Chapter III

Methodology of the Research

3.1 Introduction

The methodology adopted occupies a very important place in any kind of research. Research methodology lays out the detailed description of the research variables and procedure.

The present chapter discusses about research methodology adopted in the completion of the topic under study. This chapter deals with the description of sample, methodology of the study, tools used to collect data and statistical techniques used for data analysis.

3.1.1 Population

All teacher trainees of B.Ed. course in the state of Maharashtra formed the population of study.

3.1.2 Sample

The sample consisted of 1054 teacher trainees from different teacher training colleges in the Pune city of the academic year 2011-12. Following table shows distribution of the sample in terms of sample from granted and non-granted B.Ed. colleges, sample from Marathi and English medium B.Ed. colleges and sample distribution in terms of male and female teacher trainees.

<table>
<thead>
<tr>
<th>Category of the Sample</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of B.Ed. college</td>
<td></td>
</tr>
<tr>
<td>Granted</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Non-Granted</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Medium of Instruction</td>
<td></td>
</tr>
<tr>
<td>Marathi</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>English</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
</tbody>
</table>
3.1.3 Sampling Procedure

For the present study, Purposive Sampling Technique was used. Purposive Sampling is a Non-Probability Sampling Strategy. As the name suggests, purposive sampling is the sampling that is undertaken by the researcher to serve some of his basic purposes. So, in this technique, the researcher specifically tries to include those cases or individuals in the sample that he/she thinks appropriate or very informative for the purpose of his/her research study. (Mangal & Mangal, 2013)

3.1.4 Criteria to Select Sample

For the present study, the sample selected was pre-service teacher trainees studying in the B.Ed. colleges of Pune city. For the fulfillment of objectives, the sample was selected from following categories –

3.2 Variables

Variables included in the study were -

- Socio-economic background of B.Ed. students
- Perception of B.Ed. students about teacher training and teaching profession.
- Attitude of B.Ed. students towards teacher training and teaching profession.
3.3 Type of Research

It was a status study hence *Survey method* was used for the study. As survey research studies both small and large population by selecting and studying samples chosen from the populations to discover the inter relations of sociological and psychological variables. Hence survey method was used in the present research.

3.4 Action Plan

For the present study sample was selected from various B.Ed. colleges from Pune city. Perception Inventory and Attitude Inventory were prepared by the researcher to collect information about perception and attitude towards teacher training and teaching profession. Feedback from seven experts was taken on both the inventories (*Appendix G*). Reliability and validity of both the inventories were found out through pilot study. Standardized Socio-economic Status Scale prepared by Rajiv Bhardwaj was used to know about B.Ed. students’ social and economic background. Socio-economic Status Scale, Perception Inventory and Attitude Inventory were administered on the sample selected to collect data. Data was tabulated, analyzed and interpreted quantitatively as well as qualitatively to draw conclusions.

3.5 Tools for Data Collection

The research was intended to study the relation of socio-economic status of B.Ed. teacher trainees with their perception about and attitude towards B.Ed. training program and teaching profession. The researcher used three tools to collect data from the sample.
• A standardized Socio-Economic Status Scale prepared by Rajiv Bhardwaj was used to know about teacher trainees’ social and economic status. A standardized Socio-Economic Status Scale is given in Appendix A.

• Perception Inventory prepared by the researcher was used to collect information about teacher trainees’ perception about B.Ed. training program and teaching profession. Final form of Perception Inventory is given in Appendix B.

• Attitude Inventory prepared by the researcher was used to get data about teacher trainees’ attitude towards B.Ed. training program and teaching profession. Final form of Attitude Inventory is given in Appendix C.

The three tools are described in detail as follows –

3.5.1 Socio-economic Status Scale

The Socio-economic Status Scale constructed by Dr. Rajiv Bhardwaj was used in the present research. Social and economic status show intimate relationship with other variables. The present scale is equally good in both urban and rural areas and is applicable to measure socio-economic status above thirteen years of age. The scale has been constructed with the view to seek clarity of distinct aspects of social and economic status of an individual separately. The contention of Hurlock (1964) – ‘That the economic status of a family frequently determines what the family social status will be.’ – does not appear to be appropriate and quite vocal in the socio-cultural setting of India, where a Pandit (Katha Vachak) or primary school teacher has very high social status but may not be financially well placed, whereas we may have a merchant or miser money-lender having a very sound economic position but possessing no rank in the society. Keeping this dilemma of the Indian socio-cultural setting in view, it has been considered appropriate to measure social and economic status separately in both the areas and then the two scores of different areas switched to one continuum (Standard scores), which can give socio-economic status of an individual. With this object the test envisages to determine nine types of statuses namely social status (Ascribed), social status (Achieved), social status (As a whole), economic status (Ascribed), economic status (Achieved), economic status (As a whole), socio-economic status (Ascribed), socio-economic status (Achieved), and socio-economic status (As a whole).
Description of the Scale

The Socio-economic Status Scale given in Appendix A has been developed for literate people. It can be administered on illiterate people also but only by personal interviews. At preliminary state fifteen areas of socio-economic status were selected with the careful study of the relevant literature and from some popular tests in the field. The list of fifteen areas was submitted to twenty judges to know the most important areas which can measure the Socio-economic Status of the individual in society. Opinions of twenty judges pointed only seven areas to provide the desired information. Items for each area then selected and were again submitted to fifty experts to determine the hierarchy of ranking with reference to their importance of the seven selected areas and items related to different areas along with alternatives to each item, if any. It gives us three-rank values - i.e. area rank value, item rank value and alternative rank value. With these three rank-values, we calculated the proportion rank scale value and then determined the weighted score for each item. Many items and their alternative items, which were not approved by the experts or found a very little scale value, were then discarded.

The first form of the scale was then developed with the help of hierarchy as determined by experts. This first form of the scale was administered on sample of twenty students, which indicated different types of difficulties in the process of administration, scoring, etc. by removing and minimizing these difficulties in the different aspects of the scale, the final form emerged for the purpose of scaling. This form of the scale can be understood easily with the help of a table given below.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Area</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Family</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Education</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Profession</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>A. Doctors</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>B. College Principals</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>C. Administrators</td>
<td>3</td>
</tr>
</tbody>
</table>
D. Forces (4) 2
E. Officers 1
F. Lawyers 1
G. Teachers 3
H. Writers 3
I. Business Personnels 7
J. Artists 3
K. Engineers 2
L. Leaders 4
M. Managers 2
N. Miscellaneous 5

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Caste* 3</td>
</tr>
<tr>
<td>6</td>
<td>Total Assets 6</td>
</tr>
<tr>
<td>7</td>
<td>Monthly Income 6</td>
</tr>
</tbody>
</table>

Administration

It is a self-administering scale. The tester should discuss here the desired purpose and should explain the description and instruction of the test. The instructions should be read loudly by the tester while subjects read them silently along with him/her. The test can be started only after clear understanding has been established. There is no time limit for the testees to record the responses in the scale.

Scoring

Scoring of the test is very easy and of a quantitative type. Scoring key provides the weightage score for each item. Every alternative of any of the items has only one weighted score, which will serve to provide the score if any tick mark is present in the horizontal plane for father, mother and the case (i.e., the testee). The scoring key has to be placed vertically between the two assigned points on the test. The separate score for each area are then to be added vertically. These totals of the scores for each separate area

97
are thereafter to be put in big boxes provided at the vertical end of each area for father, mother and the case.

The same process of scoring has to be followed in respect to each page of the scale. It has to be borne in mind very clearly that there has been separate scoring keys for each page of the test and the keys have been numbered accordingly.

When scoring of each page has been completed, the area wise total score of father, mother and the case is to be transferred on the last page of the test in Table 1.

*Analysis*

For analysis of different types of statuses or the desired status of the study the tester has to complete the Table 2 of the test. For this purpose, the tester should convert the area wise total of weighted scores of father, mother and the case (Ref. – Table 1 of the test) into Z-scores which are given at mean 50 and of standard deviation 10 (Ref. Manual – Table nos.4, 5 and 6). Put this area wise Z-scores corresponding to area wise weighted scores for father, mother and the case separately in the provided place of Table 2 of the test.

After the completion of Table 2 of the test, the analysis of any status out of nine statuses or all the nine statuses can be done easily with the help of the chart given below.

*Norms*

For easy and meaningful interpretation of all nine types of statuses, norms are provided in the form of T-scores. By consenting the manual’s Tables 7 and 8 of T-score, any status score can be interpreted in terms of T-scores. Thus for example, a status score of 664 for the social status (ascribed) can be converted into a T-score of 76.66, (Ref. – Manual Table 7) because the score of 664 comes between 630.5- 670.5. The researcher should place the T-score in the Table 3 on the test.

*Interpretation*
Interpretation of any status can be made with the help of T-scores. Categories of the status can be ascertained with the help of following Table 6 (Ref.-Manual Table 9) as given below –

**Table 6: Range of SESS T-Scores**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Category</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Upper Class</td>
<td>70 and above</td>
</tr>
<tr>
<td>2</td>
<td>Upper Middle Class</td>
<td>60-69</td>
</tr>
<tr>
<td>3</td>
<td>Middle Class</td>
<td>40-59</td>
</tr>
<tr>
<td>4</td>
<td>Upper Lower Class</td>
<td>30-39</td>
</tr>
<tr>
<td>5</td>
<td>Lower Class</td>
<td>29 and below</td>
</tr>
</tbody>
</table>

### 3.5.2 Perception Inventory

In the present research, Perception Inventory prepared by the researcher on 3-point scale was used to know B.Ed. students’ perception about teacher training and teaching profession. The Perception Inventory included statements to know perceptions of B.Ed. students about B.Ed. Entrance Examination, various aspects of B.Ed. course, infrastructural facilities, educational facilities, class room instructions and evaluation, practical work included in the course, management of the institution / college and about teaching profession. Each item or statement in an inventory was followed by three responses. The three categories of responses were to the Maximum Extent (Max. Ext.), to the Moderate Extent (Mod. Ext.) and to the Minimum Extent (Min. Ext.). To score the scale, the responses were credited as 3, 2 and 1 respectively from maximum to the minimum extent.

### 3.5.3 Attitude Inventory

An attitude inventory prepared by the researcher was used to get quantitative measure of B.Ed. student’s disposition towards teacher training and teaching profession. It included a set of statements related to various aspects of teacher training and teaching profession to be responded by B.Ed. trainees. To know attitude of B.Ed. students towards teacher training and teaching profession, a researcher-made Likert Type 5 point Attitude
Inventory was used. Each item or statement in an inventory was followed by five responses.

The five categories of responses were Strongly Agree (SA), Agree (A), Undecided (U.D.), Disagree (D.A.) and Strongly Disagree (S.D.). To score the scale and the responses were credited as 5, 4, 3, 2 and 1 respectively from the favourable to the unfavourable end.

3.6 Pilot Study

As there is no suitable standardized test to measure B.Ed. teacher trainees’ perception about and attitude towards teacher training and teaching profession, the researcher prepared Perception Inventory and Attitude Inventory.

As Perception and Attitude Inventories were researcher – made, to establish their reliability and validity a pilot study was carried out. The pilot study was made on a sample of forty eight B.Ed. students.

3.6.1 Pilot Study – Perception Inventory

3.6.1.1 Preparation of the Preliminary Form of Perception Inventory

Items related to perception of various aspects of teacher training and teaching profession were listed under following headings:

a) Entrance Examination
b) B.Ed. Course
c) Infrastructural Facilities
d) Facilities
e) Classroom Instructions and Evaluation
f) Practical Work
g) Management of the Collage
h) Teaching Profession

With reference to support the list, course-related available literature was studied as well as informal discussions with B.Ed. students were carried out.
In order to prepare preliminary form of Perception Inventory, the statements were written separately under the headings listed above. The preliminary form consisted of three items related to entrance examination, 9 items related to B.Ed. course, 26 items related to infrastructural facilities, 11 items for educational facilities, 8 items related to classroom instructions and evaluation, 15 items related to practical work, 6 items for management of the collage and 12 items related to teaching profession. Thus the preliminary form consisted of total 90 items related to teacher training and teaching profession.

The items in the preliminary form of Perception Inventory have been presented in the form of questions with three alternative responses, namely; to the maximum extent (Max. Ext.), to the moderate extent (Mod. Ext.) and to the minimum extent (Min. Ext.).

Feedback was taken from six senior teacher educators from different teacher training institutes as well as a research guide before its administration on the sample for pilot study. Certain items were reframed as well as few others were added in the categories like – Infrastructural Facilities, Evaluation and Internship. The senior teacher educators were requested to suggest omissions and modifications wherever necessary. They were requested to give feedback on nature of response pattern. Experts’ feedback on Perception and Attitude Inventories is given Appendix D. On the whole, a total of 90 items have been included in the preliminary form. The responses for each item were given as in the Table 7 herewith –

Table 7: Numerical Values Assigned for Perception Inventory

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Extent of Perception</th>
<th>Numerical Value Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Positive Statement</td>
</tr>
<tr>
<td>1</td>
<td>Max. Ext.</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Mod. Ext.</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Min. Ext.</td>
<td>1</td>
</tr>
</tbody>
</table>

In order to establish reliability, validity and usability of preliminary form of inventory it was administered on forty eight B.Ed. trainee- teachers. They were asked to
tick mark (✓) the response for each item in the space provided. After responding to all the items, the total scores were obtained from each sample included in the pilot study to calculate discrimination values. As suggested by Edwards (1969), to determine discrimination value on the basis of total score, the top 27% and the bottom 27% scores were identified as the criterion group. The mean score on each item for both the criterion groups were calculated. The difference between the mean scores on each item is referred as discrimination value. The discrimination values related to the items included in the preliminary form of the Perception Inventory are given in Appendix E.

3.6.1.2 Preparation of Final Form of Perception Inventory

For the preparation of final form of Perception Inventory, those items whose discrimination value was found greater than or equal to “0.30” were selected as valid items to be included. Out of 90 items, 11 items were found to be not having the desired level of discrimination and thus 79 items were retained and hence included in the final form of Perception Inventory.

Reliability and validity of the final form were found out before its administration to the sample of the present study. The final form of Perception Inventory (English Version) is given in Appendix B.

3.6.1.3 Reliability and Validity of Perception Inventory

i) Reliability of Perception Inventory

A test is said to be reliable when it has an ability to consistently yield the same results when repeated measurements are taken of the same individuals, under the same conditions. (Koul, 2013)

Reliability of the final form of Perception Inventory was established to check the effectiveness of items to be included in an inventory for studying perception of B.Ed. students towards teacher training and teaching profession. For this purpose, that is to establish reliability of Perception Inventory the ‘test-retest method’ was followed. The test was administered to the pilot sample. A set of scores was obtained. The same test was
re-administered with the gap of 28 days after its first administration to obtain second set of scores. The two set of scores were co-related to obtain the reliability of the test.

The reliability of the test is usually reported in terms of reliability coefficient. It is the coefficient of correlation between the test and retest scores of the same subjects on the same form. (Koul, 2013)

The coefficient of correlation between the test and retest scores was computed using Karl Pearson’s Product Moment Method. It yielded following value –

\[ r = + 0.84 \]

Value of coefficient of correlation indicates that the final form of Perception Inventory is highly reliable.

ii) Validity of Perception Inventory

The test, as a data collection tool, must produce information that is not only relevant but free from systematic errors; i.e., it must produce valid information. A test is valid if it measures what it claims to measure. (Koul, 2013)

Validity of Perception Inventory is established in terms of –

a) Content Validity
b) Item Validity
c) Intrinsic Validity
da) Content Validity

The content of the Perception Inventory was developed in terms of items on the basis of B.Ed. course content and informal discussions that were carried out with B.Ed. students. Feedback was also taken from senior teacher-educators on the preliminary draft of Perception Inventory. Every item chosen represents various aspect of B.Ed. training and teaching profession collectively, all the items in an inventory constituted a representative sample of various components about perception of B.Ed. students about teacher training and teaching profession.

For the establishment of content validity the discrimination values obtained (Appendix E) and percentages obtained on each item (Appendix G) were also taken into
consideration. Thus, it can be fairly assumed that the final draft of Perception Inventory possesses satisfactory content validity.

b) Item Validity

In order to determine item validity of the Perception Inventory, the discrimination values were found. With the help of mean difference of criterion groups on each item in the preliminary draft of an inventory certain items with discrimination value less than 0.30 were omitted. Remaining items were retained to prepare the final draft of an inventory. Hence, it can be said that each item included in the final draft of Perception Inventory possesses adequate item validity.

c) Intrinsic Validity

Intrinsic validity indicates the degree to which a test measures what it is supposed to measure. Intrinsic validity can be obtained by taking square root of reliability value of an inventory. The intrinsic validity of the perception inventory is –

$$Intrinsic \; validity = \sqrt{0.84} = +0.916$$

Hence, it can be said that the final form of Perception Inventory has satisfactory intrinsic validity.

The final form of Perception Inventory consisted of 79 items, with the score on any item ranging between 1 and 3. Hence, the perception scores could range between 79 - 237. Range of perception scores for the options Max. Ext., Mod. Ext. and Min. Ext. are given in the following table-

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Extent of Perception</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Max. Ext.</td>
<td>159 - 237</td>
</tr>
<tr>
<td>2</td>
<td>Mod. Ext.</td>
<td>80 - 158</td>
</tr>
<tr>
<td>3</td>
<td>Min. Ext.</td>
<td>Below 79</td>
</tr>
</tbody>
</table>

3.6.2 Pilot Study- Attitude Inventory

3.6.2.1 Preparation of the Preliminary Form of Attitude Inventory
Items related to attitude of B.Ed. students towards various aspects of teacher training and teaching profession were listed under following headings.

a) B.Ed. Training

b) Teaching Profession

With reference to support the list, course-related available literature was studied as well as informal discussions with B.Ed. students were carried out.

In order to prepare preliminary form of Attitude Inventory, the statements were written separately under the headings listed above. The preliminary form consisted of 16 items related to B.Ed. Training and 27 items related to Teaching profession. Thus the preliminary form consisted of total 43 items related to teacher training and teaching profession.

The items in the preliminary form of Attitude Inventory have been presented in the form of statements with five alternative responses, namely; Strongly Agree (SA), Agree (A), Undecided (U.D.), Disagree (D.A.) and Strongly Disagree (S.D.).

Feedback was taken from six senior teacher educators from different teacher training institutes before its administration on the sample for pilot study. Certain items were reframed as well as few others were added. The senior teacher–educators were requested to suggest omissions and modifications wherever necessary. They have been also requested to give feedback on nature of response pattern. On the whole, a total of 43 items have been included in the preliminary form. The responses for each item were given values as in Table 8.

Table 8: Numerical Values assigned for Attitude Inventory

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Nature of Response</th>
<th>Numerical Value Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Agree</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Undecided</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Disagree</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Strongly Disagree</td>
<td>1</td>
</tr>
</tbody>
</table>
In order to establish reliability, validity and usability of preliminary form of inventory it was administered on forty eight B.Ed. trainee- teachers. They were asked to tick mark (√) the response for each item in the space provided. After responding to all the items, the total scores were obtained from each sample included in the pilot study to calculate discrimination values. As suggested by Edwards (1969), to determine discrimination value on the basis of total score, the top 27% and the bottom 27% scores were identified as the criterion group. The mean score on each item for both the criterion groups were calculated. The difference between the mean scores on each item is referred as discrimination value. The discrimination values related to the items included in the preliminary form on Attitude Inventory are given in Appendix H.

3.6.2.2 Preparation of Final Form of Attitude Inventory

For the preparation of final form of Attitude Inventory, those items whose discrimination value was found greater than or equal to “0.30” were selected as valid items to be included. Out of 43 items, 3 items were found to be not having the desired level of discrimination and thus 40 items were retained and hence included in the final form of Attitude Inventory.

Reliability and validity of the final form were found out before its administration to the sample of the present study. The final form of Attitude Inventory (English Version) is given in Appendix C.

3.6.2.3 Reliability and Validity of Attitude Inventory

i) Reliability of Attitude Inventory

Reliability of the final form of Attitude Inventory was established to check the effectiveness of items to be included in an inventory for studying attitude of B.Ed. students towards teacher training and teaching profession. For this purpose, i.e., to establish reliability of Attitude Inventory the test-retest method was followed. The test was administered to the pilot sample. A set of scores was obtained. The same test was re-administered with the gap of 28 days after its first administration to obtain second set of scores. The two sets of scores were co-related to obtain the reliability of the test.
The reliability of the test is usually reported in terms of reliability coefficient. It is the coefficient of correlation between the test and retest scores of the same subjects on the same form. (Koul, 2013)

The coefficient of correlation between the test and retest scores was computed using Karl Pearson’s Product Moment Method. It yielded following values –

\[ r = + 0.88 \]

Value of coefficient of correlation indicates that the final form of Attitude Inventory is highly reliable.

**ii) Validity of Attitude Inventory**

Validity of Attitude Inventory is established in terms of –

a) Content Validity  
b) Item Validity  
c) Intrinsic Validity

**a) Content Validity**

The content of the Attitude Inventory was developed in terms of items on the basis of B.Ed. course content and informal discussions that were carried out with B.Ed. students to know their views about teaching profession. Feedback was also taken from senior teacher-educators on the preliminary draft of Attitude Inventory. Every item chosen represented various aspects of B.Ed. training and teaching profession collectively, all the items in an inventory constituted a representative sample of various components about attitude of B.Ed. students about teacher training and teaching profession.

For the establishment of content validity the discrimination values obtained \((\text{Appendix } H)\) and percentages obtained on each item \((\text{Appendix } J)\) were also taken into consideration. Thus, it can be fairly assumed that the final draft of Attitude Inventory possesses satisfactory content validity.
b) **Item Validity**

In order to determine item validity of the Attitude Inventory, the discrimination values were found. With the help of mean difference of criterion groups on each item in the preliminary draft of an inventory certain items with discrimination value less than 0.30 were omitted. Remaining items were retained to prepare the final draft of an inventory. Hence, it can be said that each item included in the final draft of Attitude Inventory possesses item validity adequately.

c) **Intrinsic Validity**

Intrinsic validity indicates the degree to which a test measures what it is supposed to measure. Intrinsic validity can be obtained by taking square root of reliability value of an inventory. The intrinsic validity of the attitude inventory is –

\[
\text{Intrinsic validity} = \sqrt{0.88} = +0.938
\]

Hence, it can be said that the final form of Attitude Inventory has satisfactory intrinsic validity.

The final form of Attitude Inventory consisted of 40 items, with the score on any item ranging between 1 and 5. Hence, the attitude scores could range between 40 -200. Range of scores for favourable attitude and unfavourable attitude are given in the following table-

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type of Attitude</th>
<th>Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Favourable</td>
<td>121 - 200</td>
</tr>
<tr>
<td>2</td>
<td>Unfavourable</td>
<td>40 - 120</td>
</tr>
</tbody>
</table>

3.7 **Statistical Techniques for Data Analysis**

For the fulfillment of objectives of the present study, both quantitative and qualitative techniques were employed for data analysis. Statistical techniques used for data analysis were as follows –

For objectives 1, 2 and 3 -

*Objective 1: To study the Socio-economic background of B.Ed. students.*
Objective 2: To study the perception of B.Ed. Students about teacher training and teaching profession.

Objective 3: To study the Attitude of B.Ed. students towards teacher training and teaching profession.

For the fulfillment of objectives 1, 2 and 3 Frequency distribution tables were prepared considering SESS T-Scores/Perception Scores/Attitude Scores respectively of all 1054 samples. Frequency polygons were plotted to know and to infer about the distribution of SESS T-Scores/Perception Scores/Attitude Scores of the sample. Statistical techniques like Mean and Skewness were computed.

Percentages were calculated for each option of Perception and Attitude Inventories considering the responses obtained from all 26 categories made to know the extent of perception and type of attitude respectively.

The percentages of Perception/Attitude scores were calculated and used for item-wise analysis. Item wise Perception Scores and Attitude Scores are given in Appendix F and Appendix I respectively. The percentages of Item wise Perception Scores are given in Appendix G and the percentages of Item wise Attitude Scores are given in Appendix J.

For objective 4 -

Objective 4: To investigate into perception about and attitude towards teacher training and teaching profession as per the type of institution (Granted/Non-Granted), Medium of Instruction (Marathi/English) and Gender (Male/Female).

To investigate into perception and attitude towards teacher training and teaching profession, as per the type of institution (Granted/Non-Granted), Medium of Instruction (Marathi/English) and Gender (Male/Female) considering perception scores and attitude scores, frequency polygons were plotted. Most stable measure of central tendency and a measure of variability, i.e., Mean, Standard Deviation respectively as well as a value of Skewness were calculated for each category.
For objectives 5 and 6 -

*Objective 5:* To study the difference in perception of B.Ed. students from Granted/Non-Granted colleges in Marathi/English medium and Male/Female B.Ed. students.

*Objective 6:* To study the difference in attitude of B.Ed. students from Granted/Non-Granted colleges in Marathi/English medium and Male/Female B.Ed. students.

For the fulfillment of objectives 5 and 6, Research hypothesis and Null hypothesis were formulated to study the difference between all the three categories, t-values were calculated for hypothesis testing.

For objectives 7 and 8 -

*Objective 7:* To examine the relationship between Socio-economic background and perception of B.Ed. students about teacher training and teaching profession.

*Objective 8:* To examine the relationship between Socio-economic background and attitude of B.Ed. students about teacher training and teaching profession.

Research hypothesis and Null hypothesis were formulated to study the relationship between Socio-economic background and perception/attitude scores as stated in both the objectives 7 and 8. ‘t-Value’ was found to test the hypotheses.
References


