CHAPTER TWO

METHODOLOGY
2.1 The Data

The present study aims at exploring the attitudes and motivation of Indian learners of English as a second language through an analysis of their responses recorded in a set of carefully designed and pre-tested questionnaires. The technique of observation and interview were also used to gather supporting data and to check the validity of the data obtained through the questionnaires. The first year university/college students were chosen as subjects because by this level the learners' attitudes crystallize and they begin to think in terms of their future prospects. The research also tries to find out correlations between the learners' attitudes, motivation, language proficiency and their socio-cultural characteristics.

A systematic study of psychological factors like attitudes and motivation necessitates precise and rigorous means of investigation. To eschew all impressionistic conclusions and guess-work every care was taken in the course of this study to be as methodical and objective as possible. The methodology of the present study is briefly given below.

The data for analysis were collected from a cross section of students of Madhya Pradesh, the central state in
India. Table 2 presents the student enrolment in English in major universities of the state.

**TABLE 2**

Student Enrolment in Universities of M.P.: 1980-81

<table>
<thead>
<tr>
<th>University</th>
<th>Year of Establishment</th>
<th>Total Employment</th>
<th>Enrolment in U.T.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Sagar (now Dr. Harisingh Gour Vishwavidyalaya, Sagar)</td>
<td>1946</td>
<td>30,095</td>
<td>4,949</td>
</tr>
<tr>
<td>Vikram University, Ujjain.</td>
<td>1957</td>
<td>27,425</td>
<td>747</td>
</tr>
<tr>
<td>University of Jabalpur (now Kani Durgawati Vishwavidyalaya, Jabalpur)</td>
<td>1957</td>
<td>19,304</td>
<td>1,611</td>
</tr>
<tr>
<td>University of Indore (now Devi Ahilya Vishwavidyalaya, Indore)</td>
<td>1964</td>
<td>23,363</td>
<td>999</td>
</tr>
<tr>
<td>Jiwaji University, Gwalior.</td>
<td>1964</td>
<td>27,737</td>
<td>199</td>
</tr>
<tr>
<td>Ravishankar University, Raipur.</td>
<td>1964</td>
<td>39,176</td>
<td>568</td>
</tr>
<tr>
<td>Awadhesh Pratap Singh University, Rewa.</td>
<td>1968</td>
<td>20,802</td>
<td>102</td>
</tr>
<tr>
<td>Bhopal University, Bhopal.</td>
<td>1970</td>
<td>21,366</td>
<td>634</td>
</tr>
</tbody>
</table>

(Source: U.G.C. Report for the Year 1980-81)
The sample for investigation comprised the facts and responses recorded in questionnaires by 200 students studying within the jurisdiction of Dr. Harisingh Gour Vishwavidyalaya (formerly University of Saugar), Sagar, the oldest university of the state. Of these, 133 (66.5%) were male and 67 (33.5%) were female. The subjects came from five major faculties of the university: 20 (10%) from Technology\(^1\), 34 (17%) from Engineering, 45 (22.5%) from Arts, 71 (35.5%) from Science, and 30 (15%) from Commerce. The students were regular students in the University Teaching Department, Sagar, Government Girls' Degree College, Sagar, and Government College of Engineering, Sagar.

Table 3 gives the sample distribution of our subjects in terms of their number in each faculty as well as their sex.

**TABLE 3**

<table>
<thead>
<tr>
<th></th>
<th>Technology</th>
<th>Engineering</th>
<th>Arts</th>
<th>Science</th>
<th>Commerce</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15</td>
<td>32</td>
<td>18</td>
<td>42</td>
<td>26</td>
<td>133</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>2</td>
<td>27</td>
<td>29</td>
<td>4</td>
<td>67</td>
</tr>
</tbody>
</table>

| N      | 20         | 34          | 45   | 71      | 30       | 200   |
| %      | 10         | 17          | 22.5 | 35.5    | 15       | 100   |

1. The students belonging to the faculty of Technology came from B. Pharm. I year class.
The various questionnaires were administered during the subjects' free periods in their institutions. All the subjects completed the Background Questionnaire, the Attitude Questionnaire, the Motivation Questionnaire and the Cloze Test. Instructions were printed at the beginning of each questionnaire in simple English. However, certain expressions were orally translated into Hindi for the convenience of the subjects.

The Background Questionnaire (cf. Appendix A) was administered to obtain information about the subjects' sex, age, family background, socio-economic status and education. The questionnaire had 10 questions. The subjects belonged to both sexes. They came from different socio-economic classes and had started learning English at different levels. They spoke different languages at home and were in the age group of 16 to 25 years.

The twenty-three statements used for attitude measurement (cf. Appendix B) were highly emotive in nature and were meant to elicit the subjects' reactions. They emphasized the relations of language to various spheres of life such as politics, career, education, social interaction and ethnicity. These statements were such that no normal person would feel neutral about them.

The subjects' motivation was measured on the basis of three tests:

(1) Orientation Index (cf. Appendix C₁):

The subjects' orientation to study English was classified as 'integrative' (1) or 'instrumental' (0) according to their
answers to eight questions in this questionnaire.

(ii) Desire to Learn English Scale (cf. Appendix C2):
The subjects were tested as to how much they wanted to learn English. The questionnaire had six questions.

(iii) Motivational Intensity Scale (cf. Appendix C3):
Six questions were used to measure the subjects' motivation to study English and the effort put in by them to acquire competence in English.

Proficiency in English as a second language was measured by a Cloze Test "a widely used psycholinguistic research technique..." (Carton, 1971: 46). The test was prepared by the Central Institute of English and Foreign Languages, Hyderabad.

While analysing the background information questionnaire, the variables of sex and age were taken up separately. As for the places of birth of the subjects, 66% of them came from towns and 34% from villages. An overwhelming majority of them (83.5%) had Hindi as their mother-tongue. The other languages that were spoken by them included: Bengali (2%), Dogri (0.5%), Gujarati (1.5%), Malayalam (2%), Marathi (2%), Naga (1.5%), Punjabi (4%), Sindhi (1%), Tamil (1%) and Urdu (1%). The main purpose of the Background Questionnaire was to find out how far a subject's background was significant in affecting his attitude towards English and his performance in it.

The Attitude Questionnaire was based on the Likert Scale. Technically speaking, there are only two scaling methods in
social psychology that have sound mathematical models. They are: the psychological scale of Thurstone, and the summated rating scale of Likert. The Thurstone Scale can measure only favourableness and unfavourableness of the subjects towards any issue. The Likert Scale, however, can measure the precise degree of favourableness or unfavourableness. The Likert Scale has five response categories which range between 'strong approval' and 'strong disapproval.' The Likert Scale of summated ratings was used because of certain advantages over the Thurstone Scale of equal appearing intervals. Hall (1934) reports that the scales constructed by the Likert method yield higher reliability coefficients with fewer items than the scales constructed by the Thurstone method. The Likert technique is less time-consuming and less laborious than the Thurstone technique. The construction of an attitude scale by the Likert method is much easier. Moreover, in the Thurstone Method, as Murphy and Likert (1937) point out, the scale values of the statements are independent of the attitude distribution of the readers who sort the statements - assumptions which, as Thurstone points out, cannot always be verified (cf. Fishbein: 1967: 250).

There were five response categories in the questionnaire:

1. Absolutely agree
2. Quite agree
3. No opinion
4. Quite disagree
5. Absolutely disagree.
But, while scoring, on every positive item, the scores were as follows:

<table>
<thead>
<tr>
<th>Responses</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolutely agree</td>
<td>5</td>
</tr>
<tr>
<td>Quite agree</td>
<td>4</td>
</tr>
<tr>
<td>No opinion</td>
<td>3</td>
</tr>
<tr>
<td>Quite disagree</td>
<td>2</td>
</tr>
<tr>
<td>Absolutely disagree</td>
<td>1</td>
</tr>
</tbody>
</table>

In case of negative items, the scores were reversed. Of the 23 items, 15 items were positive and 8 items were negative. The positive items comprised statements numbered 1, 2, 3, 4, 7, 8, 9, 11, 13, 16, 18, 19, 20, 22, 23 while the negative statements were 5, 6, 10, 12, 14, 15, 17, 21. On the positive items a strong agreement indicated a favourable reaction, but on the negative items a strong agreement indicated an unfavourable reaction. The possible range of score was from a minimum of 23 to a maximum of 115 with an objective mid-point of 69, which indicated neutrality. The higher the subject's score was from the mid-point, more favourable was his attitude towards English, whereas a score lower than the mid-point indicated an unfavourable attitude. The mean of each of the responses was calculated for every statement in order to determine which statements elicited strong agreement and which statements evoked strong disagreements.

All the questions of the Motivation Questionnaire were multiple-choice statements and the subjects were asked to select
an alternative which was descriptive of them. The questionnaire was divided into three parts:

(1) Orientation Index \( C_1 \):

The subject's orientation is integrative or instrumental depending upon his aim of study. The Orientation Index classifies the purpose of study as "integrative", where the aim in language study is to learn more about the language group, or to meet more and different people; (and) "instrumental", where the reasons reflect the more utilitarian value of linguistic achievement" (Gardner and Lambert, 1972: 192).

This part of the questionnaire had eight questions. Four of them measured instrumental motivation and the remaining four measured integrative motivation. Items number 1, 3, 5, 7 were instrumental reasons for studying English, whereas items number 2, 4, 6, 8 were integrative reasons for doing so. There were five response categories in all the questions:

- a = definitely my feeling
- b = very much my feeling
- c = slightly my feeling
- d = not very much my feeling
- e = definitely not my feeling.

While working out scores, the five response categories were assigned values from 5 to 1. If a subject's score was higher on the integrative rather than the instrumental reasons for studying English, his motivation was classified as integrative(1).
But if his score on the instrumental reasons for studying English was higher, his motivation was classified as instrumental (0). For this, a subject's score on question numbers 1, 3, 5, and 7 and his score on question numbers 2, 4, 6, and 8 had to be calculated separately. The minimum score on instrumental and integrative reasons separately, was 4 and the maximum was 20.

(ii) Desire to Learn English Scale \( (C_2) \):

A set of six multiple-choice statements was used in this scale to find out the extent to which a student wanted to learn English. The statements dealt with the student's preference for English over other subjects, his eagerness to complete assignments, the degree of attention paid in the class, his interest in English course, and in using the language. The statements had three alternatives but they were given randomly in all the statements. They were given a score of 1, 2, or 3 in accordance with the alternative. The minimum score was 6 and the maximum score was 18.

(iii) Motivational Intensity Scale \( (C_3) \):

This test was meant to measure the subject's intensity of motivation to learn English. It had six multiple-choice statements. The statements dealt with the student's interest in respect of assignments in English, his future intentions to study and make use of English, the amount of practice of English outside class and the importance attributed to the knowledge of English. The statements had three alternatives, given randomly. They were
given a score of 1, 2 or 3 in accordance with the alternative. The minimum score was 6 and the maximum score was 18.

It may be pointed out here that the items in the Desire to Learn English Scale, in contrast to those in the Motivational Intensity Scale, focus more on the student's attitude towards learning English than on the amount of effort spent in acquiring the language.

The Cloze Test had four passages, in which words were deleted randomly. It was scored by the 'exact word method'. The subjects were asked to fill each blank with a word which would make the sentence meaningful. The subjects were marked out of 20.

2.2 Hypotheses

For a systematic analysis of our research findings, the following hypotheses were formulated for validation or otherwise:

(1) Parents, socio-economic status, education and family background influence the learners' attitudes.

(2) Favourable attitudes towards English, including a non-ethnocentric outlook, promotes greater achievement in English.

(3) The relationship between the learners' attitudes and their second language achievement may be strong or weak.

(4) Of the two types of motivation, it is the 'instrumental' motivation that most Indian learners of English possess.
(5) Integratively motivated learners score more in achievement tests.

(6) The learners' attitudes and their motivation are intimately related.

(7) There is also a strong relationship between the learners' motivation and their achievement in English.

2.3 Statistical Methods Used

It was highly desirable to analyse and interpret the results in precise and rigorous terms by means of advanced statistical methods. It would be worthwhile to discuss some of these methods in brief. This would make the results of our research accessible even to those who are not well-versed in sophisticated mathematical methods of computation. In order to present a clearer picture, means of all the variables were calculated and their percentage was also calculated. A correlation between attitude scores and background scores was calculated. A correlation between attitude scores and Cloze Test scores was also worked out. These correlations were Pearson's product-moment correlations. Moreover, inter-correlations were calculated for the Desire to Learn English Scale, the Motivational Intensity Scale, the Cloze Test scores, the Orientation Index and the socio-physical variable sex and correlation matrices were also worked out. The correlations of Orientation Index and Sex, as they are dichotomous variables, with other variables were
computed as point biserial correlation coefficients. The correlations between the Orientation Index and the socio-physical variables like sex were phi-coefficients, while the correlations among the Desire to Learn English Scale, the Motivational Intensity Scale and the Cloze Test scales were computed as product-moment coefficients.

For the calculation of mean, the Arithmetic Mean was used, which may be formulated as:

\[ M = \frac{\sum X}{N} \]

where

- \( M \) = Mean of the series of ungrouped measures.
- \( N \) = Number of subjects
- \( \sum X \) = Sum of the scores.

The Product-moment coefficient of correlation has been defined as that "ratio which expresses the extent to which changes in one variable are accompanied by—or dependent upon—changes in a second variable". (Garrett and Woodworth, 1966 : 125). It is designated by the letter \( r \).

The correlation between two dimensions is absolute if \( r = 1.00 \). A perfect relationship is expressed by a coefficient of 1.00, and no relationship is expressed by a coefficient of 0.00. A positive relationship is expressed by any coefficient of correlation falling between 0.00 to 1.00. The degree of
positive association depends on the size of the coefficient of correlation. Thus, a positive relationship implies that a high degree of one trait is associated with that of another. The coefficient of correlation may also be negative. It implies that a high degree of one trait is associated with a low degree of another. A negative relationship is implied by $r$ falling between $-1.00$ to $0.00$ and a perfect negative $r = -1.00$. Pearson's Product-moment coefficient of correlation can be represented as follows:

$$
r = \frac{\sum x'y' - C_x C_y}{N - \sigma_x \sigma_y}
$$

where

$\sum x'y'$ = Sum of the product of the deviations taken from assumed means of the two sets of score.

$N$ = Number of subjects.

$C_x$ = Correction of Test 1 ($X$)

$C_y$ = Correction of Test 2 ($Y$)

$\sigma_x$ = Standard Deviation of Test 1 ($X$).

$\sigma_y$ = Standard Deviation of Test 2 ($Y$).

The Biserial Correlation is used to determine the relationship between variables when the members of the group can be given scores in one variable but can only be divided into two categories in the other variable. The second variable is called a dichotomous variable. When the dichotomous items are scored as 1 or 0 representing the two categories, they can be thought of as concentrated at two distinct points along a
graduated scale or continuum" (Garrett and Woodworth, 1966:380), then the point biserial is used. The formula for the point biserial \( r \) is:

\[
r_{pbis} = \frac{M_p - M_q}{\sigma} \times \sqrt{pq}
\]

where
- \( M_p \) = Mean of the first category
- \( M_q \) = Mean of the second category
- \( \sigma \) = Standard deviation of the entire group
- \( p \) = Proportion of the sample in the first group
- \( q \) = Proportion of the sample in the second group.

Biserial correlations are positive if integratively oriented subjects obtain higher mean scores on the continuous variables than do the instrumentally oriented. If females score higher than the boys on the continuous variables, then also the biserial correlations are positive.

The phi-coefficient of correlation is calculated when both the variables are dichotomous. Test items are scored many a time with no intermediate answers. The phi is the appropriate coefficient of correlation when the two variables can take only one of the two values. Kurtz and Mayo (1979: 347), however, hold that 'the sign of phi is usually arbitrary'.

The formula for the phi-coefficient of correlation is:

\[
\phi = \frac{AD - BC}{\sqrt{(A+B)(C+D)(B+D)(A+C)}}
\]

Where \( A, B, C, \) and \( D \) represent frequencies.
Our questionnaires were largely suggested by Pierson, Fu and Lee (1980), Jackobovits (1970), and Gardner and Lambert (1972). However, a few suitable modifications were made when and where necessary to suit the purpose of our study. For statistical methods, work by Garrett and Woodworth (1966) and Kurtz and Mayo (1979) were consulted.