As stated in Chapter II, two tools were developed to measure the degree of deprivation and to assess the level of language ability of the children in the sample.

1. Deprivation Scale,
2. Language Tests.

3.1.1 Development of Deprivation Scale:

3.1.1.1 Historical Background of Deprivation Scale:

In the second half of the 20th century, many studies have been conducted all over the world on poor people, the downtrodden in society. Some studies are labelled under social class (Mc Carthy, Bernstein, Robinson, Deutsch). Some are on race difference (Labov). Some are under the heading "disadvantaged" or "deprived" (Rath, Panda). Sociologists studied the socialization of these people from the point of view of lower class, caste or race affiliation. Psychologists study these people in the setting of the environment which fails to provide opportunity to have
experience. They are not getting advantage which other people are enjoying from family background, from society, and from day-to-day experiences.

The child is not only a product of his social class or caste or race, he is an outcome of the experiences he will be getting because of his social class/caste affiliation. His economic, social, cultural life gives him different types of experiences which are very important for the development of the cognitive, conative and affective side of his life.

Different authors used different criteria of selecting subjects like socially advantaged and socially deprived groups. But the use of a set of criteria rather than a single criterion for selection of subjects is more appropriate and more defensible. Firstly, social deprivation is the outcome of the joint functioning of many different social and environmental factors. Secondly, a subject who may be judged to be deprived as per one criterion may be judged to be advantaged as per a different criterion, thus creating confusion in the selection process. 1

"For identification of deprivation has been studied through considerations of living areas (Adams 1971), institutionalization (Sinha & Shukla 1974),
and membership of specific social group (Gardon 1968). However, Davis (1968), Whiteman and Deutsch (1966) and Sahu (1975) have devised some independent indices of deprivation, but they cover narrow and partial range of deprivational variables and have not made quantitative and objective study of the phenomenon of deprivation." ²

3.1.2 Some studies in the direction of locating deprived background.

a) Prolonged deprivation Scale:

Mishra and Tripathi are of the opinion that "members of a particular social group or community are not subjected to identical interaction. The life experiences of individuals can be conceptualised as an interrelated set of continue along which quantitative and qualitative characteristics of experiences vary. Therefore, deprivation should be treated globally and should include all aspects of life in a specified natural setting for determining its levels and it should be conceived as a hypothetical construct refering to all possible aspects of experimental input an individual has received during his life time". ³
Mishra and Tripathi have developed a prolonged deprivation scale which consists of fifteen factors.

1. Residential accommodation,
2. Physical environments of home,
3. Economic status,
4. Food,
5. Clothing,
6. Educational experiences,
7. Child-rearing experiences,
8. Significant childhood experiences,
9. Parental characteristics,
10. Interaction with parents,
11. Motivational experiences,
12. Emotional experiences,
13. Experiences of recreation and travel,
14. Religious experiences,
15. Miscellaneous socio-cultural experiences.

These fifteen areas of deprivation are divided into two factors:

(A) Physico-economic,
(B) Experiential factor.
This scale consists of 96 items from fifteen areas of prolonged deprivation identified by them. Since rating on these items has to be made on five points, the minimum and maximum possible scores are 96 and 480 respectively. For rating of the degree of deprivation on these items clearly defined categories have been developed in which numerical values of 1 to 5 indicating least deprived to most deprived are assigned. Total scores on all items together will be the subject's deprivation score. An individual with a very high score namely above the 75th percentile may be considered a highly deprived person, while low scores, namely below the 25th percentile, would indicate people who are most deprived.

(b) Whiteman & Deutsch's Index of Cultural Deprivation

Six environmental variables have been used in this index of cultural deprivation:

1) Housing condition,
2) Parental schooling desired for child,
3) Number of children under 18 years of age,
4) Conversation during dinner,
5) Number of anticipated cultural activities,
6) Kindergarten attendance.
They found in past researches, in this field, that following variables are either causative or associated factors of social deprivation.

1. Low family income,
2. Low parental education,
3. Minority group affiliation,
4. Slum or suburban or rural dwelling,
5. Substandard nutrition,
6. Improper reward from home,
7. Inadequate interaction with parents,
8. Father's absence,
9. Low self-concepts,
10. Inadequate schooling or no schooling,
11. Teacher's discriminatory behaviour,
12. Improper peer group interaction,
13. Mother's education,
14. Oppression of higher castes.

All these factors were incorporated in the scale. Appropriate categorizations were made under each factor and the questionnaire used contained 47 statements along with their scaled values and quartile deviations.
Social deprivation scores of a subject equal the sum total of scores earned by subject on all these factors.

(d) **Home Observation for the measurement of the environment (HOME)**

During the past decade, significant methodological advances have been made in research studies of early experience and development. Among the most important of these advances have been the refinement of research strategies involving process variables such as response contingencies in the 'home' nature or parental discipline and complexity of parental language. Consequently more variance in cognitive performance has been accounted for than was the case of earlier studies employing structural or status measure, such as social class or parental income.

Wachs, Uzgiris and Hunt related each kind of stimulation from home to cognitive development measured on a Piagetian scale and found important relationship between home environment and cognitive development. It was also found out from the studies that score on the home interview was a better predictor of the boys' verbal and numerical abilities than mere SES variables.
Taking this view into account Caldwell, Heider and Kaplan prepared an instrument called 'HOME' - Home Observation for the Measurement of the Environment.

This instrument is designed to be an easily administered, observationally based inventory which provides an index of the quality and quantity of social, emotional and cognitive support available to a young child within the home setting.

It contains 45 items representing the following six types of environmental forces:

1. Emotional and verbal responsivity of the mother,
2. Avoidance of restriction and punishment,
3. Organization of the environment,
4. Provision of appropriate play material,
5. Maternal involvement with the child,
6. Opportunities for variety in daily routine.

This instrument can be used for detecting the children who are from unstimulating environment i.e. deprived environment.

3.1.3 Preparation of the Deprivation Scale:

Refering to all the studies in this area and the actual tools prepared for selecting a deprived
group from a normal group, it was decided that not a single readymade tool can be useful for the present study.

The new instrument which would be objective in nature and which would give quantitative index of deprivation, was a special need of this study. Therefore, new tool was devised with the help of all these instruments and scales referred above.

The Skeleton of "Prolonged Deprivation Scale" (Mishra & Tripathi 1975) was used as it was a quantifiable and objective instrument. A scale is a type of questionnaire, in which the method of asking the individual to indicate his degree of agreement or disagreement with a series of statements about a controversial subject (Best 1982)\(^3\). Scale serves the purpose of summarizing in a score of scale position, the individual responses to a number of carefully standardised items.

As the study in hand was of the children of 5 to 6 years old it was not possible that the information about their home background, and their experiences could be gathered from such a young group. Therefore it was decided to prepare a parental questionnaire to find out the information about the
child in the scale form, namely a "Deprivation Scale".

As the child was to be tested in his social, cultural, economic as well as experiential set-up or background, three aspects of deprivation were included in the scale.

1. Economic,
2. Socio-cultural,
3. Experiential.

3.1.4 Pooling of items:

The factors of deprivation in these three aspects of deprivation were decided upon with the help of the different tools and scales used in earlier studies. These were:

1) Economic aspect: (i) Income of the family,
   (ii) Occupation of the father,
   (iii) Standard of living of the family,

2) Socio-cultural aspect:
   (iv) Caste,
   (v) Educational background of the family,
   (vi) Socio-cultural background of the family.
3) Experiential aspect : (vii) Parental interaction and ways of bringing up the child,

(viii) Language stimulation by the family,

(ix) Stimulation through printed and play materials,

(x) Stimulation for variety in daily routine.

Some items were pooled from Mishra & Tripathi's "prolonged deprivation scale". For example, item on economic aspect and some ideas on socio-cultural aspect were borrowed from them. For the experiential aspect, the Whiteman and Deutsch "Index of Deprivation" was used for the item language stimulation. The 'Home' inventory already referred to includes items like -

1. provision of appropriate play materials,
2. opportunities for variety in daily routine.

Proper modifications and changes were made to put the items in the form of a scale.

In the first draft there were 60 items. But after the home visits in the pilot work, which was conducted for the fifteen students from the class-I standard B, items were cut down to 52 in number. They are as under :
Aspects of Deprivation

<table>
<thead>
<tr>
<th>A) Economic deprivation</th>
<th>Item No.</th>
<th>Total Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>B) Socio-cultural deprivation</td>
<td>16 to 31</td>
<td>16</td>
</tr>
<tr>
<td>C) Experiential deprivation</td>
<td>32 to 52</td>
<td>21</td>
</tr>
</tbody>
</table>

Distribution of items was made according to the 10 factors of deprivation mentioned earlier. More weightage was given to experiential factor.

3.1.5 Scoring scheme:

Each item was rated on five scaled alternatives. Five stimuli in sequence were given for each item (1 to 5) and the subject was rated on that item, ticking the appropriate alternative. The score on that item would be the sequential number of the alternative which was rated for the subject. Therefore, minimum and maximum scores for the subject would be 52 and 260 respectively. For rating of degree of deprivation on these items clearly defined categories had been developed in which numerical values of 1 to 5 indicating least deprived to most deprived were assigned. The total deprivation score would be the total number of marks in all items together, with sub-scores for the economic, the socio-cultural, and the experiential items.
3.1.6 Further description of the deprivation scale:

(A) In economic deprivation following sub-factors were analysed.

(I) Income of the family,

(II) Occupation of the family,

(III) Standard of living of the family.

(I) Income of the family:

For noting the level of income, a ten-point scale was prepared, based on the income of parents in the sample. The upper range of the sample was Rs. 4501/- to Rs. 5000/- and the lower range is upto Rs. 500/-. Those whose income was in the range of Rs. 4501 to Rs. 5000 will score 1 in this aspect of economic deprivation and those whose income was in the lowest range i.e. upto 500 rupees, were scored 10 for this factor. A score of ten denoted highest deprivation. The score one was not deprived at all and the rest of the scores came in between.

(II) Occupation of the family:

Not only income but the position of a man in his occupation was also a deciding factor for economic deprivation, because it was a deciding factor for his income as well as way of living.
Five categories were marked to point out his position in the occupation. In the first category there were people in the independent professions such as doctors, lawyers, consultants. The people who were in service and holding executive or administrative posts are also classified in the first category. These people are highly educated and specialised. Their position is better because of high income.

The second category includes superintendents and clerks in service because they have economic security, then workshop owners, men in engineering service, garage owners, who are educated in skilled work. Land owners (cultivators) and land owners of small holdings, also were included in this category.

The third category is class-IV servants in service, skilled labourers, motor mechanics, rickshaw drivers. In the fourth category, there are artisans, semi-skilled labourers, and in fifth category, there are hawkers, unskilled labourers and landless cultivators.

These categories of occupation are grouped according to their educational level rather than on the basis of income, although income differences also underlie the classification.
(III) Standard of living of the family:

Economic deprivation can also be located from the standard of living in the family. The income and occupation of the family affect living standards.

A man eats food, wears clothes which suits his income. The income decides his standard of living. The standard of living is best studied by direct observation, such as visits to particular homes, and by asking questions about each of the items e.g. food, clothes, the type of home, material possessions in the house, etc.

In the deprivation scale item No. 4 to item No. 15 were those to locate the standard of living in the family. Maximum score for this factor of deprivation is 60 and minimum is 12, as there are twelve items for this aspect and each item carried five marks as the maximum score.

(B) 'B' part denotes the level of socio-cultural deprivation of the family. In this particular aspect, following factors were analysed.
1) Caste

ii) Educational background

iii) Socio-cultural background

For details, see Appendix

1) Caste:

Caste determines much of the socio-cultural background of a child, as every caste has its own culture. There are eight categories of caste classification for Maharashtra developed by A.R. Kamat. Brahmin and other allied castes top the categories and Nav Baudha ends the list. (List is attached in Appendix). Brahmins score 1 mark in this classification, while Nav Baudha score 8 marks. There are six categories in between these two.

ii) Educational background:

Education brings about social change, it brings about radical changes in the attitude of a group. If a child is brought up in a background where his parents are educated he is bound to get exposure for good socio-cultural environment. As against this, if a child is brought up in uneducated environment, the people who are visiting him also are uneducated, and they will experience socio-cultural deprivation in the family.
The scores are given according to the classification of literacy. Postgraduate level tops the list while illiterate ends it. In between there are six categories (See Appendix).

In the 'B' part of the deprivation scale, items 16, 17, 18, 19, 20 and 21 decide the educational background of the family.

iii) Socio-cultural background:

To decide the socio-cultural background of the family, total of the scores on the following items from the deprivation scale were calculated: item No. 22, 23, 24, 25, 30. Maximum score was 20 and minimum 5.

(C) Following factors were analysed to decide the experiential deprivation of a child.

1) Parental interaction and ways of bringing up the child.

ii) Language stimulation by the family,

iii) Stimulation through printed and play materials,

iv) Stimulation for variety in daily routine.
To assess these factors the scores on the following items were calculated for each aspect.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>Total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Parental interaction</td>
<td>32, 33, 34, 35, 36, 37, 38, 39, 47, 48, 49</td>
<td>55</td>
</tr>
<tr>
<td>ii) Language stimulation by the family</td>
<td>40, 41, 42, 43</td>
<td>20</td>
</tr>
<tr>
<td>iii) Stimulation through printed and play materials</td>
<td>26, 27, 28, 44, 45, 46</td>
<td>30</td>
</tr>
<tr>
<td>iv) Stimulation for variety in daily routine</td>
<td>50, 51, 52, 31</td>
<td>20</td>
</tr>
</tbody>
</table>

3.2.0 Development of Language Tests: The Historical Background:

Researchers in the field of sociolinguistics and psycholinguistics have to face numerous problems, because there is no standardised scale for measuring proficiency in language. Several skills are contained in language proficiency; it is not possible to study
all the skills through one test at a time. Different workers study different language skills which they think representative of total language ability. As Reed pointed out "there are four language skills - listening, speaking, reading and writing. Of these, listening and reading are passive skills while speaking and writing are active skills. For the young children of the preprimary and primary school age only two skills, i.e. listening and speaking can be taken for testing while middle school and high school children can be tested on all four skills.

3.2.1 In the current study the children in the sample were of age 5 to 6 years and were studying in the first standard of primary school. But of these some had attended preprimary schools and some had not. Because of the experience as a teacher educator in the language ability of children in corporation and private schools, it was decided that the following aspects of language ability should be incorporated in the tests.

1) Active vocabulary of the child.
2) Language comprehension of the child.
3) Ability of narration and expression.
3.2.2 The following studies provided guidelines for the development of language tests.

(a) **Hindi Mulanche Buddhimapen**: V.V. Kamat developed an Indian version of the intelligence scale developed by Terman and Merrit (1960). As language ability is one of the several aspects of intelligence, many items in this test are to test the language ability of a particular child. There are items on -

1) Vocabulary.
2) Comprehension.
3) Item direction.
4) Repeating the sentences.
5) Finding out similarities and differences.
6) Preparing sentences using given words.
7) Describing pictures.

Out of these items, for the children of 5 to 7 years old, the items (1) vocabulary, (2) comprehension, (3) item direction, (4) repeating the sentences and (5) describing a picture were useful for the students.

As this test was administered by the investigator many times, the selection of items was found very easy. The tests, like finding out similarities and differences in known concepts, doing as directed
(for example, pointing to parts of the body), describing a picture, had given some idea and direction for preparing a test of language ability for the children of primary school age.

(b) *Peabody Picture Vocabulary Test (PPVT)*, developed by Dunn in 1959 is a non-verbal multiple choice test that was designed to evaluate children's intelligence between the ages of 2½ to 18 years, who have no hearing disabilities and who can indicate 'yes' or 'no' in some manner. The test was designed to provide an estimate of an individual's verbal intelligence through measuring his hearing vocabulary or receptive knowledge of vocabulary. There are 150 plates, with four pictures on each plate. The child is to respond to the pictures by saying 'yes' or 'no', whether the spoken word describes each picture or not. Thus it is a multiple choice vocabulary test, the method of which has been taken as one of the vocabulary tests in the current study.

(c) *Preschool test for children* has been constructed by Dr. P.H. Ramaseshan, and adopted in the Psychology Department of Shri Venkateshvara University. This test consists of seven items as mentioned below:
i) Verbal test.
ii) Identification of body parts.
iii) Application of kitchen equipment.
iv) Recognition and application of articles of daily use.
v) Pairing test.
vi) Comparison test.
vii) Draw anybody you like.

(i) The Verbal Test measured the communication of the child. The series of questions asked were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) What is your name?</td>
<td>1</td>
</tr>
<tr>
<td>b) What is your father's name?</td>
<td>1</td>
</tr>
<tr>
<td>c) What is your father?</td>
<td>1</td>
</tr>
<tr>
<td>d) Where do you live?</td>
<td>1</td>
</tr>
<tr>
<td>e) What do you do when you are alone?</td>
<td>3</td>
</tr>
<tr>
<td>f) Identification of fruits and vegetables.</td>
<td>3</td>
</tr>
<tr>
<td>g) Identification of animals from the animal picture books.</td>
<td>10</td>
</tr>
</tbody>
</table>

Maximum 20

(ii) Identification of body parts: The investigator asked the child to point out parts of the body, e.g. ear, head, nose, eyes, hands.
(iii) Application of kitchen equipments: This item tests the knowledge of the child about the uses of home appliances in the house, e.g. bucket, oven, deep-frying pan, flat frying pan, spatula.

(iv) Recognition and use of articles of daily use: This item measures the child's knowledge of functional aspects of objects. These articles would be: comb, mirror, towel, soap box, pencil, etc.

The idea of including items ii), iii) and iv) in the tests was very fruitful in the present study. The last three items were not included.

(d) Language Tests by T.S. Rao were developed for testing the second language proficiency of a child. In this study, the skills chosen for study of second language proficiency are -

1) Active basic vocabulary.
2) Ability to follow direction.
3) Power of comprehension.
4) General language maturity.
Four tests were developed by him to study these skills -

i) Picture Vocabulary Test.

ii) Item direction Test.

iii) Comprehension Test.

iv) Story Telling Test.

(i) In picture vocabulary test he has used 64 pictures. The purpose of this test was to assess the active vocabulary of children in the age 6 to 10 years.

(ii) Ability to follow direction : There were 20 items in the test which were drawn from Binet-Simon Scale (the Kamat test is a Marathi version of the same).

(iii) Power of Comprehension : Listening is an important aspect of communication. Most of the school programmes also depend to a very large extent upon comprehending what is being spoken. A teacher talks for about 75% of the time, and the children have to comprehend it. Therefore, it is important to use comprehension test as a device to measure language attainment. Two stories were used for these tests. Questions were asked at the end of the story.
(iv) Story telling test: Since the previous tests had not covered many important indices of language growth such as sentence construction, syntax, speed, pronunciation, etc., the spoken sentences were sought to be studied in this last test, the story telling test. The children were asked to tell any story which they knew.

(e) The Illinois Test of Psycholinguistic Abilities 15

The Illinois test of Psycholinguistic Abilities developed by Mc Carthy and Kirk is one test in the preparation of which much careful work has been done. The test has been devised for the purpose of differential assessment of children's language development. The test battery consists of 10 sub-tests and are named in accordance with the psycholinguistic functions. They are-

1. Auditory reception.
2. Visual reception.
4. Auditory memory.
5. Auditory association.
8. Verbal expression.

3.2.3 Different research studies have been conducted to study the language ability of the child in different environmental set-ups. They have used different tests.

1. Rajlaxmi Muralidharan has used an interesting story suitable for the age group under consideration in her study.

2. Shantilata Sahu has developed suitable language tests depending upon the language textbooks of previous grades. The language tests were developed on the basis of the concepts and words used in these standard language textbooks. The language ability test battery for second grades contained -

   a) A test of word reading.
   b) A test of word comprehension.
   c) A test of passage comprehension.
The LATBs for third and fifth grades contained a test of -

a) Word spelling.
b) Word comprehension.
c) Passage comprehension.
d) Word fluency.

3. Prerana Mohite (1979) in her thesis on "Language performance of preschool children with special reference to their socio-economic status" tested children on four aspects of language development namely,

i) Vocabulary,
ii) Comprehension,
iii) Articulation,
iv) Intonation.

The tools she used to study vocabulary and comprehension were as follows -

1. A test of classified vocabulary was prepared. It has four major categories: animals, birds, flowers and fruits.

2. Comprehension Test consisted of two stories based on children's family experiences. Each story had eight questions, four based on factual information narrated in the story and four on comprehension of the events in the story.
Rhona Poole Johnston used material consisting of four coloured picture stories, each of which contained four pictures. The child was then asked to tell a story about each of the four sets of pictures. The speech was later transcribed and analysed for further study.

3.2.4 Preparation for Language Tests:

It was decided to test the language ability of a child of 5 to 7 years old from three aspects.

1. Vocabulary of a child.
2. Language comprehension of a child.
3. Narration and expressions of a child.

To prepare the language tests, the following points were kept in mind:

1) Each aspect of the language ability should be tested not by a single test but by a variety of tests.

2) All tests should yield quantifiable results.

3) All tests should be interesting and amusing. They should not be so lengthy as to give fatiguing effect.
A good test should have discriminating power. That means it should discriminate clearly between higher scorers and lower scorers. But this discrimination should not be due to bias of any one's vocabulary, experiences and interests. If all the items in the tests are based on non-deprived vocabulary, concepts and experiences, these children will score high and if test items are taken from deprived children's vocabulary, experiences or interests, these children will do better than middle class children. Therefore, such items in the test should be taken as are derived from the life of both the groups - deprived and non-deprived. This was the criteria used for selecting the items for the test battery.

For this purpose, the particular vocabulary of both the deprived group and the non-deprived group was detected by visiting homes of slum children and middle class children. It was also noted that some vocabulary is used by both the children. Village children are using slightly different vocabulary.

All children in the sample were coming from varied types of background. The village children have village background. They live closer to nature - vegetables, plants, the river, the sky, land and water. They roam in the fields. They know about the growing of crops, their watering, harvesting.
The slum children have different backgrounds; they have their own surroundings. The sample slum area is opposite Shivajinagar railway station. The children in this area are familiar with station atmosphere - the crowd and variety of people, the sellers, the hawkers, the train, the engine, also there are petty shopkeepers, the sellers in the slum area. Children are familiar with the things therein as they are visiting these shops off and on. Also they are used to heavy traffic because this slum area is on Bombay-Poona highway.

Middle class children are coming from educated background. Their parents are interested in their physical, mental and cultural development. They visit bazaars, gardens, parks often. They are exposed to variety of stimulation.

Taking into account all these subjects of interest of all the children in the sample, the items were selected. Following criteria were decided for pooling of items by the advisory committee.*

1. 1/3rd items from all the tests should be in favour of the deprived group, both rural

* An advisory committee was constituted at IIE to guide in preparing the language tests. The members were 1) Dr. Tilottama Daswani, and 2) the late Dr. Vijaya Chitnis.
and urban. 1/3rd items should be in favour of middle class group and 1/3rd items should be in favour of both.

2. Naladkar's lists of Basic Vocabulary for standard I should be used for item selection in the preparation of language tests especially for vocabulary tests. Only nouns should be used for vocabulary tests.

3. For Narration tests topics should be such that the children could narrate experiences or things spontaneously. That means, the topics should be of interest to them. Therefore there should be so many alternative topics in the tests that the individual child will be able to find out a topic of his own interest.

4. There should not be any time-limit for any tests. The child may take his own time to answer the question.

5. The test items should be taken from the semantic fields of a child.
Semantic fields of the child are:

i) Personal information of a child.

ii) Body parts.

iii) Clothes.

iv) Food.

v) Home (parts of home)

vi) Home environment (utensils, home objects, home surroundings).

vii) Relatives.

viii) Nature - Natural phenomenon, vegetation, flowers, fruits, animals, birds, colours.

ix) School environment.

x) Out-of-home environment.

In Naladkar's vocabulary list, there are 828 words in both the lists for recognition and recall. Out of them 348 (42%) words are based on the abovementioned semantic fields of the child. Only nouns were taken. That means, of these 348 words only 194 i.e. 55.8% words are used in all the language tests.

3.2.5 Pooling of items in different language tests:

a) Vocabulary tests:

It was decided that there should not only be pictures for vocabulary tests, as in other language
tests, but actual objects should also be used for testing the vocabulary of a child. In this type of test, a child will get three-dimensional view of the object which is missing in picture vocabulary test. These two constituted the tests of reproduction vocabulary. Children have to recall from their store of vocabulary the names of 1) pictures, 2) objects.

There should be one test for recognition vocabulary. For this the model of Peabody Picture Vocabulary Test\textsuperscript{21} was used. This multiple choice vocabulary test in which four pictures were shown to a child at one time, and he was to indicate the picture which described a word spoken by the experimenter. It was also decided to test the vocabulary of a child without giving visual or auditory cues. He has to enumerate from his memory store whatever he knows about the things in the test item.

Thus four tests were developed for the vocabulary testing.
### Table No. III:1

Vocabulary Tests & Items

<table>
<thead>
<tr>
<th>Tests</th>
<th>Items</th>
<th>Out of Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Picture Vocabulary test</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>2. Object Vocabulary test</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>3. Multiple Choice Vocabulary test</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>4. Recall test of vocabulary</td>
<td>5</td>
<td>--</td>
</tr>
</tbody>
</table>

### Table No. III:2

Distribution of items according to the semantic fields of the child in four vocabulary tests

<table>
<thead>
<tr>
<th>Semantical field</th>
<th>Test Number</th>
<th>Items in different tests</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>1. Personal information</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Body parts</td>
<td>--</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>3. Clothes</td>
<td>3</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Food</td>
<td>4</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>5. Home</td>
<td>3</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>6. Home environment</td>
<td>11</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>7. Relatives</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>8. Natural environment</td>
<td>9</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>9. School environment</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>10. Out of home environment</td>
<td>--</td>
<td>--</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 30 30 15 5 80
Table No.III:3
Percentage of items in different semantic fields of the child used in vocabulary tests.

<table>
<thead>
<tr>
<th>Semantic fields</th>
<th>Item</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personal information</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td>2. Body parts</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>3. Clothes</td>
<td>3</td>
<td>3.75</td>
</tr>
<tr>
<td>4. Food</td>
<td>17</td>
<td>21.12</td>
</tr>
<tr>
<td>5. Home</td>
<td>4</td>
<td>5.00</td>
</tr>
<tr>
<td>6. Home environment</td>
<td>26</td>
<td>32.5</td>
</tr>
<tr>
<td>7. Relatives</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td>8. Natural environment</td>
<td>28</td>
<td>35.00</td>
</tr>
<tr>
<td>9. School environment</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td>10. Out of home environment</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>100.00</td>
</tr>
</tbody>
</table>

As the children in the sample were 5 to 7 years of age, they were not expected to be exposed to out-of-the-home environment. Their world was around their mothers. They spent most of their time in the home or around it. They watched what mother was doing in kitchen, what father had brought from market, what they were eating as food. Thus their vocabulary was concentrated around
home environment and natural environment. Therefore, more items in the vocabulary tests were about the home, and objects, utensils, objects in the home surrounding were incorporated. Also child is familiar with vegetables, fruits as food. They knew different animals when they went outside. Their vocabulary developed when adults talked with them about these things or objects. Unless the adults take interest to tell them what these things are the child will not be able to utter a word.

1. In the picture vocabulary test only picturable items were taken for the study. Therefore, items were from parts of the home, objects in the home, fruits, animals, vegetables or clothes, and food. Thirty items were selected for this test. Two-thirds of the items were taken from Naladkar vocabulary list for 1st standard, and one-third were selected from field work as the criterion was that one-third of the items should be from non-deprived group of children only.

2. In object vocabulary test the items should be presentable in actual form or in model form. Therefore, such items which were difficult to present were discarded. For example item 'Giraffe' was discarded from the previous test because it was not available in the model form i.e. toys.
In this test also the items were clustered around home environment and natural environment (See - Table 3.2).

3. In the third test i.e. multiple choice vocabulary test, the four pictures were exposed at a time and the child was to show which was the picture that describes the spoken word. This was an auditory perception test. The child was to listen to a word and show the picture which describes that word through perception. In this test items were taken from following fields - body parts, home environment and natural environment.

4. In the Recall vocabulary test, the child was asked a question and he was to answer in as many words as he knows, for example - (1) items in meals, (2) different colours, (3) animals, (4) crops, (5) things we buy in a shop.

The child was to recall the things he was asked about from his vocabulary store. Those who were exposed to variety of experiences will use more words than the child who have limited exposures. Also, in the homes where adult were alert in giving information to the children, the store of vocabulary was more than in the home where adult language assistance was
absent. Therefore, this test is an index of home background of a child (deprived or non-deprived).

In this test also such topics were selected so as to facilitate the differentiation of children from private school, corporation school and village school. Five questions were asked, one on food, one on home environment and three were on vegetation, animals and colours i.e. natural environment.

(b) Comprehension Tests:

It was decided to test the language comprehension ability of a child, as much of the child's time in the school is spent in listening (95%). Most of the school programmes also depend to a very large extent upon comprehending what is being spoken. Thus there can be number of skills included in comprehension, for example:

1) A child can find similarities and differences in a given concept or word, which are in his everyday vocabulary. Unless a child has understood that concept he will not attempt this skill. Therefore, finding similarities and differences is taken as a test of comprehension.
ii) He can follow the directions and do what he is asked to do. Unless the child comprehends the instructions he will not do what he is asked to do.

iii) He can complete the spoken analogy by association. He has to study the first part, and find out the associative frame which completes the sentence. It requires an ability to comprehend.

iv) He can answer the questions based on a story already told to the child, he can tell the instances sequentially. But for all these responses he must comprehend the story.

Four tests on abovementioned skills were prepared for testing comprehension ability of a child. As in the case of vocabulary tests, the semantic fields of the child were referred to for pooling the items for different tests. The following items were taken.

<table>
<thead>
<tr>
<th>Table No. III.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of items in different semantic fields of the child, used in comprehension tests:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semantic fields</th>
<th>Items</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personal information</td>
<td>3</td>
<td>4.28</td>
</tr>
<tr>
<td>2. Body parts</td>
<td>5</td>
<td>7.14</td>
</tr>
<tr>
<td>3. Clothes</td>
<td>1</td>
<td>1.42</td>
</tr>
<tr>
<td>Tests</td>
<td>Items</td>
<td>Score</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>1. Finding similarities and differences.</td>
<td>5</td>
<td>2 marks for each similarity and each difference; total of this.</td>
</tr>
<tr>
<td>2. Item direction test</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>3. Test of auditory association.</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>4. Story comprehension test.</td>
<td>5</td>
<td>30</td>
</tr>
</tbody>
</table>
1. Test No. 1: Finding similarities and differences.

A child knows the concept, the thing, the object. He describes the thing. He tells something about that thing, that object or concept. But as long as he will not comprehend that concept or object he will not find similarities or differences between particular object or thing and other objects. The skill of comprehension is at the upper level of knowledge skill. Therefore to test the comprehension ability the first test introduced in the test battery was to find out if the child could identify similarities and differences between two concepts. Five items were given for finding similarities and five items for finding differences. As the children were 5 to 6 years old, such items were selected in which the similarities and differences could be found immediately from visualising them, such as colour, shape, taste, use.

The scoring scheme: Two marks were given for each similarity and difference which the child would find in the items. A number of similarities or differences might be mentioned. The score will be the number of similarities or differences multiplied by 2 for each item. Total score will be total of all scores for each item.
Comprehension Test No. 2 : This was termed as 'item direction test'.

By understanding and comprehending the innumerable language stimuli impinging on us, we can establish rapport with others and have a communication network established. Since following directions is an important aspect of our life whether at home or at school, our outside, this is studied here through a specially constructed test. In this test child is to follow the instructions of the examiner, such as:

1) giving his name,
2) giving an answer in 'yes' or 'no' form,
3) pointing to a part of the body,
4) telling the time of the day,
5) pointing out an object.

Unless the child comprehends the instructions (directions) he will not do as directed in the test.

Scoring scheme :

There are 15 items in the tests, each item carried 2 marks. Maximum marks for the test are 30.

(3) The third test developed for testing comprehension is the test of 'auditory association'.
The idea of this test was borrowed from the 'Illinois Test of Psycholinguistic Abilities'. In this test a child hears an incomplete analogy which is a stimulus for the rest of the sentence. He completes the sentence by giving an associative frame, using different laws of association e.g. law of similarity, law of contract, law of contiguity (of time, and place) etc. The examiner reads the incomplete analogy, stopping abruptly to get the rest of the sentence from the child.

This is a test of comprehension because in this test the child comprehends the first part of the sentence and associates the second part by mental manipulation. He has to use this comprehension ability in this particular test.

**Scoring scheme:** There are twenty sentences and each one carries one and a half marks. The total score will be total marks of the scores in all the correct sentences. Maximum score will be 30 marks.

4) **Story comprehension test:** Such type of tests are used in all language testing for measuring the comprehension ability. After listening to a story a child is asked to answer some questions based on that story. In this case the selection of the story
is very important. As the age group is 5 to 7 years of age, a story should be told to them which is not too complicated, which should not be 'mysterious'. There should not be any abstract thinking in the story. The figures in the story should be known to all the children. Most important thing in this test is narration of the story. The vocabulary which is used in the story should be known to all the pupils, so that they can follow the story without obstruction.

From childhood, Indian children are used to hearing stories. They knew different stories from Panchatantras, Ramayana, Mahabharata. Therefore, selection of the story is very important. A story should be selected which is not a familiar one. Otherwise those who know the story would score more in this test. Therefore, a story was taken from some Russian picture books. There was an animal story in which all animals (a cat and mice) in the story were known to all students. A story was composed on these pictures. The pictures were also enlarged.

Five questions were framed on that story. These questions were such that only if they understood the story, would be able to answer the questions. One question was on information conveyed in the story. Three were on comprehension or understanding of the
story. The last question was on the sequence of the story. Only the child could follow the sequence could he arrange the pictures correctly.

Scoring scheme:

<table>
<thead>
<tr>
<th>Question No.</th>
<th>No. of marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

c) Tests on Narration and Expression:

How much can a child express? Can he say something about his favourites in the family or the school? Can he narrate his experiences about the market or home? In this type of test the child is given different topics and he can select one of these and say whatever he knows about it. There is no time limit. The child is set free of any constraint in this particular test so that his expression and narration is facilitated and he will express fully what he is able to say.
There are two sub-tests in this particular test:

1. Telling a story.
2. (a) Narrating the experiences about a situation.
   (b) Describing a person whom you like most.

1. A story of hare, tiger and elephant was told with the help of the pictures. The pictures were taken from a Russian story book. The children are asked to narrate the story in their own words.

Initially, it was decided to show the pictures and ask the child to develop the story. But the pilot story showed that the children were too small to do this. Therefore, it was decided to tell the story first with the help of the pictures, and ask the child immediately to tell the story verbally.

The score was the total number of words he had spoken about the story after correcting the sequence of the story.

**Narration and expression Test No. 2 :**

There are two parts to this test.

a) In the first part the child has to talk about a particular situation.
b) In the second part he has to describe his favourite person in the family, such as father or mother, or a teacher with whom he has developed close relationship. They can very well describe about these persons.

(a) Three topics for situations were selected for each of the three backgrounds.

1. Describing a quarrel. This is especially for the slum children from corporation school. They are used to this situation which occurs frequently in slum areas. Therefore it was expected that the child would be able to narrate freely.

2. The topic was for village children. They often visit weekly bazaars in the village. Bazaar day is the most exciting day in their life. Villagers plan ahead for the bazaar day - what is to be purchased and perhaps what is to be sold. That is the only recurring opportunity for them to have outside exposure. It is an invaluable experience for them. It was expected that children from the village would be able to say something about bazaar.

3. The third topic is for middle class children. They often speak about 'Sunday'. The school is closed
on that day. Many parents have a holiday on that day; therefore they can plan to visit a garden, parks or market, or travel. The children know that their parents are at home on that day, taking rest, while in the other two groups parents are busy throughout the week. For the latter, there is hardly any holiday in their life as they are busy in casual labour, or contract labour, or in seasonal labour. Therefore, Sunday is a special feature of middle class (non-deprived group) people.

In this test, the total number of words spoken by the child is the score for that item.

In the (b) part of this test, the child is asked to describe his mother or father or teacher. He spontaneously talks about the person with whom he has established good relations. Score will be number of words spoken by the child. Average number of words in both the parts of the test will be the score for that test.

3.3.0 Data Collection procedure:

When the research tools were ready, the heads of the schools were first approached. They were made fully aware of the research. Permission from the Administrative Officer, School Board, Poona Municipal Corporation, Pune was obtained. He gave full cooperation
and asked the headmasters of the respective schools to extend full cooperation and help from their side.

The headmaster of each school called a meeting of staff members to discuss the research problem and the prepared tools. The teachers suggested some changes in the language tests. Also they suggested the procedure of data collection. They specifically suggested not to use tape recorder, as the children are not used to it, and it may affect their true responses.

As it was impossible to administer the written tests in groups because they have not yet learnt to write, individual oral tests were conducted for which a special room was required.

Rapport was established with the class teachers of each school and cooperation was sought from them. The list of the names and addresses of the students in Class-I was provided by the class teachers. The researcher

As I used to visit Narvir Tanaji Vidyalaya and Prathmik Vidya Mandir as a part of her work as a teacher educator, she had already got full cooperation from the class teachers, and they provided full help in getting the home addresses of the children in the sample. The teacher actually introduced some of the
parents and asked them to take her to their residence; otherwise it was a very difficult job to locate the addresses of the students.

3.3.1 **Pilot Study:**

Before starting the work on the selected sample it was decided to carry out a pilot test on the students in Standard I, Division B who would not be included in the main study. Ten students were selected from both the schools and the prepared test was administered to them, to note down the time required for each test and the difficulties in administration of the tests.

It was at first decided to put down the responses on tape recorder for the first standard students in the Corporation school. But a great deal of tape was wasted because of their protracted responses. It was very unwieldy and inconvenient to use the tape recorder. Also the response of the child was affected by the investigator's handling of the mike.

After taking half the test responses on tape recorder, it was decided to take down the response on paper, word for word. It was found convenient for the student and to the investigator also and the testing
worked out more smoothly. There was no one between the investigator and the child, therefore the child was quite free with the investigator and he gave more spontaneous responses.

From the experience of the pilot work, a little change was done in the test items as well as the procedure of the methodology. Time schedule for each and every test was organised. Planning for test schedule was prepared for both the schools in Shivajinagar.

3.3.2 The timings of the Prathmik Vidya Mandir (the private school) was in the morning from 7.15 a.m. to 11.15 a.m. and the Narvir Tanaji Vidya Mandir was from 12.25 in the afternoon to 5.30 p.m. The long recess of the school for lunch break was between 2.30 to 3.00 O'clock in the afternoon. Thus it was possible for the investigator to administer the language test in both the schools on the same days.

While conducting the test, it was decided that -

1) the children should be comfortable and without any pressure on their mind at the time of the test;
2) they should not feel lonely at that time; in order to make them feel secure they were called in groups of five to the
test room. They came up one at a time for testing, while the rest sat in a corner of that room.

3) some time was also saved, as children were more quickly brought up for testing than if they had to be called from their classrooms.

The tests were conducted in following sessions for each student.

Table No. III: 6
Test Sessions

<table>
<thead>
<tr>
<th>Session</th>
<th>Language test number</th>
<th>Average time required in minutes to complete the test.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>2, 3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4, 5</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>6, 7</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>25</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>25</td>
</tr>
</tbody>
</table>

| Total   | 10                   | 180                                                  |
3.3.3 Preparation for language testing programme:

The schools opened on 15th of June 1981 for the new year. The investigation was started on that day, with daily visits to the two schools. The parents used to leave their children to school, providing an opportunity to get introduced to some of them. In order to establish a rapport with the children, investigator sat in the classroom during some of the lessons being given, and gave three lessons and told two stories to the whole class, before starting the tests. For one week the investigator took roll-call of the students in order to get to know the names of the children, and came to know the students. This was easier in the private school than in the Corporation school where the children themselves did not know their surnames very well, and at the time of roll-call very few of them responded immediately. Some stood up only after their names were called three or four times.

The taking of the roll-call in Corporation school proved to be time-consuming. One more difficulty in this particular school was that all students were not to be found in the school on any one day. If a student is present to-day there is no guarantee of
his coming tomorrow, in scheduled time. Also new students were arriving in this school up to the first week of August. Therefore, in the second week of August when the number of students in the Standard I, Division A seemed to have stabilised, the selection of the sample was finalised. The criterion was only Marathi-speaking children were selected. Total number of students was 72 in the class, out of which 60 were included in the sample.

The Private school was co-educational. There were 44 boys and 18 girls in the class. It was decided to exclude girl students in order to match the sample from PMC school, which had only boys.

Meanwhile two visits were organised to a rural school, the Jeevan Shikshan Mandir in Khanapur, Taluka Bhor, District Pune, to select the sample from that school. There also the same situation at entrance to school was observed as in the case of Corporation school. The children were joining the school up to end of July. Therefore, it was only after the first week of August that it was possible to decide the sample from this school. There were 21 students in the class, out of whom the 11 boys were
taken for the study. The headmaster also cooperated with the investigator. He introduced to many parents in their own homes. Thus the children were known to the investigator before the actual testing programme was started.

In addition to this, the investigator attended the class throughout the two days spent there and the rapport was established very nicely with the children in the class. She told them stories as in the other schools, and gave the same treatment as in Corporation school and private school.

3.3.4 Administration of the language tests:

The testing programme started with five language tests. In order to attract the students the initial tests were short, sweet, colourful and picturesque. Also they were simple and easy. The students were asked questions and the responses were written down on the test booklet. They were not told whether the response was right or wrong. Thus enough confidence was inculcated in the students to enable them to respond freely.

The testing programme started in the 2nd week of August 1981 in the two urban schools.
Test No. 1 was picture vocabulary test in which there were 30 colourful pictures. The child was asked to say what the picture was about. The response was taken down. No time limit was set.

At the end of the month of September, the administering of five language tests was finished in the two urban schools. The testing programme in the private school was completed smoothly. There was regularity of attendance of the students in the school and the testing could be done serially. But in Corporation school it was very difficult to complete the five tests of each and every students in the sample, because of their irregular attendance.

In the first week of October, five language tests were administered in the rural school. The place chosen for the testing was a Maruti temple in the village which is at a distance from the school. The tests were finished in two batches. No difficulty was found in conducting the testing programme because all the students were staying within reach of the school and they could be sent for even if they were absent from school.
The language tests No. 6 to 10 were finalised in November 1981, and administered from the second week of November. These tests were time-consuming as compared to the first five tests. Two of these tests were for narration and expression in which the child has to describe the subject or the situation, or tell a story. These tests were completed in the two urban schools by the middle of March and in the rural school by the end of March 1982.

The responses were taken down in the test booklet itself. The test booklets were properly checked according to the scoring scheme given in previous pages.

3.3.5 Administration of Deprivation Scale:

In the month of March 1982 it was decided to start studying the deprivation level of each student in the sample.

As the children in the sample were only 5 to 7 years old, they were neither in a position to fill in the scale themselves, nor could they have brought back the questionnaire filled by the parents. One reason was that the majority of the parents in the Corporation school and village school were illiterate,
therefore they would have been unable to fill the questionnaire.

Taking in view all these points it was decided to administer the scale in such a way as to gather the information by informal discussion with the parents, by asking questions, or by observing the actual physical conditions in a home or outside home. That means each student in the sample was observed in home situation. Rating of 52 items were made in case of each student.

There was no hard and fast rule about the person from whom the information should be gathered. The experience was that in the case of the private school children it did not matter whether the father or the mother was contacted, both gave clear-cut information about their children. But there was a problem for the other two schools. Their mothers were unable to give full information. So the timings had to be arranged so that both the parents were present at home. Therefore in their homes the weekly holiday of the parents was first found out and the visits were arranged accordingly. The parents too cooperated in good manner in giving the information.

The scoring sheet was filled with the help of the scale questionnaire and scores were calculated
in A, B and C parts. The total scores were calculated separately.

3.3.6 **Language test for the Second year:**

The same children from the three schools were again tested for the ten language tests; for the next year when they were studying in 2nd standard. It was decided to see whether school environment decreased the language difference between these children in the three types of schools.

A set of parallel tests, similar to the ones used in the first year, were used in the three schools. The order and sequence of the tests were the same as before. The responses were taken down in the test booklets.

The answer-sheets were checked and tables were prepared to give the information.

3.4.0 **Presentation of Data:**

3.4.1 **Scores on deprivation scale:**

Deprivation scale booklets of each and every child in the samples of the three schools were checked and a summary chart of scores on scale items was prepared for every child. Total deprivation scores for
'A', 'B' and 'C' part of the scale were calculated. The score in 'A' part of the deprivation scale denoted the level of economic deprivation. The score in 'B' part suggested the child's position in socio-cultural deprivation and the 'C' part suggests the position of a child on the scale of experiential deprivation. Total score on all items of the deprivation scale was also calculated. Thus four scores on deprivation scale were calculated.

As mentioned earlier, the three components were further analysed into ten factors. The scores for each factor for each child were calculated separately.

For each and every child the following scores were tabulated with the help of deprivation scale.

1. Score on economic deprivation.
2. Score on socio-cultural deprivation.
3. Score on experiential deprivation.
4. Total deprivation score.
5. Income of the family.
6. Score for father's occupation.
7. Score for standard of living of the family.
8. Score for caste.
9. Score for educational background of the family.
10. Socio-cultural background of the family.
11. Parental interaction and ways of bringing up the child.
12. Language stimulation by the family.
13. Stimulation for variety in daily routine.

3.4.2 Frequency distribution of deprivation scores:

After calculating the deprivation scores on deprivation scale, frequency distribution chart was prepared; to determine range of scores for high, medium and low deprivation group.

**Table No. III:7**

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequency</th>
<th>Less than cumulative frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>45-75</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>75-105</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>105-135</td>
<td>17</td>
<td>41</td>
</tr>
<tr>
<td>135-170</td>
<td>28</td>
<td>69</td>
</tr>
<tr>
<td>170-205</td>
<td>21</td>
<td>90</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>
\[ Q_1 = \frac{75 + 22.5 \times 30}{22} = 103 \]

\[ Q_2 = \frac{135 + 45 - 41 \times 30}{28} = 139 \]

\[ Q_3 = \frac{135 + 67.5 - 41 \times 30}{28} = 163 \]

Low deprivation group -- 0 to 103.
Medium deprivation group -- 104 to 163.
High deprivation group -- 164 to 200.

Table was prepared to show the frequency distribution of pupils in different schools according to deprivation categories.

\[ \chi^2 \] Table to test the hypothesis

(H0 -- School and deprivation categories are independent)

<table>
<thead>
<tr>
<th>School</th>
<th>Deprivation category</th>
<th>Low (56 - 76%)</th>
<th>Medium (43-46%)</th>
<th>High (23-33%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prathmik Vidya</td>
<td></td>
<td>21</td>
<td>16</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>Narvir Tanaji</td>
<td></td>
<td>0</td>
<td>24</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>Vidyalaya</td>
<td>(57-14%)</td>
<td>(42-86%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeevan Shikshan</td>
<td></td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Mandir</td>
<td>(18-18%)</td>
<td>(81-82%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total :</td>
<td></td>
<td>(23-33%)</td>
<td>(46-67%)</td>
<td>(30-00%)</td>
<td>90</td>
</tr>
</tbody>
</table>
Observed value of $X^2$ is 56.34. Table value of $X^2$ for 4 degrees of Freedom is 13.277 at 1% level of significance. Hence reject H.O. (i.e. null Hypothesis).

"Deprivation and school are dependent i.e. we can consider some school as representative of some deprivation categories".

Thus the assumption that three schools are representative schools was correct. It can be said -
(1) Prathmik Vidya Mandir is representative of school for non-deprived children. (2) Narvir Tanaji Vidya Mandir is representative of school for deprived (urban) children. (3) Jeevan Shikshan Mandir is representative school for most deprived (rural) children.

Therefore schoolwise evaluation of the language test score automatically shows the difference in score attributable to the three levels of deprivation.

3.4.3 Evaluation by language tests:

All the test booklets of the first year (1981-82) were assessed according to the scoring scheme given above. Separate scores for ten tests were written down in the test booklets.
The charts showing itemwise distribution of marks for each test were prepared on separate sheets. The following scores were calculated. (To find out these scores all scores on different tests were converted into stanine scores).

1. Score on vocabulary,
2. Score on comprehension,
3. Score on narration and expression,
4. Total language ability score.

(1) Score for vocabulary was calculated by adding the scores on test No. 1, 2, 3, 4 i.e. (a) Picture vocabulary test, (b) Object vocabulary test, (c) Multiple choice vocabulary test, (d) Recall test of vocabulary.

(2) Score for comprehension ability was calculated by adding the score on test No. 5, 6, 7, 10 i.e. (a) Finding similarities and differences, (b) Item direction test, (c) Auditory association test, (d) Story comprehension test.

(3) Score on narration and expression was found out by taking together the scores on tests No. 8 and 9 i.e. (a) Narrating experiences about the situation and describing a person whom you like most, (b) Telling a story based on pictures.
Total language ability score will be total number of marks in all the ten tests of language ability.

Scores were also calculated separately for the second test battery of language ability, conducted in the year 1982-83.

3.4.4 The tabulation of whole data:

In the year 1982 when the results of the first series of language tests were ready, it was decided to calculate the validity of the language tests with the criteria of achievement in school subjects and also achievement of a child in language as school subject, in the school final examination (1982). Thus the table of Data was prepared including the above scores. The entire information was filled in twenty five columns. They were as under:

<table>
<thead>
<tr>
<th>Column No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age of the student at entrance to school.</td>
</tr>
<tr>
<td>2.</td>
<td>Income of the family.</td>
</tr>
<tr>
<td>3.</td>
<td>Occupation of the father.</td>
</tr>
<tr>
<td>4.</td>
<td>Standard of living of the family.</td>
</tr>
<tr>
<td>5.</td>
<td>Caste of the family.</td>
</tr>
<tr>
<td>6.</td>
<td>Educational background of the family.</td>
</tr>
<tr>
<td>Column No.</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>7</td>
<td>Socio-cultural background of the family.</td>
</tr>
<tr>
<td>8</td>
<td>Parental interaction and ways of bringing up the child.</td>
</tr>
<tr>
<td>9</td>
<td>Language stimulation by the family.</td>
</tr>
<tr>
<td>10</td>
<td>Stimulation through printed and play materials.</td>
</tr>
<tr>
<td>11</td>
<td>Stimulation for variety in daily routine.</td>
</tr>
<tr>
<td>12</td>
<td>Score on vocabulary test 1981.</td>
</tr>
<tr>
<td>13</td>
<td>Score on vocabulary test 1982.</td>
</tr>
<tr>
<td>14</td>
<td>Score on comprehension test 1981.</td>
</tr>
<tr>
<td>15</td>
<td>Score on comprehension test 1982.</td>
</tr>
<tr>
<td>16</td>
<td>Score on narration and expression test 1981.</td>
</tr>
<tr>
<td>17</td>
<td>Score on narration and expression test 1982.</td>
</tr>
<tr>
<td>18</td>
<td>Total score on language ability test 1981.</td>
</tr>
<tr>
<td>19</td>
<td>Total score on language ability test 1982.</td>
</tr>
<tr>
<td>20</td>
<td>Achievement in school language test.</td>
</tr>
<tr>
<td>21</td>
<td>Achievement in all subjects together.</td>
</tr>
<tr>
<td>22</td>
<td>Score on economic deprivation.</td>
</tr>
<tr>
<td>23</td>
<td>Score on socio-cultural deprivation.</td>
</tr>
<tr>
<td>24</td>
<td>Score on experiential deprivation.</td>
</tr>
<tr>
<td>25</td>
<td>Total score on deprivation scale.</td>
</tr>
</tbody>
</table>

Refer to Appendix No. 6.
Chapter III - References


5. Rath & Samant, op. cit.


11. V.V. Kamat: डिदी मृणाली झुठिमापन Purohit and Purohit, Pune 1962.


13. P.H. Ramaseshan, Pre-school test for children, adopted in Shri Venkateshwar University, Psychology Department, 1974.


20. P.R. Naladkar (op. cit.)

21. See Dunn (op. cit.)