CHAPTER 6

A STUDY OF INSTITUTIONAL DIFFERENCES
CHAPTER 6

A STUDY OF INSTITUTIONAL DIFFERENCES

Teaching profession is a noble profession and to keep the tradition of nobleness alive, it is necessary to ensure the positiveness of the attitude, not only on the part of the teachers in profession but also on the part of the teachers in training institutions. The B.Ed. course should have the potential of building the teachers having positive attitude towards their own profession.

The course content is changed from time to time to achieve better and better results. Therefore, continuous evaluation of the potentialiality as stated above is necessary. However this followup is not carried out every time, even at the event of total change in the course.

A student entering in the College of Education for getting professional competency and basic theoretical knowledge, teaching skills and attitude towards teaching profession have some initial attitude score on the attitude scale prepared for measuring the attitude towards teaching profession. It was assumed that at the end of the academic year of his training he should show positive change in the attitude towards teaching profession, if subjected to final measurement by using the same instrument again. In order to ascertain this assumption of the researcher a pilot study was undertaken to evaluate such differences statistically.

6.1 A Pilot Study

A pilot study was undertaken. The objectives of the study were:

1. To develop a tool for assessing the attitude of the student-teachers towards teaching profession.
2. To measure the attitude of the student-teachers towards the teaching profession before and after the commencement of the B.Ed. training programme.

3. To draw the conclusions about the effectiveness of the prescribed B.Ed. course of Poona University, as an instrument of bringing about the attitudinal changes in the student-teachers.

4. To study the sex differences in the attitude towards teaching profession.

Hypotheses:

Two hypotheses were set to evaluate the attitude scores. Both were null-hypotheses.

1) There is no significant difference between the means of the attitude scores derived from the administration of the attitude scale before and after the training of the student-teachers taking B.Ed. Course of the University of Poona.

2) There is no significant difference between the means of the attitude scores pertaining to attitude towards teaching profession of male and female groups.

Limitations:

The study was limited to the sample of student-teachers admitted in the College of Education, Jalgaon for the B.Ed. Course of the Poona University.
Sample:

59 student-teachers were included in the sample. This number is about 1/3 of the total number of student-teachers admitted for B.Ed.Course during the academic year 1989-90. Out of 59 student-teachers 30 were male student-teachers and 29 were female student-teachers.

Design of the Society:

It was a single group pre-test post-test design for testing hypothesis one.

For second hypothesis, testing the hypothesis was carried out twice that is at pre-test level and at post test level.

Tool:

Tool that was developed by the researcher was used for this study.

Procedure:

The first administration of the scale was carried out in the first week of July 1989 i.e. in the beginning of the training programme and the second administration of the scale was carried out in the second week of March 1990 after the training was over. The results of pre-testing and post-testing were subjected to statistical calculations. The design being 'single-group pre-test-post-test design'. The researcher first computed co-efficient of correlation between the pre-test and post-test in order to test the first hypothesis. Then t-ratio comparison was carried out to assess the difference between the means. To assess the difference between the means of the sex groups no correlation co-efficient was established. These groups were taken as independant groups.
Calculations:

For testing hypothesis one, the following formula was used to find out

\[ \gamma = \frac{N \Sigma XY - \Sigma X \cdot \Sigma Y}{\sqrt{[N \Sigma X^2 - (\Sigma X)^2] [N \Sigma Y^2 - (\Sigma Y)^2]}} \] \quad \text{.... (1)}

Using a computer programme based on the formula cited here, the data was fed to computer for processing. After getting the value of \( \gamma_{xy} \), \( SE_D \) was calculated by using the formula.

\[ SE_D = D_D = \sqrt{SE_1^2 + SE_2^2 - 2 \gamma_{xy} SE_1 \times SE_2} \] \quad \text{.... (2)}

Where \( SE_1 \) is the standard error for \( x \)-set of scores.

\( SE_2 \) is the standard error for \( y \)-set of scores.

\( \gamma_{xy} \) is the correlation coefficient between set \( x \) and set \( y \).

After calculating the value \( SE_D \), t ratio was calculated by using the formula.

\[ t = \frac{D}{SE_D} \]

The results of these calculations shown in the Table 6.1.

---

TABLE 6.1
COMPARISON OF PRE-TEST ATTITUDE SCORE AND POST-TEST ATTITUDE SCORES OF 59 STUDENT TEACHERS.

<table>
<thead>
<tr>
<th>Measure</th>
<th>TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test (x)</td>
</tr>
<tr>
<td>N</td>
<td>59</td>
</tr>
<tr>
<td>Sum of Scores</td>
<td>5534</td>
</tr>
<tr>
<td>Mean</td>
<td>93.79661</td>
</tr>
<tr>
<td>Sum of squares of Scores</td>
<td>525992</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>10.83118629</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.410100427</td>
</tr>
<tr>
<td>$\gamma_{xy}$</td>
<td>.56617607</td>
</tr>
<tr>
<td>$\delta_{Dm}$</td>
<td>1.303387447</td>
</tr>
<tr>
<td>t</td>
<td>3.276989516</td>
</tr>
</tbody>
</table>

The hypothesis second was tested twice at pre-test stage and at the post-test stage.

Since the group taking the test was subdivided into male and female groups for comparison the male and female groups were treated as independent group and the statistical treatment for independent group was given while calculating the t ratio.

The formula used for finding out $SE_D$ was

$$
\delta_D \text{ or } SE_D = \delta_{(M_1-M_2)} = \sqrt{\delta^2_{M_1} + \delta^2_{M_2}} \quad \ldots(3)
$$

After finding out the value of $SE_D$, t ratio was calculated by using the formula $t = \frac{D}{SE_D}$.

Using the same procedure, t value for pre-test and post-test were calculated.

The results of the calculations are shown in the Table 6.2.

**TABLE 6.2**

SEX COMPARISON TO TEST HYPOTHESIS TWO ON THE BASIS OF t VALUES

<table>
<thead>
<tr>
<th>Measure</th>
<th>TEST</th>
<th>PRE-TEST</th>
<th>POST-TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>30</td>
<td>29</td>
</tr>
<tr>
<td>$M$</td>
<td></td>
<td>93.8</td>
<td>93.8626896</td>
</tr>
<tr>
<td>$\sum x^2$</td>
<td></td>
<td>268260</td>
<td>258140</td>
</tr>
<tr>
<td>$g^2$</td>
<td></td>
<td>143.56</td>
<td>91.29132</td>
</tr>
<tr>
<td>$g^2_m$</td>
<td></td>
<td>4.7853</td>
<td>3.417966551</td>
</tr>
<tr>
<td>$g_{DM}$</td>
<td></td>
<td>2.864134338</td>
<td>2.7886566378</td>
</tr>
<tr>
<td>t</td>
<td></td>
<td>0.0218878001</td>
<td>0.0239039849</td>
</tr>
</tbody>
</table>

Results and Calculations

1) t value was found to be significant at .01 level. On the basis of t value hypothesis one was rejected.

The conclusion drawn was that there is significant difference between the means of attitude scores derived from pre-testing and post-testing programmes. The time interval was filled with the training programme acting as the treatment variable. The variable was proved to be effective
enough to bring about the devised attitudinal changes in the student-teachers. Thus potentiality of the B.Ed. course, prescribed by the Poona University as on attitude builder was proved beyond doubt for the small sample that was drawn for the purpose of pilot study.

2) The t value, thus obtained were not significant even at .05 level. Thus the hypothesis two, was retained. It was established that the attitude towards teaching profession is sex free.

The results obtained indicated favourable development due to training in attitude towards teaching profession but the results did not confirm the studies conducted by Agrawal (1966) Kakkar (1970) and S.P.Ahluwalia. However the results obtained by the researcher confirmed the results obtained by R.N.Meharotra (1973) and Yeshodhara K.,(1979). The results indicating mutual opposition were obtained by different researchers. Therefore though the results of this pilot study were encouraging yet more careful and extensive study was needed. Therefore further extensive work was undertaken by the researcher.

The results of the pilot study found to be encouraging and therefore, it was decided to undertake study covering more well-established colleges and the institutional differences regarding attitude development thus become the subject-matter of the further extensive study.

In this chapter the assessment of the institutional differences, from the point of view of potential of the colleges as the attitude builders, is presented below, though the course content is the same for all the B.Ed.colleges affiliated to Poona University, however institutional differences do reflect due to individual differences among the administrators, teachers etc., and also due to the differences in resources. The principals have
enough freedom of organising various activities related to the course content. This freedom expresses itself in various ways. The philosophy of the head of the institution is one such factor. His attitude towards various activities leading to total development of a student-teachers assumes importance in building the attitude towards teaching profession. The subject-expert also treat the subject matter according to their own subjective attitude and methods.

There are opinions about the importance of various subjects of the course as well as the units under a subject, these attitudinal differences do reflect in the teaching of various subjects and various units under a subject. The opinions of principals differ regarding the relative importance of the theory part and the practical part of the whole course. Some principals view the whole training from the examination point view. They are somewhat result orientated, while still others weight more the demand of the profession itself they lay stress on value development.

These attitudinal differences among heads and their staff members are responsible for the institutional differences observable in the attitude scores at the end of the year.

It was decided by the researcher to study the institutional differences by measuring the attitude in the beginning and at the end of the academic year 1991-92.

6.2 Selected College for the Study

The study included the Colleges of Education affiliated to Poona University which were fully granted and having old establishment and situated at the district places under the jurisdiction of Poona University.
The list of the Colleges of Education which were included in the study as below.

1. College of Education, Jalgaon
2. College of Education, Dhulia
3. College of Education, Nasik
4. College of Education, Ahmadnagar
5. Tilak College of Education, Pune.

6.3 Tool

The researcher had developed his own tool for assessment of student-teachers attitude towards teaching profession. The tool was standardised as stated in the previous chapters of this report. The standardised tool developed by the researcher was used for data collection. The pre-test was administered in the first week of July 1991 and the post-test was administered in the last week of January 1992. At both the times the researcher himself administered the attitude scale by visiting the colleges personally. The opinionnaire was also given to the Principals and teacher-educators who were available at the time of administering the post-test.

The Nature of Opinionnaire

The opinionnaire contains three parts, first (a) part is the five point rating scale, from strongly agree to strongly disagree. The statements were based on the attitude towards teaching profession and selection criteria of the student-teachers for B.Ed.degree course. The second (b) part contains Educators have to rank them as their choice. The third (c) part is the blank space for suggestions for improvement in B.Ed.course for the innovation
of student-teachers attitude towards teaching profession.

The opinionnaire can be seen in the Appendix T-1 of this report.

6.4 Analysis of Pre-test and Post-test Attitude Scores

Null-Hypothesis

The hypothesis set for the purpose of evaluation was, "There is no significant institutional differences between the means of attitude development indicators of the Colleges of Education under the study."

Procedure used for the verification of the hypothesis:

It was decided by the researcher to employ technique of analysis of variance to find out F-ratio for comparison of means of attitude development indicators.

For this purpose, pre-test scores and post-test scores of the colleges were first worked out. Difference between post-test score and pre-test score was also calculated in each case and shown accordingly in the tables. The tables can be seen in the Appendix T-2 of this report.

The difference were the attitude development indicators. Then means, sum of squares of all attitude development indicators and the sum of attitude development indicators were calculated for each college from the difference in the attitude scores. A Table 6.3 was prepared to show the calculated values.

From this table correction term c was calculated first,

\[ C = \frac{(527)^2}{418} = 664.423449 \]

Then total sum of scores \( SS_T \) was calculated as:

\[ SS_T = 60397-664.423449 = 59732.577 \]
### TABLE 6.3

COLLEGEWISE CALCULATED VALUES FOR THE CALCULATION OF F-RATIO.

<table>
<thead>
<tr>
<th>Measure</th>
<th>College of Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jalgaon</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
</tr>
<tr>
<td>Mean</td>
<td>2.871</td>
</tr>
<tr>
<td>$\Xi D$</td>
<td>201</td>
</tr>
<tr>
<td>$\Xi D^2$</td>
<td>8405</td>
</tr>
<tr>
<td>$\mathbf{b}$</td>
<td>10.575</td>
</tr>
</tbody>
</table>

Then $SS_b$ was calculated as:

$$SS_b = \frac{(201)^2}{70} + \frac{(-34)^2}{56} + \frac{(3)^2}{80} + \frac{(-30)^2}{62} + \frac{(387)^2}{150} - C$$

$$= 1610.888629 - 664.423449 = 946.46518$$

Then $SS_W$ was calculated by using the formula:

$$SS_W = SS_T - SS_b$$

$$= 59732.577 - 946.46518$$

$$= 58786.11182$$

Then ANOVA Table 6.4 was prepared as below:

### TABLE 6.4

ANOVA TABLE

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Means</td>
<td>4</td>
<td>946.46518</td>
<td>236.616295</td>
</tr>
<tr>
<td>Within Classes</td>
<td>413</td>
<td>58786.11182</td>
<td>142.3392528</td>
</tr>
</tbody>
</table>
From this table F ratio was calculated as

\[
F = \frac{236.616295}{142.3392538} = 1.66234042
\]

The table values were found out

\[F_{at .05} = 2.40 \quad \text{and} \quad F_{at .01} = 3.37\]

For degrees of freedom 413 and 4

The calculated F value was 1.66234042

The value of F is not significant even at .05 level.

Therefore the hypothesis, "There is no significant difference between the means of attitude-development-indicators pertaining to different Colleges of Education" had to retained.

Though considering all the students of Colleges of Education under study the hypothesis had to be retained yet further analysis on the basis of classification of students into the groups of high and low attitude development-indicators was carried out for further evaluation.

6.5 Rationale for comparing high and low Attitude Groups alone and Omitting Medium Group:

The difference between the pre-test and post test score can be looked upon the attitude-development indicators. The attitude development indicator can take positive or zero or negative value on the attitude development scale. The zero of the scale indicates stagnant tendency the position of which is somewhere in the middle of the scale. The end points lie in the opposite directions of the zero of the scale. The positive end of the scale indicates high attitude development. The negative end of the scale indicates low attitude development. According to this division of attitude

development scores three tendencies of attitude development-indicators can
be described. High positive value of the indicator denotes movement towards
high end development such scores can be grouped into high attitude group.
Moderate positive or negative value of the indicator denotes stagnant tendency
of attitude-development. Such scores can be grouped into medium attitude
group. Very low negative values of the indicator denotes movement towards
low end development. Such scores can be grouped into low attitude group.

On the basis of classification of attitude development indicators it
was decided not to compare the stagnant group with high or low attitude
groups. Such scores which can be classified as belonging to stagnant group
should be ignored and only those moving towards high and low ends should
be compared.

Attitude-development-indicators when labled as belonging to high, medium
and low attitude groups symbolise the tendency of attitude-development-
indicators to move in high group indicates excellent attitude development
while the opposite tendency to move into low group indicates, poor attitude
development. The tendency to remain in medium group indicates stagnant
tendency. Therefore to evaluate colleges accordingly the tendency of attitude
development indicators should be studied by classifying students into high,
medium and low groups. The predominance of the tendency of scores to
move should be observed by observing the frequencies in high and low
groups only and not the medium group because stagnancy of attitude develop-
ment indicators is indicated by the frequency in the middle group and
that's why in order to compare colleges from the tendency point of view.
The frequencies in high and low group should be given statistical treatment
for further analysis.
The Hypothesis

The hypothesis set for further analysis was, "After classifying the student-teachers into the groups high, medium and low attitude development indicators by considering the group as a whole and classifying the student-teachers irrespective of colleges, then considering colleges for comparison separately. There are no significant institutional differences in the indicators of attitude development during the year 1991-92 of student-teachers belonging to high and low attitude groups of attitude-development-indicators."

In the hypothesis that was set for the purpose of study the term, "Attitude-development-indicators" cannot the algebraic differences between the pre-test attitude score and post-test attitude scores.

6.6 Procedure for Verification of the hypothesis

Classification of the students into the groups of high, medium and low attitude development indicators:

The attitude development indicators were taken from the Table which can be seen in the Appendix T-2 of this report and irrespective of colleges all the indicators were summed up to get the mean value. The mean value thus calculated was 1.216. Then using this mean value and the indicators the standard deviation of all the indicators was calculated. It was found to be 11.954. Using mean and standard deviation values the classification scheme was developed. For that purpose the values M+6 and M-6 were calculated.

Calculation of Standard Deviation of the whole group:

\[ \sigma^2 = \frac{\sum X^2 - (\sum X)^2}{N^2} \]

\[ ... (5) \]

\[
\frac{418 \times 60397 - (527)^2}{(418)^2} = \frac{24968217}{174724}
\]

\[ \delta^2 = 142.90090 \]

\[ = 11.954 \]

\[ \therefore M + \delta = 1.261 + 11.954 = 13.215 \text{ i.e. } = 13 \]

and \[ M - \delta = 1.261 - 11.954 = -10.693 \text{ i.e. } = -11 \]

The decision about the high, medium and low was taken and defined by the scores. Such definitions of groups in score form were shown in a classification scheme. The scheme is as given below:

**Classification Scheme**

- **High Group**: +13 and above
- **Medium Group**: +12 to -10 Both inclusive
- **Low Group**: -11 and below

After defining the limits of these groups all the students under the study were classified and identification mark H, M and L were given to each attitude development indicator as the case may be. Collegewise tables were prepared to show the group of every student against attitude development indicators. From these tables the number of students belonging to each group of every college was tabulated. This Table 6.5 is as shown below:

Using the data of the Table 6.5 the paired comparison were systematically carried out to verify the hypothesis set for the purpose.
TABLE 6.5
NUMBER OF STUDENTS CLASSIFIED INTO HIGH, MEDIUM AND LOW GROUPS PERTAINING TO ALL THE COLLEGES UNDER COMPARISON.

<table>
<thead>
<tr>
<th>Colleges of Education at</th>
<th>Group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
<td>Total</td>
</tr>
<tr>
<td>Jalgaon</td>
<td>10</td>
<td>57</td>
<td>3</td>
<td>70</td>
</tr>
<tr>
<td>Dhulia</td>
<td>5</td>
<td>41</td>
<td>10</td>
<td>56</td>
</tr>
<tr>
<td>Nasik</td>
<td>28</td>
<td>100</td>
<td>22</td>
<td>150</td>
</tr>
<tr>
<td>Ahmadnagar</td>
<td>11</td>
<td>52</td>
<td>17</td>
<td>80</td>
</tr>
<tr>
<td>Pune</td>
<td>6</td>
<td>44</td>
<td>12</td>
<td>62</td>
</tr>
</tbody>
</table>

For verification of the hypothesis chi-squared \( \chi^2 \) test was applied to a pair of colleges. For the purpose the two by two tables were prepared and the cells were lettered appropriately by A,B,C and D.

The calculation for chi-square \( \chi^2 \) were made by using the formula-

\[
\chi^2 = \frac{N(AD-BC)^2}{(A+B)(C+B)(A+C)(A+D)} \quad \ldots \quad (6)
\]

Then by referring \( \chi^2 \) table values for one degree of freedom for .01 and .05 levels.\(^7\)

The general statement of hypothesis for any paired comparison undertaken in the study, for every pair of colleges the hypothesis reads the same but only the names of the colleges forming the pairs will change. Thus the general statement given above should generate ten hypothesis for ten comparison.

---

The hypothesis for every pair of colleges was either accepted or rejected at the appropriate level of significance.

6.7 Comparison of Colleges of Education

**TABLE 6.6**

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHER BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUPS OF COLLEGES OF EDUCATION AT JALGAON AND DHULIA.

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jalgaon</td>
<td>A 3</td>
<td>B 10</td>
<td>13</td>
</tr>
<tr>
<td>Dhulia</td>
<td>C 10</td>
<td>D 5</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td><strong>15</strong></td>
<td><strong>28</strong></td>
</tr>
</tbody>
</table>

Using formula with Yates' correction for continuity, the calculation:

\[ g^2_C = \frac{(N ((\mid AD-BC\mid -N/2)^2)}{(A+C)(B+D)(A+B)(C+D)} \]

\[ = \frac{28(15-100)^2}{13x15x13x15} = \frac{28(85-14)^2}{13x13x15x15} = \frac{28(71)^2}{13x13x15x15} \]

\[ = \frac{28x5041}{13x13x15x15} = \frac{141148}{38025} = 3.7119789 \]

df = 1, The calculated value is 3.7119789 comparing the table values and calculated value \( g^2 \) is not significant at .05 level.
TABLE 6.7

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHER BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUPS OF COLLEGES OF EDUCATION AT JALGAON AND NASIK

<table>
<thead>
<tr>
<th>College at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jalgaon</td>
<td>A 3</td>
<td>B 10</td>
<td>13</td>
</tr>
<tr>
<td>Nasik</td>
<td>C 22</td>
<td>D 28</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>38</strong></td>
<td><strong>63</strong></td>
</tr>
</tbody>
</table>

The calculation of $\chi^2$ by using Yates' correction for continuity formula

\[
\chi^2_C = \frac{N(|AD-BC|-N/2)^2}{(A+B)(B+D)(A+C)(C+D)} = \frac{63(|84-220|-31.5)^2}{617500} = \frac{63(136-31.5)^2}{617500} = \frac{63x(104.5)^2}{617500} = \frac{63x10920.25}{617500} = \frac{687975.75}{617500} = 1.1141307
\]

df = 1, the value of $\chi^2$ is not significant at .05 level.

TABLE 6.8

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHER BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUP OF COLLEGES OF EDUCATION AT JALGAON AND AHMADNAGAR

<table>
<thead>
<tr>
<th>College at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jalgaon</td>
<td>A 3</td>
<td>B 10</td>
<td>13</td>
</tr>
<tr>
<td>A'nagar</td>
<td>C 17</td>
<td>D 11</td>
<td>28</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>21</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>
Calculation of $\chi^2$ using Yates' correction for continuity;

$$\chi^2_C = \frac{N(|AD-BC|-N/2)^2}{(A+C)(B+D)(A+B)(C+D)}$$

$$= \frac{41(133-170)-20.5)^2}{152880} = \frac{41(137-20.5)^2}{152880} = \frac{41(16.5)^2}{152880}$$

$$= \frac{41 \times 13572.25}{152880} = \frac{556462.25}{152880} = 3.6398629$$

df=1, the value of $\chi^2$ is not significant at .05 level.

**TABLE 6.9**

**TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHER BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUPS OF COLLEGES OF EDUCATION AT JALGAON AND PUNE**

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jalgaon</td>
<td>A 3</td>
<td>B 10</td>
<td>13</td>
</tr>
<tr>
<td>Pune</td>
<td>C 12</td>
<td>D 6</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>16</td>
<td>31</td>
</tr>
</tbody>
</table>

The calculation $\chi^2$ using formula with Yates' correction for continuity;

$$\chi^2_C = \frac{N(|AD-BC|-N/2)^2}{(A+B)(C+D)(A+C)(B+D)}$$

$$= \frac{31(18-120)-15.5)^2}{56160} = \frac{31(86.5)^2}{56160} = \frac{31 \times 7482.25}{56160}$$

$$= \frac{231949.75}{56160} = 4.1301593$$

df=1, the value $\chi^2 = 4.1301593$ is significant at .05 level.
TABLE 6.10

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHER BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUP OF COLLEGES OF EDUCATION AT NASIK AND DHULIA

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasik</td>
<td>A 22</td>
<td>B 28</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>C 10</td>
<td>D 5</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>33</td>
<td>65</td>
</tr>
</tbody>
</table>

Calculation of $\chi^2_C = \frac{65(110-280|-32.5)^2}{32x33x15x50} = \frac{65(170-32.5)^2}{792000}

= \frac{65(137.5)^2}{792000} = \frac{65x18906.25}{792000} = \frac{1228906.20}{792000} = 1.5516492

df=1, the value of $\chi^2$ is not significant.

TABLE 6.11

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHERS BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUPS OF COLLEGES OF EDUCATION AT DHULIA AND AHMADNAGAR

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhulia</td>
<td>A 10</td>
<td>B 5</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>C 17</td>
<td>D 11</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>16</td>
<td>43</td>
</tr>
</tbody>
</table>

Calculation of $\chi^2$ by using Yates' correction continuity formula;
\[ S_c^2 = \frac{43(110-85-21.5)^2}{27 \times 16 \times 28 \times 15} = \frac{43(25-21.5)^2}{181440} \]
\[ = \frac{43(3.5)^2}{181440} = \frac{43 \times 12.25}{181440} = \frac{526.75}{181440} \]
\[ = 0.0029031 \]

df = 1, the value of \( S_c^2 \) is not significant.

**TABLE 6.12**

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHERS BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUPS OF COLLEGES OF EDUCATION AT DHULIA AND PUNE.

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pune</td>
<td>A 12</td>
<td>B 6</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>C 10</td>
<td>D 5</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>11</td>
<td>33</td>
</tr>
</tbody>
</table>

Calculation of \( S_c^2 = \frac{33(|60-60|-16.5)^2}{22 \times 11 \times 15 \times 18} = \frac{33 \times (16.5)^2}{65340} \]
\[ = \frac{33 \times 272.25}{65340} = \frac{8984.25}{65340} = 0.1375 \]

df = 1, the value of \( S^2 \) is not significant.

**TABLE 6.13**

TWO BY TWO TABLE OF CLASSIFICATION OF STUDENT TEACHERS BELONGING TO HIGH AND LOW ATTITUDE DEVELOPMENT GROUPS OF COLLEGES OF EDUCATION AT NASIK AND AHMADNAGAR

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasik</td>
<td>A 22</td>
<td>B 28</td>
<td>50</td>
</tr>
<tr>
<td>A' Nagar</td>
<td>C 17</td>
<td>D 11</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>39</td>
<td>78</td>
</tr>
</tbody>
</table>
Calculation \( S_C^2 = \frac{78(22x11-28x17)^2}{39x39x28x50} = \frac{78(242-476)^2}{2129400} \)

\[ = \frac{78(234)^2}{2129400} = \frac{78x54756}{2129400} = \frac{4270968}{2129400} \]

\[ = 2.0057142 \]

df=1, the calculated value of \( S^2 \) is not significant at .05 level.

**TABLE 6.14**

Two by Two Table of Classification of Student Teachers Belonging to High and Low Attitude Development Groups of Colleges of Education at Nasik and Pune

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasik</td>
<td>A 22</td>
<td>B 28</td>
<td>50</td>
</tr>
<tr>
<td>Pune</td>
<td>C 12</td>
<td>D 6</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>34</td>
<td>68</td>
</tr>
</tbody>
</table>

Calculation of \( S^2 = \frac{68 [(22x6)-28x12]^2}{34x34x18x50} = \frac{68(132-336)^2}{1040400} \)

\[ = \frac{68x(-204)^2}{1040400} = \frac{68x41616}{1040400} = \frac{2829888}{1040400} \]

\[ = 2.72 \]

df=1, the value of \( S^2 \) is not significant at .05 level.

**TABLE 6.15**

Two by Two Table of Classification of Student Teachers Belonging to High and Low Attitude Development Groups of Colleges of Education at Pune and Ahmadnagar

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Low Group</th>
<th>High Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pune</td>
<td>A 12</td>
<td>B 6</td>
<td>18</td>
</tr>
<tr>
<td>A'nagar</td>
<td>C 17</td>
<td>D 11</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>17</td>
<td>46</td>
</tr>
</tbody>
</table>
Calculation of $\chi^2 = \frac{46(12\times11-17\times6)^2}{29\times17\times28\times18} = \frac{46(132-102)^2}{248472} = \frac{46(30)^2}{248472} = \frac{46\times900}{248472} = \frac{41400}{248472} = 0.1666183$

$df=1$, the value of $\chi^2$ is not significant.

After carrying out all ten paired comparisons a summary table was prepared for observation and interpretation.

The summary Table 6.16 of the results of the chi-square calculations:

<table>
<thead>
<tr>
<th></th>
<th>J</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>S</td>
</tr>
<tr>
<td>D</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NS</td>
</tr>
<tr>
<td>P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

J means College of Education, Jalgaon
D means College of Education, Dhulia
N means College of Education, Nasik
A means College of Education, Ahmadnagar
P means College of Education, Pune
NS means Not Significant
and S means Significant
6.8 The Interpretation of the Results of the Paired Comparisons

Out of ten paired comparisons made only one had the significant difference at .05 level. All other values of \( \chi^2 \) chi-square were not significant. The significant value of chi-square was found for Jalgaon with one, out of four colleges, namely College of Education that is Tilak College of Education, Pune. However all other comparisons of Colleges of Education were proved to be non-significant from the point of view of chi-square value.

In case of all four comparisons with Nasik and non-significant chi-square values. Though the tendency to move towards high group was observable in case of Nasik yet this tendency had not having that high value as compared to high value of Jalgaon. Therefore non-significant results were emerged. Other colleges had the tendency of the movement of the attitude development indicators some what of similar magnitude unidirectional therefore showed non-significant chi-square values.

The reasons must be searched further. Some kind of support can be given by analysing the data collected from the opinionnaire analysis specially prepared for the teacher-educators working in the colleges selected for the study.

6.9 Opinionnaire Analysis

After collecting the opinionnaire-sheets from the respondents available at the time of administration of post attitude measurement session were subjected to analysis.

Part A, being a five point rating scale. The categories were weighted appropriately by weight 4, 3, 2, 1, 0. Highest being completely agreed response
and lowest being completely disagreed response. The intermediate categories were weighted appropriately as 3, 2 and 1. A table of frequency distribution was prepared for each college and for each of the seven items, the total score was calculated by using the formula:

\[
\text{Total score expressed in percentage for every item} = \left[ \sum_{1 \text{ to } 5} (\text{frequency} \times \text{category weight}) \right] \times \frac{100}{4N}
\]

The opinionnaire copies were given to the teacher-educator (including principals) of the Colleges of Education at Jalgaon, Dhulia, Nasik, Ahmadnagar and Pune at the time of post attitude measurement session. That is in the last week of January 1992. The number of teacher-educator of the respective colleges was as shown below in Table 6.17.

**Table 6.17**

<table>
<thead>
<tr>
<th>Colleges at</th>
<th>Jalgaon</th>
<th>Dhulia</th>
<th>Ahmadnagar</th>
<th>Nasik</th>
<th>Pune</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of teacher educators responding the rating scale</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>21</td>
<td>8</td>
<td>53</td>
</tr>
</tbody>
</table>

The results of the calculations for all seven items are shown in the Table 6.18 as below:
TABLE 6.18
TOTAL SCORES EXPRESSED IN PERCENTAGE FOR ALL THE ITEMS OF ALL THE COLLEGES OF EDUCATION UNDER STUDY.

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Jalgaon</th>
<th>Dhulia</th>
<th>A'nagar</th>
<th>Nasik</th>
<th>Pune</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50.00</td>
<td>30.55</td>
<td>28.12</td>
<td>29.76</td>
<td>65.62</td>
</tr>
<tr>
<td>2</td>
<td>92.85</td>
<td>97.22</td>
<td>90.62</td>
<td>45.24</td>
<td>96.88</td>
</tr>
<tr>
<td>3</td>
<td>100.00</td>
<td>97.22</td>
<td>75.00</td>
<td>46.43</td>
<td>87.50</td>
</tr>
<tr>
<td>4</td>
<td>78.57</td>
<td>77.77</td>
<td>68.75</td>
<td>33.33</td>
<td>62.50</td>
</tr>
<tr>
<td>5</td>
<td>75.00</td>
<td>72.22</td>
<td>65.62</td>
<td>36.90</td>
<td>75.00</td>
</tr>
<tr>
<td>6</td>
<td>85.72</td>
<td>94.44</td>
<td>81.25</td>
<td>39.29</td>
<td>87.50</td>
</tr>
<tr>
<td>7</td>
<td>82.14</td>
<td>75.00</td>
<td>71.88</td>
<td>39.29</td>
<td>62.50</td>
</tr>
</tbody>
</table>

A. Interpretation of the total scores expressed in percentages for all the items of all the colleges included in study:

The first statement given for rating was, "As per provision in prevailing rules the attitude of the candidates can be taken into consideration for their selection."

To this statement medium agreement is expressed by teacher educators belonging to Colleges of Education at Jalgaon and Pune. While teacher-educators belonging to Colleges of Education, Nasik, Dhulia, Ahmadnagar had shown the inclination towards disagreement. Overall dissatisfaction about the present criteria of selection of student-teachers for B.Ed. Course was reflected in the responses of the teacher educators. They feel that there should be some arrangement to rectify the situation.

Presently interviews of the candidates are taken in which a question or two are asked to adjudged his or her attitude in some what overt
manner. However no systematic measurement of attitude is done to select the students. The opinions of the teacher-educators reflect the dissatisfaction about the present mode of selection.

The second statement for rating was, "Selection of the candidate should be according to the attitude."

Clear-cut division between the colleges is observable in the percentage scores recorded against this statement in Table 6.18 Jalgaon, Dhulia, Ahmadnagar and Pune are one one side while Nasik only is having low percentage score. The teacher-educators of College of Education at Nasik were not in agreement with this statement in comparison with the agreement expressed by other colleges. There is homogeneous score-values above 90; can be seen as regards the four colleges mentioned above.

The improvement regarding the selection procedure in the minds of the teacher educators belonging to College of Education, Nasik must be some what different from the rest of the colleges.

The third statement given for rating was, "Considering the attitude by measuring it selection should be done."

Data expressed in the Table 6.18 clearly shows deviation of the teacher educator belonging to College of Education, Nasik than the rest of teacher educators belonging to other four Colleges of Education namely Jalgaon, Ahmadnagar, Dhulia and Pune who had indicated considerable high percentage towards agreement than disagreement. Teacher educators of Nasik College of Education appears to be more conservative than willing to change.

The fourth statement given for rating was, "The attitude scale developed by the researcher is useful for selecting the students."

Here also the clear-cut distinction between the colleges is observable in the percentage scores recorded against this statement. Table 6.18 The
Colleges of Education at Jalgaon, Dhulia, Ahmadnagar and Pune are on one side, while Nasik is only having low percentage score. The teacher educators of Nasik College of Education were not in agreement with this statement in comparison with the agreement expressed by other colleges. Probably the teacher educators at Nasik College might not be fully convinced about the use of the researchers' attitude scale.

The fifth statement given for rating was, "By measuring the attitude of the selected students the attitude can be further developed through the prevailing curriculum."

It can be observed from the Table 6.18 that the teacher educators of the Colleges of Jalgaon, Dhulia, Pune and Ahmadnagar had expressed their opinions which match and indicate agreement in general but the teacher educators at Nasik were not that much in agreement with the statement.

The sixth statement given for rating was, "It is possible to develop the student teachers, whose attitude is favourable, by providing more motivation to them, into the best teachers."

To this statement higher agreement is expressed by educators belonging to Colleges of Education, Jalgaon, Dhulia, Ahmadnagar and Pune. The percentage score of these four colleges were more than 80. But only Nasik college had shown the disagreement about this statement. They feel that it is not possible to develop student-teachers into best teachers by measuring the attitude.

The seventh statement given for rating was, "It is possible to grade teachers using this attitude scale."

To this statement medium agreement is expressed by the teacher-educators belonging to Jalgaon, Dhulia, Ahmadnagar and Pune. Only the
teacher-educators of College of Education at Nasik expressed their disagreement towards this statement.

The overall observation of the whole Table 6.18, highlights the negative and deviate response on the part of the teacher educators belonging to College of Education, Nasik, while the teacher educators of other four colleges responded quite differently than the teacher educators of College of Education, Nasik. Their responses indicate their general agreement with the statements.

B. Analysis of Part B of the Opinionnaire for teacher-educators belonging to colleges under study:

In Part B, various activities were given for teacher educators to give ranking according to their utility for developing the attitude of student-teachers towards their profession.

The activities enlisted were as below:

1) Presenty or Attendance
2) Art-related activities
3) Library activities
4) Laboratory activities
5) Attitude of teacher educators towards their own profession.
6) Micro teaching
7) School-lessons
8) Social Work
9) Socially Useful Productive Work.
10) Regular lectures pertaining to curriculum
11) Co-curricular activities
12) Extra-curricular activities
13) Attitude of colleges towards education, and
14) In addition to above thirteen activities, if there be any other activity, mention and rank it.

Though fourteen ranks were available for ranking yet only thirteen ranks were assigned by all teacher-educators of all the colleges. They have omitted fourteenth point for ranking. It can be seen that the first thirteen activities really covered the whole field of activities in all the colleges under study and thus only thirteen were sufficient and hence exhaustive for ranking.

The analysis of the responses given by the teacher-educators was carried out as follows:

First college-wise and statement-wise ranks given by every individual belonging to that college were recorded against every statement then the ranks were added to prepare a score for every statement. These scores are further ranked from one to thirteen.

For example one such Table 6.19 is given below:

Similar tables were prepared for other colleges which can be seen in the Appendix T-3 of this report.
# TABLE 6.19

**ACTIVITYWISE RANKING GIVEN BY THE TEACHER EDUCATORS OF THE COLLEGE OF EDUCATION, JALGAON**

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Name of Activity</th>
<th>Rank given by the teacher-educator</th>
<th>Sum of Ranks</th>
<th>Ranking according to sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Presenty</td>
<td>1,2,1,1,4,5,13</td>
<td>27</td>
<td>2.0</td>
</tr>
<tr>
<td>2</td>
<td>Art-related</td>
<td>6,1,13,14,10,8,10</td>
<td>62</td>
<td>11.0</td>
</tr>
<tr>
<td>3</td>
<td>Library</td>
<td>3,3,14,13,11,6,8</td>
<td>58</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>Laboratory</td>
<td>4,13,4,6,8,10,9</td>
<td>54</td>
<td>9.0</td>
</tr>
<tr>
<td>5</td>
<td>Attitude of teacher educators towards their own profession</td>
<td>7,10,5,2,7,13,1</td>
<td>45</td>
<td>5.5</td>
</tr>
<tr>
<td>6</td>
<td>Micro-teaching</td>
<td>9,7,3,3,3,7,4</td>
<td>36</td>
<td>4.0</td>
</tr>
<tr>
<td>7</td>
<td>School Lessons</td>
<td>8,6,2,4,2,1,3</td>
<td>26</td>
<td>1.0</td>
</tr>
<tr>
<td>8</td>
<td>Social Work</td>
<td>11,11,10,10,12,9,11</td>
<td>74</td>
<td>12.0</td>
</tr>
<tr>
<td>9</td>
<td>Socially Useful Productive Work</td>
<td>12,12,11,11,13,11,12</td>
<td>84</td>
<td>13.0</td>
</tr>
<tr>
<td>10</td>
<td>Theory Lectures</td>
<td>5,5,12,5,1,2,5</td>
<td>35</td>
<td>3.0</td>
</tr>
<tr>
<td>11</td>
<td>Co-curricular</td>
<td>10,8,6,7,5,3,6</td>
<td>45</td>
<td>5.5</td>
</tr>
<tr>
<td>12</td>
<td>Extra-curricular</td>
<td>13,4,7,8,6,4,7</td>
<td>49</td>
<td>7.0</td>
</tr>
<tr>
<td>13</td>
<td>Attitude of College towards Education</td>
<td>2,9,8,9,9,12,12</td>
<td>51</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Using the last column of the Table 6.19 as exemplified above summary

Table 6.20 was prepared as follows:
<table>
<thead>
<tr>
<th>Sr No</th>
<th>Name of the Activities</th>
<th>Jalgaon</th>
<th>Dhulia</th>
<th>Nasik</th>
<th>A'ningar</th>
<th>Pune</th>
<th>Average of Average Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Presenty</td>
<td>2.0</td>
<td>7.0</td>
<td>8.0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.4</td>
</tr>
<tr>
<td>2</td>
<td>Art-related</td>
<td>11.0</td>
<td>12.0</td>
<td>10.0</td>
<td>11.0</td>
<td>5.0</td>
<td>9.8</td>
</tr>
<tr>
<td>3</td>
<td>Library</td>
<td>10.0</td>
<td>5.0</td>
<td>7.0</td>
<td>4.0</td>
<td>7.0</td>
<td>6.6</td>
</tr>
<tr>
<td>4</td>
<td>Laboratory</td>
<td>9.0</td>
<td>10.0</td>
<td>9.0</td>
<td>8.5</td>
<td>9.0</td>
<td>9.1</td>
</tr>
<tr>
<td>5</td>
<td>Attitude of teachers towards their own profession</td>
<td>5.5</td>
<td>1.0</td>
<td>1.0</td>
<td>5.5</td>
<td>4.0</td>
<td>3.4</td>
</tr>
<tr>
<td>6</td>
<td>Micro Teaching</td>
<td>4.0</td>
<td>6.0</td>
<td>2.0</td>
<td>10.0</td>
<td>2.0</td>
<td>4.8</td>
</tr>
<tr>
<td>7</td>
<td>School Lessons</td>
<td>1.0</td>
<td>3.0</td>
<td>3.0</td>
<td>5.5</td>
<td>1.0</td>
<td>2.7</td>
</tr>
<tr>
<td>8</td>
<td>Social Work</td>
<td>12.0</td>
<td>11.0</td>
<td>13.0</td>
<td>12.0</td>
<td>10.5</td>
<td>11.7</td>
</tr>
<tr>
<td>9</td>
<td>Socially Useful Productive Work</td>
<td>13.0</td>
<td>13.0</td>
<td>12.0</td>
<td>13.0</td>
<td>13.0</td>
<td>12.8</td>
</tr>
<tr>
<td>10</td>
<td>Theory Lectures</td>
<td>3.0</td>
<td>8.0</td>
<td>4.0</td>
<td>1.0</td>
<td>6.0</td>
<td>4.4</td>
</tr>
<tr>
<td>11</td>
<td>Co-curricular</td>
<td>5.5</td>
<td>4.0</td>
<td>5.0</td>
<td>3.0</td>
<td>8.0</td>
<td>5.1</td>
</tr>
<tr>
<td>12</td>
<td>Extra-curricular</td>
<td>7.0</td>
<td>9.0</td>
<td>6.0</td>
<td>8.2</td>
<td>12.0</td>
<td>8.5</td>
</tr>
<tr>
<td>13</td>
<td>Attitude of teacher educators towards education</td>
<td>8.0</td>
<td>2.0</td>
<td>11.0</td>
<td>7.0</td>
<td>10.5</td>
<td>7.7</td>
</tr>
</tbody>
</table>

It can be seen easily that activity number seven occupies the highest importance position from the point of view of attitude building. This activity is the school-lessons. The teacher educators show the remarkable agreement
about this activity in developing the attitude towards teaching profession, however the College of Education, Ahmadnagar had shown deviation from the rest.

The next position is occupied by the point number five; which is the attitude of the lecturers about their own profession, however marked grouping can be seen regarding this point. Dhulia and Nasik colleges had indicated topmost importance to this point while Jalgaon, Ahmadnagar and Pune did not fall in their group, they had placed medium importance to this point.

Next to this point, number one and ten occupy the same position, the average of average rank is 4.4 for these points. The attendance and daily lecture programme regarding point number one the attendance Jalgaon, Ahmadnagar and Pune had placed higher importance, while teacher educators belonging to Dhulia and Nasik did not think so. Their ranks indicate definite deviations.

As regards point number eleven, that is co-curricular activities, all the colleges were somewhat unanimous in judgement regarding medium importance of this point. It should be noted here, that teacher-educators had felt the point number eleven that is co-curricular activities are more important than the extra-curricular activities. The averages being 5.5 and 5.1 respectively.

The next activity, that is sixth one, is the micro-teaching activity. The average rank for this activity is 4.8 Jalgaon, Dhulia, Nasik and Pune had placed more importance while teacher-educators of Ahmadnagar did not show much importance to this activity. Their ranks indicate definite deviation.
The next point is library activities as indicated by number three. Library activities included the reading room activities and study using the library. Its average rank is 6.6. It is clear that Dhulia, Nasik, Ahmadnagar and Pune had shown medium agreement and had given somewhat equal ranks but teacher educators of Jalgaon did not think the importance so high for this activity.

The next point that is number thirteen which is the attitude of the colleges towards education. It means the attitude of staff, non-teaching as well as teaching staff and also the attitude of Principal and other directly or indirectly related individuals to the College. The average rank of this point is 7.7 from the Table 6.20 it is clearly seen that the teacher-educators of Jalgaon, Ahmadnagar, Pune and Nasik had given somewhat equal ranks. But teacher educators of Dhulia were not in agreement with others. They ranked this point quite highly. Their opinion showed marked deviation from the rest.

The next point, that is fourth which is the laboratory activities. Laboratory activities included the laboratory work and reporting in journal. From the Table 6.20 it is clearly seen that all teacher-educators of all colleges were somewhat in agreement with each other and hence had given practically the same ranks.

The next point, that is second is the activity related to Art. The teacher educators at Jalgaon, Dhulia, Nasik and Ahmadnagar had given the some what ranks to this point but teacher educators belonging to Tilak College of Education, Pune had shown deviation about this activity. They did think the importance of this activity more than the rest. The point numbers eighth and ninth which are social work and socially useful productive work respectively. It can be seen that they have somewhat
equal ranking. All the teacher-educators of all the colleges thought that these two activities do not have much importance from the point of view of attitude building. According to the Table 6.20, social work occupies the last but one rank and socially useful productive work occupies the last rank.

The opinion of the teacher-educators and the conclusion drawn from the high and low attitude group comparison pertaining socially useful productive work activities based on t test as already presented in Chapter Five show that the teacher educator do not give importance to socially useful productive work activity and the student-teachers of high attitude group do not participate vigorously into this activity to bring about the significant difference between the means of the performance indicators of high and low attitude groups. These two results are some what concurrent.

C. Part of the Opinionnaire:

Suggestions were called from the participating teacher educators regarding improvement of B.Ed.curriculum in order to make it effective from the point of view of developing attitude of the student-teachers towards teaching profession. The participants were required to write these suggestions in the C Part of the Opinionnaire. Principals of the colleges under study and teacher-educators working in the colleges and were present at the time of second session of the attitude development measurement were asked to give their suggestions in C Part of the opinionnaire. These were 53 teacher-educators who had taken part in filling the opinionnaire. Some of them had given many suggestions while a few did not write anything probably they think that the present curriculum is sufficient to develop the attitude.
First the suggestions were written down on data-sheets. Then these suggestions were sorted out in three categories. The categories were:

1) Suggestions regarding administration.

2) Suggestions regarding curriculum.

and 3) Suggestions regarding teacher-behaviour.

This classification was carried out irrespective of the colleges. Translation of the suggestions into English can be seen in the Appendix T-4 of this report.

Under each category one can see the number of suggestions. But the general stress is on the following points.

1) A change is needed to make the course effective in developing the attitude of the student-teachers towards teaching profession.

Right from the selection of the student teacher for the course.

2) Many suggestions of administrative nature were given by the participants.

The participants stress the need for attitude measurement as a selection criterion.

3) Some of the participants pointed out the present malady in education, which is the political influence. They wanted to keep education free from such bad influences.

4) They suggested the course should be made more practical and opportunities should be given to observe the ideal behaviour of teacher/teacher-educator in the society.
5) Some of the teacher educators wanted internship to be included in the present curriculum.

6) Teacher educators expressed their views about the distance between teacher educators and student-teachers. They wanted this distance to be reduced.

If these suggestions are taken into consideration one important conclusion can be drawn and it is that the present course is more or less ineffective in building the right type of teaching profession. The actual data collected by the researcher from the student-teachers by applying the attitude scale twice that is in the beginning of the academic year pre-testing is in agreement with the general opinion of the teacher-educators as concluded by the researcher above.

The results of analysis of variance confirm the ineffectiveness of the present course in building the right type of attitude of student-teachers towards teaching profession.