CHAPTER THREE

TOOLS OF RESEARCH
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One of the major tools of research, the programmed text, has already been discussed in the previous chapter. This chapter embodies the details of the other two tools employed in the study, namely, socio-economic status scale and the level of aspiration tasks.

3.1

SOCIO-ECONOMIC STATUS SCALE

The term 'socio-economic status', means any group of individuals coming closer to each other on the continuum of occupation, education, income, caste and culture. Chapin (1928) has offered most widely used definition of socio-economic status as "the position that an individual or family occupies with reference to the prevailing average standards of cultural possessions, effective income, material possessions and participation in group activity of the community".

In the last one or two decades a number of scales have been evolved in India to measure the socio-economic status of the people. The authors of these scales have tried to make their scales more comprehensive. However, many variables like the area in which the house is
situated, membership of voluntary organizations, the
type of the schools children studied, savings etc. which
also add to socio-economic status, have been left out
in these scales.

In the present investigation a modified form
of Dev Mohan socio-economic status scale (1972) developed
at the Panjab University, Department of Education,
Chandigarh was used. This scale suitably was revised
by the investigator to include certain important areas
which were not covered in the original scale. The need
to modify the existing scale was felt by the investigator
in the context of increasing population of the city,
increase in the number of schools, colleges, industries
and rapid developments taking place in this urban area.

The scale is designed to measure socio-economic
status of urban families. It collects informations about
the following component variables:

1. Occupation of the family members.
2. General education of the members of the family.
3. Economic Indicators- Monthly income of the
   family, and the income of other relations
   living with the family, average income, if any,
   of the family from sources other than the
   occupation of family members.
4. Cultural Indicators - Types and number of news-
   papers/magazines and their frequency, membership
   of clubs, societies, organizations, participation
in social gatherings like parties, fetes, picnics, cultural programme, tours, theaters etc.

5. Psychological Indicator- Types of colony, type of general thinking of others about your family, belief in caste and mobility, leisure time activities, social attitude etc.

The scale (Appendix-A) contains 13 items. Each item is provided with a number of alternatives, this number varies from item to item. The subjects are required to fill in the particulars concerning their bio-data (Name, age, Sex, class/year, section, Roll No., college/school, Residence, date etc.) before they write anything on the sheet. They are instructed to read the items carefully and write their response on the dotted space (-----) against every question. In case of more than one choice, they are required to tick (/) the one or more that apply the most to them. It is also made clear to the subjects in the very beginning that the information obtained through this scale will be kept confidential and will be used entirely for the research purposes. They are also to reply every question frankly and sincerely.

Each item in the socio-economic status scale is divided into number of sub-items. The first item relates to the number of family members and other relations staying with the family. The second and the third items
relate to information about the academic qualifications and profession of the family members of the subjects respectively. Item number four asks for the family income. Item number five relates to the information about the landed property. Item number six enquires about the modes of conveyance etc. possessed by the family members. Item number seven seeks information about the type of accommodation they are living in. Item number eight enquires if the members of their family are member of any club and arrange or participate in social gatherings. Item number nine asks whether their parents entertain or invite guests while item number ten enquires whether the family goes out for trips or tours in vacations. Item number eleven serves the purpose of getting information about the various luxury items possessed by their family. Item twelve seeks information about the hostel expenses if any, the subjects residing in the hostels incurring. The last item i.e. item number thirteen enquires whether they have a library at home and read news papers and magazines.

3.1.1

SCORING OF THE SOCIO-ECONOMIC STATUS SCALE

The scoring of the socio-economic status scale is done by following the scoring key (Appendix A2).

Each item requiring 'yes' or 'no' response is scored by giving a score of (1) to 'yes' and (0) to 'no'. Each alternative in a particular item carries a specific
score. The grand total for a particular subject is obtained by adding up the scores against his tick marks. This grand total determines the socio-economic status of the testee.

3.1.2

RELIABILITY OF THE SOCIO-ECONOMIC STATUS SCALE

For the purpose of present investigation the reliability of the scale was calculated by using test-retest method with a short interval of 15 days. The scale was given to 50 students from a college in Chandigarh. The coefficient of correlation was found to be quite high i.e. .91 which compares favourably with Dev Mohan socio-economic status scale (1972) test-retest reliability coefficient of .93.

3.1.3

VALIDITY OF THE SOCIO-ECONOMIC STATUS SCALE

The scale has content validity as the items included in the scale are framed as a result of suggestions, interviews and discussions with the experts, people and the Heads of certain institutions. Thus, the universe of the concept was widely covered.

3.2

LEVEL OF ASPIRATION TASKS

Frank (1935) demonstrated significant correlation coefficients between various laboratory level of aspiration tasks and from his experiments he concluded that level of aspiration represents a relatively
permanent characteristic of the personality and that this performance can be demonstrated regardless of the type of ability which the task requires. Mohanty (1974) has also pointed out that level of aspiration does not change with varying tasks of situations.

In the present investigation three level of aspirations tasks were used for measuring the level of aspiration of the subjects namely - letter cancellation test, digit symbol substitution test and computation task. These tasks were designed and developed following mostly the lines of Muthayya, B.C. who used these tasks in his 1959 study. These tasks have been widely used in the field of educational and psychological researches in India and abroad. Mohanty (1974, 76, 78), Ali (1978) used one or more of these tasks in their studies and found them to be reliably measures of level of aspiration.

The details of these tasks are discussed as follows:

3.2.1 LETTER CANCELLATION TEST

This test (Appendix-A) consists of 40 rows of letters of the English alphabet arranged at random in each row without any sequence and proper meaning. The subject is required to write his particulars pertaining to the name of school/college, his own name, class section and age etc. on the title page which bears the time limit also.
The subject has to cross out all the 'a's and 'i's by a horizontal stroke. In each row the number of 'a's and 'i's ranges from 4 to 8. There are 151 'a's and 112 'i's making a total of 263 'a's and 'i's on the sheet. The subject is to proceed systematically line by line down the sheet. His score is the number of letters crossed out within the time limit. If he leaves out any letter in a line, it is deducted from his total score for the trial. The score on this test thus varies from 0 to 263. In addition, the subjects are required to write their aspiration score (aspired score) in the space specified for the purpose. After each trial their sheets are evaluated by the investigator and their obtained score is written in the box meant for the purpose.

3.2.2

**COMPUTATION TASK**

This task (Appendix -A_4) consists of adding single digits. There are fifteen rows, each row having ten digits. For each trial the subject has to add fifteen rows correctly and put the total at the bottom of the each row on the sheet. If the answer is wrong it is not counted for the total score. The time limit for each trial is 60 seconds. The subject's score for each trial would be the number of rows, out of 15 added correctly. The score range here is 0 to 15. Five trials are given preceded by one practice trial.
3.2.3

DIGIT-SYMBOL SUBSTITUTION TEST

This task (Appendix-A3) consists of two sheets. On the front sheet the subject is required to give his particulars regarding his name, name of the school/college, class, section and age. The time limit is also indicated on the front sheet. On the second sheet there are six rows of digits, each row consisting of 20 digits. The subject has to substitute the digits by proper symbols by looking into the key given at the top of the sheet. The time limit is 60 seconds. The subject is required to enter his aspiration score (aspired score) in the box provided on the top left corner of the sheet. Thus the subject is made to write his aspiration score rather than the usual method of telling the aspiration score to the experimenter, in order to avoid the subjective factors which may hinder his free expression.

The subject's score for each trial is the number of digits he substitutes by correct symbols within the prescribed time limit. The correctness of symbols reproduced by the subject is determined by their gross resemblance to those provided in the key. The score range in this task is 0 to 120. Error, if any is deducted from the total score of the trial. Five trials were given preceded by one practice trial (as explained in the previous chapter). The score is counted
by the investigator after the every trial. This obtained score is written in the obtained score box at the bottom of the page.

3.2.4
RELIABILITY OF THE Previous researches have
LEVEL OF ASPIRATION established the reliability and
TASKS validity of the three level
of aspiration tasks used in the present investigation.
It has been reported in a number of studies related
to level of aspiration experiments that, digit symbol
substitution test, computation task and letter cancellation
tasks are fairly reliable and valid measures of level
of aspiration (Muthayya, 1959, Mohanty, 1976).

Muthayya (1959) asserts that the test-retest
method of finding out reliability is considered to be
best in this type of testing. The following table shows
the correlation coefficients of the three tasks as
calculated by test-retest and split-half methods in
Muthayya’s, (1959) study.

| TABLE -23 |
|---|---|---|---|
| | TEST- RETEST AND SPLIT HALF RELIABILITY COEFFICIENTS | OF LOA TASKS (MUTHAYYA, 1959) | |
| Task | Test - Retest | SPLIT HALF |
| | 1st testing | 2nd testing |
| 1. Symbol Digit | .18 | .84 | .87 |
| 2. Letter cancellation | .78 | .91 | .75 |
| 3. Computation | .84 | .90 | .66 |
Reliability of the three levels of aspiration tasks used in the present investigation was calculated by split-half method. In the split-half method the splitting was done in terms of odd/even trials. Goal discrepancy scores formed the essential data for the purpose.

**TABLE - 24**

<table>
<thead>
<tr>
<th>Task</th>
<th>Split half reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Letter cancellation</td>
<td>0.85</td>
</tr>
<tr>
<td>2. Digit-symbol substitution</td>
<td>0.90</td>
</tr>
<tr>
<td>3. Computation</td>
<td>0.77</td>
</tr>
</tbody>
</table>

The above results show that the goal discrepancy scores obtained through three levels of aspiration tasks used in the present study are quite reliable. The range of reliability co-efficient varies from 0.77 to 0.90. The results compare favourably with those of Mathayya's Madras study (Mathayya, 1959). All these coefficients lead us to believe that the tasks used are reliable and the procedure adopted to measure level of aspiration is also reliable.
3.2.5

VALIDITY OF LEVEL OF ASPIRATION TASKS

Validity of the three level of aspiration tasks was determined by calculating the product moment inter-correlation between the goal discrepancy scores of subjects on the three tasks.

TABLE -25

PRODUCT MOMENT INTER-CORRELATION OF THREE LEVEL OF ASPIRATION TASKS

<table>
<thead>
<tr>
<th>Task</th>
<th>Letter cancellation</th>
<th>Digit-symbol substitution</th>
<th>Computation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter cancellation</td>
<td></td>
<td></td>
<td>.72</td>
</tr>
<tr>
<td>Digit-symbol substitution</td>
<td></td>
<td></td>
<td>.79</td>
</tr>
<tr>
<td>Computation</td>
<td></td>
<td></td>
<td>.69</td>
</tr>
</tbody>
</table>

It can be observed from the table that coefficient of correlation between the GDS of subjects on letter cancellation and digit-symbol substitution was found to be .72 and coefficient of correlation between the GDS on letter cancellation and computation tasks was calculated to be .79. However, the coefficient of correlation between digit-symbol substitution and computation was .69.

All the above coefficients of correlation suggest that the level of aspiration tasks used in the present investigation were sufficiently valid.