**METHODOLOGY**

The main objective of present study is to find out whether school students of IX grade identified as low achievers and high achievers differ in their perceptions of classroom and home environment as well as their self-concept and attitude toward learning. It also aims at finding out how do the English and Marathi medium students as well as boys and girls, regardless of their level of academic achievement, compare in their perceptions of the two types of environment, self-esteem, and attitude toward learning.

### 2.1 Sample:

The sample of this study consists of 400 students (200 boys and 200 girls) of IX grade belonging to 5 English and 5 Marathi medium schools located in Pune.

The sample drawn from ten schools could be described as purposive, and it contains two subgroups, viz high and low achievers.

The criterion for selecting low and high achievers has been the percentage of marks obtained by the students in the last two examinations, namely, VII and VIII grade annual examinations. Those who had obtained marks in the range of 35% to 48%, were regarded as low achievers, while those whose obtained marks were 65% and above were considered as high achievers.

The break up of the sample is as follows:

<table>
<thead>
<tr>
<th></th>
<th>English Medium (N=200)</th>
<th>Marathi Medium (N=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys (N=100)</td>
<td>Girls (N=100)</td>
</tr>
<tr>
<td>High Achievers (N=200)</td>
<td>N=50</td>
<td>N=50</td>
</tr>
<tr>
<td>Low Achievers (N=200)</td>
<td>N=50</td>
<td>N=50</td>
</tr>
</tbody>
</table>
2.2 Measures:

The following measures have been used for collecting data.

**Attitude Toward Learning Scale:**

This scale has been developed to assess how favourably the students covered in the study are disposed toward learning.

It contains 10 evaluative statements, which describe the extent to which the students like the activity of learning and consider it to be good, interesting and worthwhile. The respondents have to indicate the extent to which each statement represents their feelings by choosing one of the five response alternatives: Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree.

The reliability of this scale has been found to be .69, when estimated by Rulan formula, using odd-even items. The scoring weights for each item range from 1 to 5, for the items that are phrased in positive direction (reflecting positive attitude). The endorsement of rating category “Strongly agree” is scored as 5 and the endorsement of “Strongly disagree” is scored as 1. The other alternatives are assigned scores of 4 (Agree), 3 (Neither agree nor disagree), and 2 (Disagree). The scoring direction is reversed for the items that are phrased in the negative direction. The sum of scores assigned to the response categories checked by the respondent yields an index of his overall attitude toward learning.

**Family Environment Scale:**

This scale has been developed to assess the perceptions which participants have of their family environment. It contains 16 items which describe various aspects of the family environment pertaining to four major dimensions, viz cohesion, conflict, achievement orientation, intellectual and
cultural orientation. These four dimensions are those which have been covered by Moos and Moos (1986) in their Family Environment Scale.

‘Cohesion’ and ‘Conflict’ are those aspects which reflect the kind of “relationship” which is believed to be persisting in the family, while ‘Achievement orientation’ and ‘Intellectual orientation’ indicate the extent to which “personal growth” is encouraged in the family.

In fact, Moos and Moos (1986) have covered some more aspects in their measure. However, for the purposes of this study it was thought that the four aspects mentioned above were most relevant. Moreover, because of brevity, it was necessary to restrict the length of present scale to 16 items. It was also necessary to construct the scale in simple language with a view to ensure that the school students did not have any problem in comprehending the meaning of statement.

The reliability of four subscales has been estimated by the Alfa-coefficient and the values are:

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohesion</td>
<td>.61</td>
</tr>
<tr>
<td>Conflict</td>
<td>.46</td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>.41</td>
</tr>
<tr>
<td>Intellectual and Cultural orientation</td>
<td>.35</td>
</tr>
</tbody>
</table>

The scoring weights for each item range from 1 to 5 as shown below:

<table>
<thead>
<tr>
<th>Scoring Weight</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inaccurate is scored as</td>
<td>1</td>
</tr>
<tr>
<td>Slightly Inaccurate as</td>
<td>2</td>
</tr>
<tr>
<td>Uncertain as</td>
<td>3</td>
</tr>
<tr>
<td>Slightly Accurate as</td>
<td>4</td>
</tr>
<tr>
<td>Accurate as</td>
<td>5</td>
</tr>
</tbody>
</table>
This scoring direction is reversed for the negatively worded items. The sum of numerals assigned to each item of each subscale indicates the score of respondent on that subscale.

**Classroom Environment Scale:**

This measure has been developed for assessing students' perception of their classroom environment. It contains 16 items which pertain to the following aspects of classroom environment: teacher support, teacher control, innovation, and order and organization. These aspects have been derived from the work of Moos and Trickett (1987) on classroom environment. They have identified some other aspects also. However, in the present scale only four aspects, mentioned above, have been covered as they are relevant to the purpose of having a glimpse at how favourably the respondents perceive their classroom environment.

The reliability of this scale has been determined by working out the Alfa co-efficient for the four subscales. The reliability co-efficient for the four subscales are as follows:

- Teacher support : .73
- Teacher control : .47
- Innovation : .45
- Order and Organization : .43.

The scoring weights for each item range from 1 to 5 as shown below:

- Inaccurate is scored as 1
- Slightly Inaccurate as 2
- Uncertain as 3
- Slightly Accurate as 4
- Accurate as 5
The above direction of scoring is reversed for the negatively worded statements. The sum of numerals assigned to every response chosen by the respondent determines his or her total score on the given subscale. Thus four scores are yielded by the responses to the items of this scale.

**Self-esteem Inventory (SEI):**

This scale, (school form), developed by Coopersmith (1986), has been used to assess the extent to which participants perceive themselves to be competent, successful, significant and worthy. According to the author, self-esteem is a personal judgment of worthiness, expressed in the attitudes a person holds toward self. The SEI is designed to measure evaluative attitude toward the self in social, academic, family and personal areas of experience.

The School Form of SEI is used with students aged 8 to 15 years. 58 items constitute this scale out of which 50 are the self esteem items while the remaining 8 items belong to the 'lie scale'. The S-E items are the statements concerning how one feels about himself or herself. The respondent has to go through each statement and decide whether whatever has been said in it represents his or her true feeling regarding his or her self. If he/she thinks that an item describes truly how he/ she usually feels, he/she has to put a (X) in the column "Like Me" against that item, if not then put (X) in the column of "Unlike Me".

The SEI has four subscales: (i) School (academic) subscale, (ii) Social (self-peer) subscale, (iii)Home (Parents) subscale, (iv) General (personal) subscale. In addition, there is a lie scale, which, accordingly to the author, could be regarded as a measure of a student's defensiveness. The total of scores on the four subscales, which together contain 50 items, is treated as indicative of a respondent's level of "Overall Self-Esteem". The test- retest reliability for the SEI has been reported to be .88.
In addition to the aforesaid measures, ratings of the students covered in this study were obtained from their teachers on the following characteristics: willingness to learn, ability to comprehend, clarity in expression, and curiosity to learn. The concerned teachers were provided with a seven point rating scale ranging from 1(very low) to 7(very high) for every characteristic. The concerned classroom teachers were required to rate each student separately on all the four characteristics by taking into consideration what they had observed about him/her so far.

Thus the teachers were requested to assign appropriate position on the scale for each characteristic to each student under consideration. Accordingly, the teacher had to encircle the number on the scale which was to be assigned to the given student. The main purpose behind the use of rating scales was to find out the extent to which favourable ratings were offered to the students who were identified as low and high achievers on the basis of marks obtained by them in the last two consecutive annual school examinations.

2.3 Procedure:

The following measures were to be administered to the students covered in this study:
1. Attitude Toward Learning.
2. Family Environment Scale.
3. Classroom Environment Scale.
4. Self-esteem Inventory.

The measures were administered to the students not individually but by forming their groups with 20 to 25 students contained in each of them. Thus several group testing sessions were conducted during the process of data collection. The time and date of each session were predetermined as per the convenience of students and school authorities.
All the four questionnaires, namely, Attitude Toward Learning, Family Environment Scale, Classroom Environment Scale and Self-esteem Inventory were administered in one session.

These measures were translated into Marathi for the convenience of students who had opted this language as the medium of instruction. Thus the Marathi versions of the measures were administered to the Marathi medium students. Teachers’ ratings were obtained independently after the administration of tests to the students belonging to different groups. Normally teachers took two days to complete their ratings of concerned students.

The testing sessions were preceded by the process of identification of low and high achievers. Since the percentage of marks obtained in the last two consecutive annual examinations were used as the basis for the formation of the designated groups, it was necessary to collect the required record of results from the administration of each school. Though the measures were administered thereafter, caution was exercised to ensure that the student participants did not become aware of the distinction made between and among them as low and high achievers. The measures were administered to the students at their respective schools and no time limit was set for them to complete the questionnaires. However, the students were urged not to think too much while choosing an alternative for an item as their response. On the other hand, they were requested to consider the reaction which first occurred in their mind. This was necessary to ensure that their responses were unbiased and representative of what they generally think and how they act.

2.4 Research Design and Treatment of Data:

The present study has its focus on finding out whether the low and high achievers differ in their attitude toward learning, self-esteem and
perceptions of their family and classroom environments. An attempt has also been made to examine the impact, if any, of medium of instruction and male-female difference on the above mentioned attitudinal and perceptual aspects of student behaviour.

Since Hypotheses 1 and 2 involve predictions concerning differences in perceived family environment between high and low achievers as well as English medium and Marathi medium students, a 2x2 factorial design has been employed. The two factors, viz. level of academic achievement and English v/s Marathi medium are granted the status of independent variables, while perception of home environment is treated as the dependent variable. Hypotheses 3 and 4 are verified by using another 2x2 factorial design in which the two independent variables are again the level of academic achievement and medium of instruction, while perception of classroom environment is the dependent variable. For the verification of hypotheses 5 to 8, which involve predictions concerning difference in the level of self-esteem and attitude toward learning, the same 2x2 factorial design was repeated. The independent variables were level of academic achievement and medium of instruction, and the dependent variables were level of self-esteem and the extent of favourableness of attitude toward learning.

Hypotheses 9 to 12 involve predictions concerning differences in perceived home and classroom environments as well as self-esteem and attitude toward learning between male and female students. While verifying these hypotheses the variable ‘sex difference’ has been explored along with the variable ‘level of academic achievement’ with a view to find out how far the former has exerted its effect on the dependent variables, both independently and in interaction with the level of academic achievement. As such, for the verification of aforesaid hypotheses also a 2x2 factorial design
has been employed with sex difference and level of academic achievement as the independent variables.

Apart from the verification of twelve hypotheses, it was also decided to compare the high and low achievers along certain relevant characteristics mentioned earlier. The purpose was to find out how favourably the low and high achievers were rated in respect of each characteristic. It was also decided to find out how did the male and female as well as English and Marathi medium students compare with each other in the ratings received by them from their classroom teachers. The best way to do this was to employ a 2x2x2 factorial design with the level of academic achievement, Marathi v/s English medium, and sex difference as the independent variables, and ratings received from teachers as the dependent variables.

As for statistical treatment, the ‘F’ test was employed to see whether the criterion groups differed significantly in the predicted direction in the concerned aspects of behaviour such as perception of family and classroom environment and perception of self worth as well as attitude toward learning. The ‘F’ test was also employed to find out whether the aforesaid groups differed significantly in the ratings received by them from their classroom teachers.