitudes, interest with perceptions of outer academic environment for three years separately.
6. To examine the relationships between perceptions of inner and outer academic environment over three years separately.
7. To predict the students' perceptions of inner and outer academic environment by using personality, attitudes and interest variables as predictors.

HYPOTHESES

1. Students will differ significantly by institution and gender at three time points on personality, attitudes and interest.
2. Students will differ significantly by institution and gender at three time points on perceptions of inner and outer academic environment.
3. There will be different patterns of relations among personality, attitudes and interest variables during three years of undergraduation.

4. There will be different patterns of relations between personality, attitudes, interest variables and perceptions of inner academic environment during three years of undergraduation.

5. There will be different patterns of relations between personality, attitudes and interest variables and perceptions of outer academic environment during three years of undergraduation.

6. The inner academic environment variables will relate differently to outer academic environment variables during three years of undergraduation.

7. Personality, attitudes and interest variables will predict the perceptions of inner and outer academic environment significantly at the three time points.

SAMPLE

The present study was planned as a longitudinal research over three years to understand the pattern of variations and relations in students’ personality, attitudes, interest and perceptions of inner and outer academic environment, during college years. The choice of the sample involved selection at two levels: (a) institutions and (b) students.

a) Institutions: Jawaharlal Nehru University (JNU) and Aurobindo College were chosen, as both the institutions were located in a metro city, and provided good scope for different professional, technical, private and government (public sector) job opportunities, after completing the courses. JNU had been known for its unique courses and facilities, emphasis on social justice, secularism, and democratic way of life, larger participation of females in academic, and union
activities, and a peaceful campus life. Aurobindo college was a reputed college affiliated to another Central University, Delhi University (DU), located in South Delhi. It was found possible to compare the undergraduates of language courses in JNU, with those in general B.A. Courses of DU, as both were categorised as soft courses. There were however differences between the two institutions, in terms of administrative and study environment, such as conditions of teaching, method of examinations, facilities, role of unions etc.

Jawaharlal Nehru University (JNU) came into existence in 1969 as a central university. It endeavoured to emulate the principles for which Pt. Jawaharlal Nehru, the first prime minister of independent India worked during his life time i.e. national integration, social justice, secularism, democratic way of life, international understanding and scientific approach to the problems of society. To fulfill these ideals, the university tried to foster the composite culture of India, and established, such Schools and Centres of study, alongwith those in modern sciences and technology, in languages, arts, culture of India as well as literature and social, cultural life of foreign countries, so as to inculcate in students a world perspective, and an international understanding of social and cultural problems. The basic academic units of the university were not the single discipline departments, but multidisciplinary Schools of Studies. Most Schools comprised of a number of Centres having the academic programme within the broad framework of the School. There were (at the time of the research) eight Schools of inter-disciplinary research and teaching, besides one specialized centre for Biotechnology.
The School of Languages at JNU was different from other language institutions in the country. It had facilities for teaching and research (from B.A. to Ph.D. level), in most of the major foreign languages as well as in Indian languages, Philosophy, English and Linguistics. It offered a five year integrated M.A. as well as a three year B.A. (Honours) programme. Bachelor’s Degree Programme in foreign languages aimed at developing proficiency in spoken as well as written languages. Teaching methods made liberal use of audio-visual techniques, language laboratory, films etc. There were eight centres (nine languages) leading to the award of Bachelor’s degree (Hons.) in foreign languages. Most of the students in the university belonged to different parts of India, lived in hostels and participated freely in different cultural activities organized by respective Schools, hostels as well as regional student groups.

Student Union occupied a prominent position in students academic life. Along with the recognized and active student union in position, there were other non recognized student groups which organized different public meetings to discuss academic and non-academic issues, such as protests against university authority for better facilities etc. Most of the students (males and females) actively participated in those activities, and were aware of their rights and duties. The university had on its rolls approximately 3,600 students. Despite the union activities and strikes, the percentage of students attending classes was quite good. Students had good facilities, such as low fees for registration, hostel accommodation and mess facility, university health centre, bus passes, guest house etc. in comparison to other universities. The unique courses and the competent professors, good teacher-student ratio, more political awareness along with low fee
structure attracted students from different parts of India. Admission tests were conducted at a number of centres in cities all over India. It made admissions relatively more competitive, compared to other institutions.

The college selected as a comparison group, had both the undergraduate and post graduate courses (Arts, Commerce, Science), and the college offered programmes in morning as well as in evening shifts. Admission to the college was made through the university level entrance examination. Most of the students of college were domiciles of Delhi, and there were no hostel facilities for outstation students. Students participation in the college activities was very low, and controlled mainly by males. A very low percentage of students attended classes regularly.

(b) Students: At the second level, students were chosen from the university and the college attending the first year of three year undergraduate programmes, and followed for three years. The university sample included undergraduate students from the School of Languages. Out of the 185 who registered in the School in the first year course, 135 students were selected randomly and tested in first year (1997-98), tested again in the second year (1998-99) and then in the third year (1999-2000). Out of the 135 students tested in the first year, 133 students continued in the second year, and 132 in the third year. These included 96 male and 36 female students. The number of college students, who participated in the research were 48. These students were chosen randomly from Arts faculty morning shift, during their first year (1997-98) and then followed in second year (1998-99), and third year (1999-2000) of undergraduation. In the first phase 50 students participated in the study, but two students dropped out of the course after
completing second year of undergraduation. There were thus 24 male and 24 female students (total 48 students) who finally remained in the study.

The final study included only those who completed all the three years of undergraduation course. The Sampling design may be shown as below -

![Sampling Design Diagram]

**VARIABLES**

**Classifying Variables**

1. Institution: A University and College.
2. Gender: Male and Female students.
3. Time: First, Second and Third year of Undergraduation.

**Measured Variables**

1. **Personality Dimensions**

   Extraversion and neuroticism personality dimensions were defined following Eysenck (1953) as extravert-introvert and neuroticism-stability. A typical extravert was sociable, liking parties, having many friends, had need to talk to people, and did not like reading by oneself. The typical neurotic was an anxious, depressed, tensed, and quiet retiring sort of person, reserved and distant except to intimate friends.
2. **Personal Attitudes**

Attitude was an organized and consistent way of thinking, feeling and responding to personal and social things or situations. It developed in the process of reacting and adjusting to social environment. Here attitudes were defined in terms of life goal and freedom to criticize authority.

(a) **Life Goal**: Life goal indicated what individuals did strive ultimately in their life situations, and/or what they tried to attain or avoid in various life domains. There were 5 life goals identified and chosen on the basis of students' responses to an open ended question, indicating their preferred life goals. The chosen five life goals in terms of frequency of choice were - love and affection, personal identity, economic stability, social service and concern for parent care.

(b) **Freedom to Criticize Authority**: This variable was defined as students' perceived freedom of inquiry and expression. It was formed on the basis of student's responses to an open ended question, listing their preferred domains of institution related variables. Four domains were selected on the basis of response frequencies, namely - hostel administration, centre/department administration, school/faculty administration and university/college administration.

3. **Interest**

The feeling that a certain activity, a vocation or object was of worth/significance to the individual indicated interest. Here interest was used in terms of vocational choice. Vocational choices involved the choice of occupation and of career. An occupation was a collection of tasks performed for monetary
gains/benefits in an organized way. There were four vocational choices selected on the basis of frequency of student responses to an open ended question, indicating their preferred vocational choices. The four vocational choices chosen were media, academics, business, and administrative services.

4. Inner and Outer University/College Environment

The college/university (academic) environment was defined as inclusive of two layers, the inner and the outer. The inner environment was the totality of the current organizational state. It included factors of context, function, physical environment, process, structure, technology as they actually existed. Outer environment, included both the past and present effects. It comprised such factors as the economic, political, social and technological situations. External environment super imposed itself on the internal organizational environment. Thus, the inner layer was constituted by the realities inside the university/college, while the outer layer consisted of what was happening in the society outside the university/college.

TOOLS, CONTENT AND CODING

(1) Personal Information Sheet

It included information about subject (student), such as name, social category, sex, university/college, centre/department and year of graduation.

Academic institutions were of two types college and university, and were coded as - college: 1, university: 2.

Sex of students: Male and female, coded as - male: 1, female: 2.

Year of graduation was coded as - first year of undergraduation: 1; second year of undergraduation: 2; third year of undergraduation: 3.
(2) **Eysenck Maudsley Personality Inventory:** The inventory consisted of two scales, a short scale and a long scale for assessing extraversion-introversion and stability-neuroticism dimensions of personality. The long scale included 48 items (also included 12 items of short scale). It used response format having three alternatives: Yes, Neutral and No (see appendix -1). These responses were coded as:

Yes : 2  
Neutral : 1  
No : 0

For extraversion dimension of personality, the item numbers were:

1, 4, 5, 8, 9, 12, 14, 16, 18, 20, 22, 24, 26, 28, 32, 34, 38, 42, 46, 48

The questions 14, 16, 18, 22, 24, 30, 36, 40 and 44 had negative coding (yes-0, neutral-1, no-2).

For neuroticism dimension of personality, the item numbers were:

2, 3, 6, 7, 10, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47

Participants’ total score in raw form on extraversion and neuroticism scale could range between 0 to 96. The total scores for extraversion and neuroticism were then converted into the standard score, as given in the manual.

(3) **Inner and Outer College Environment Questionnaire**

This questionnaire was developed by Singh and Sinha (1997). This questionnaire consisted of two scales, inner environment scale and outer academic environment scale. The 11 pairs of inner environment were conditions conducive to teaching and learning, university/college administration, method of examination,
teacher-student relationships, basic facilities in college (e.g. drinking water, fans, lights, toilets, etc.), special facilities (e.g. extra curricular activities, library, sports, cultural activities, debates etc.), student consideration for each other, union's role, casteism among students, use of alcohol and drugs and boys attitude towards girls.

The 11 pairs of outer environment were related to political, economic, law and order, corruption, modern technology (e.g. t.v., v.c.r., telephones etc.), attachment to others, communication factors, upkeep of environment, medical facilities, civic amenities (e.g. roads, drinking water, electricity etc.) and religious superstition.

These 22 dimensions of inner and outer college environment altogether were used here. All dimensions were assessed on a five point scale (see appendix-1).

The responses on inner academic environment scale varied from very good to very bad.

Coding for inner academic environment scale was as below

- Very good : 5
- Good : 4
- Moderate : 3
- Bad : 2
- Very bad : 1

The response scale for outer academic environment varied from 'very much improve' to 'very much deteriorated'.
Coding for outer academic environment scale was as below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much improved</td>
<td>5</td>
</tr>
<tr>
<td>Improved</td>
<td>4</td>
</tr>
<tr>
<td>Remained Same</td>
<td>3</td>
</tr>
<tr>
<td>Deteriorated</td>
<td>2</td>
</tr>
<tr>
<td>Very much deteriorated</td>
<td>1</td>
</tr>
</tbody>
</table>

Each item on this scale had to be responded in two ways (a) in the past and; (b) in the future.

Participants score on inner academic environment scale varied between 11 and 55, and on outer academic environment scale varied between 22 and 110. Participants total score for outer and inner academic environment scale varied between 33 and 165.

(4) Questionnaire for Priority Ranking of Life Goal, Freedom to Criticize Authority, and Vocational Choice

This questionnaire was developed and standardized by the researcher at ZHCES, JNU. It consisted of two questions (one each for life goal and vocational choice), and eight close ended questions (two for life goal, four for freedom to criticize authority and two for vocational choice). The list of life goals and vocational choices were finalized on the basis of a pilot study conducted on a representative sample of 50 undergraduates (1 year students), prior to starting the first phase of data collection in August 1997. Students were asked to indicate as to what they would like to have as their preferred life goal and vocational choice. This could be shown as below -
List of Life Goals

The list of life goals indicated by students was as follows:

1. To be loved by others
2. Good career
3. Fame
4. To work for aged
5. Property
6. To serve parents
7. Respect for parents
8. Loving relationship
9. High social status
10. Famous personality
11. To work for children
12. To get peace prize
13. To fulfill father’s ambition
14. Many friends
15. Belongingness to high society
16. Respect by others
17. To work for backwards
18. Wealth
19. Healthy charming personality
20. Social work
21. To enjoy with parents
22. Happy married life
23. World tour
24. High achievement
25. To work for handicapped
26. To provide economic and emotional security for parents
27. Sympathetic relationships
28. To be known all over the world
29. To work for literacy
30. Positive interaction with others
31. To gain money
32. Work for poor
33. Response from others
34. To win national/international prizes
35. Warm relationship with family
36. Respect from younger ones
37. To be occupied always
38. Informal relations at work place
39. Fulfillment of hobbies
40. To be a super star
41. To be named in Guinness book of world record
42. To work for orphans
43. Movement to save environment
44. Intimate relationships
45. To work for empowerment of women
46. To work for national integration
47. Service to diseased people
48. Self-actualization
49. To be always with parents
These life goals were then analyzed on the basis of closeness of contents by two experts (using 80% agreement and above as the criterion), and categorized in five life goals namely - love and affection, personal identity, economic stability, social service, and concern for parent care, for the final study.

Given below was the table of detailed life goals classification for final study:

**Table (i) - Life Goals Classification for Final Study**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Love and Affection</th>
<th>Personal Identity</th>
<th>Economic Stability</th>
<th>Social Service</th>
<th>Concern for Parent Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To be loved by others</td>
<td>Famous Personality</td>
<td>Good career</td>
<td>To work for aged</td>
<td>Respect for parents</td>
</tr>
<tr>
<td>2.</td>
<td>Loving relationships</td>
<td>Respect by others</td>
<td>Property</td>
<td>To work for handicapped</td>
<td>To fulfill parents ambition</td>
</tr>
<tr>
<td>3.</td>
<td>Many friends</td>
<td>High achievement</td>
<td>High social status</td>
<td>To work for illiterate</td>
<td>To enjoy with parents</td>
</tr>
<tr>
<td>4.</td>
<td>Happy married life</td>
<td>To be known all over the world</td>
<td>Belongingness to high society</td>
<td>To work for empowerment of females</td>
<td>To be always with parents</td>
</tr>
<tr>
<td>5.</td>
<td>Good husband/wife</td>
<td>Healthy, charming personality</td>
<td>Wealth</td>
<td>To work for poor</td>
<td>To serve parents</td>
</tr>
<tr>
<td>6.</td>
<td>Sympathetic relations</td>
<td>To win national-international prizes</td>
<td>Fulfillment of hobbies</td>
<td>To work for backwards</td>
<td>To provide economic, emotional security</td>
</tr>
<tr>
<td>7.</td>
<td>Positive interactions</td>
<td>To be remembered after death</td>
<td>To gain money</td>
<td>Movement to save environment</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Response from others</td>
<td>Self-respect</td>
<td></td>
<td>Service to diseased</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Informal relations</td>
<td>Self-actualization</td>
<td></td>
<td>To work for national, international integration</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Intimate relationship</td>
<td>To be a super star</td>
<td></td>
<td>To be occupied always</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Respect from younger ones</td>
<td></td>
<td></td>
<td>To get peace prize</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Warm relationship in family</td>
<td></td>
<td></td>
<td>Social work</td>
<td></td>
</tr>
</tbody>
</table>
In the final study, they were presented the list of life goals along with two closed ended questions related to helpfulness of course content and the 'time devoted' to achieve the desired life goals. The questions were shown below.

**Q.1** To what extent, the present course will help you in achieving your life goal?

(i) 25%  (ii) 50%  (iii) 75%  (iv) 100%

**Q.2** How much time you devote for achieving your life goal?

(i) 25%  (ii) 50%  (iii) 75%  (iv) 100%

These required students to respond by choosing one of the four alternatives.

The freedom to criticize authority measure consisted of four questions related to university/college, hostel, School/discipline and Centre/department administration, and required students to choose one of the four alternatives, as shown below.

**Questions:**

I feel that given a problem, I am free to criticize:

1. University/College administration  -  (i) 25%  (ii) 50%  (iii) 75%  (iv) 100%
2. Hostel administration  -  (i) 25%  (ii) 50%  (iii) 75%  (iv) 100%
3. School/Discipline administration  -  (i) 25%  (ii) 50%  (iii) 75%  (iv) 100%
4. Centre/Department administration  -  (i) 25%  (ii) 50%  (iii) 75%  (iv) 100%
List of Vocational Choices

Given below was the list of vocational choices indicated by the students:

1. Interpreter
2. Lecturer
3. Union Civil Services
4. Marketing
5. Share Broker
6. Translator
7. Journalist
8. Teacher
9. Banking
10. Electronic field
11. Freelance Journalist
12. State Civil Services
13. Hardware field
14. News Reader
15. Defence Services
16. Service Selection Board
17. Own business
18. Anchor
19. Private Companies
20. Furniture business
21. News Correspondent
22. Advertisement
23. Medical Transcription
24. Cloth business
25. Public Relations Officer
26. Hotel Management
27. Publisher
28. Film Direction
These vocational choices were also analyzed on the basis of closeness of contents by the two experts (criterion of 80% and above agreement), and categorized in four vocational choices, namely - Media, Academic, Administrative and Business.

Given below was the table of vocational choices used for classification for final study:

**Table (ii) - Vocational Choices Classification for Final Study**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Media</th>
<th>Academics</th>
<th>Administrative</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Interpreter</td>
<td>Lecturer</td>
<td>All India Civil Services</td>
<td>Marketing</td>
</tr>
<tr>
<td>2.</td>
<td>Translator</td>
<td>Teacher</td>
<td>State Civil Services</td>
<td>Share Broker</td>
</tr>
<tr>
<td>3.</td>
<td>Journalist</td>
<td></td>
<td>Banking</td>
<td>Electronics</td>
</tr>
<tr>
<td>4.</td>
<td>Freelance journalist</td>
<td></td>
<td>Defence</td>
<td>Hardware</td>
</tr>
<tr>
<td>5.</td>
<td>News Reader</td>
<td></td>
<td>Service Selection Board</td>
<td>Own business</td>
</tr>
<tr>
<td>6.</td>
<td>Anchor</td>
<td></td>
<td>Private Companies</td>
<td>Furniture</td>
</tr>
<tr>
<td>7.</td>
<td>News Correspondent</td>
<td></td>
<td>Medical Transcription</td>
<td>Cloth</td>
</tr>
<tr>
<td>8.</td>
<td>Advertisement</td>
<td></td>
<td></td>
<td>Hotel Management</td>
</tr>
<tr>
<td>9.</td>
<td>Public Relations</td>
<td>Officer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Publisher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Film direction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Alongwith the list of four vocational choices, two closed ended questions were added to know the 'helpfulness of course content' and 'time devoted' to achieve the desired vocational choices, as shown below.

**Q.1** To what extent the present course will help you in achieving your vocational choice?

(i) 25%  (ii) 50%  (iii) 75%  (iv) 100%

**Q.2** How much time you devote for achieving your vocational choice?

(i) 25%  (ii) 50%  (iii) 75%  (iv) 100%

These required students to choose one of the four alternatives.

A copy of each of the measures are included in Appendix -1.
QUALITATIVE DATA:

Interviews were conducted on small groups of 4-5 students during second and third phase of data collection (II year and III year of undergraduation).

Formation of Discussion Groups:

Student groups were identified using students' responses on the self-administered questionnaire for inner academic environment. There were eleven inner academic environment dimensions, on which students indicated their responses by using a five point scale. The responses on the scale varied between very good to very bad. Using these five response types: very good, good, average, bad and very bad, five student groups were formed in each class for discussion. Each group of students was given 20-25 minutes to discuss the responses. The structured questions in an open ended form sought the underlying reasons to their responses. Discussions were conducted during their class breaks, lunch hours etc.

Discussion Schedule

A set of seventeen questions were prepared and compiled in a questionnaire form to elicit student group responses. Out of the seventeen questions, eleven questions were directly related to the causal analysis of dimensions on inner academic environment, while the other six questions were related to the suggestions for improvement in academic environment, in comparison with other educational institutions, relation of academic environment to personal characteristics (extraversion, neuroticism, life goal, freedom to criticize authority and vocational choice) and to societal environment.

Percentages of student responses on these seventeen questions of academic environment were calculated separately for the second and third phase and for university and college students.

A copy of the discussion schedule has been included in Appendix -2.
PROCEDURE OF ADMINISTRATION OF THE QUESTIONNAIRES

After the necessary translation of inner and outer academic environment scale was done (Hindi to English by back translation method), and preparation of life goal, freedom to criticize authority and vocational choice scale, the procedure for the administration of instruments was worked out. Basically these were self-administered questionnaires given to the students either in small groups or individually during first year, second year and third year of undergraduation: (specifically between August to November each academic year 1997, 1998 and 1999).

First phase of data collection (I year of undergraduation) included only quantitative data (self-administered questionnaires). Students were explained the specific terms used in the questionnaire, and were requested to return the questionnaires after completion. The second and third phases (II and III year of undergraduation), included additionally along with self-administered questionnaires, group discussions (4-5 students in a group) of the students, who participated in first phase of data.

ANALYSIS

Data were analyzed by using both parametric and non-parametric statistics namely:

1) Analysis of variance (ANOVA) was used to know the variations in patterns of changes in personality, attitudes, interest and perceptions of inner and outer academic environment by institution and gender at three time points.
2) Correlation analysis was used to assess patterns of relationship among personality, attitudes, interest, and perceptions of inner and outer academic environment variables.

3) Regression analysis was done to predict perceptions of inner and outer academic environment by using personality, attitudes and interest variables as predictors.

4) Percentages and rank order correlations were used to analyze questions on selection for life goal and vocational choice.