CHAPTER - IV
ANALYSIS AND INTERPRETATION OF DATA
CHAPTER - IV

ANALYSIS AND INTERPRETATION OF DATA.

The present chapter discusses the analysis and interpretation of the data. It is divided into four sections for convenience.

Section One : Analysis and Interpretation of the Students' Questionnaire.
Section Two : Analysis and Interpretation of the Teachers' Questionnaire.
Section Three : Analysis and Interpretation of the Attitude Scale.
Section Four : Analysis and Interpretation of the Interview Schedule of the Principals of the Technical Institutions of Assam. Analysis and Interpretation of the Pilot Study has also been included in this chapter.

4.1. ANALYSIS AND INTERPRETATION OF THE GIRL STUDENTS' RESPONSES TO THE QUESTIONNAIRES.

On critical examination of the replies from the girl students of the technical institutions of Assam to the various questions as referred to in previous Chapter III, it is observed that there is no such significant variations in their replies.

TABLE NO.1.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.1. What prompted you to join this course.</td>
<td>Percentages</td>
</tr>
<tr>
<td>a) Better job prospective.</td>
<td>60%</td>
</tr>
<tr>
<td>b) Own Interest.</td>
<td>30%</td>
</tr>
<tr>
<td>c) Family encouragement.</td>
<td>10%</td>
</tr>
</tbody>
</table>
Figure - 4: According to Table - 1

Reason for joining the technical course

- Better Job Prospective (30%)
- Family Encouragement (10%)
- Own Interest (60%)
According to Table No-1, 60% of the girl students replied that the prospect of better job opportunities prompted them to join this technical course. 30% of the girl students joined this course due to their own interest and 10% of the them joined this course due to the encouragement from their families.

**TABLE NO.2.**

**OPINION OF PARENTS IN JOINING THE TECHNICAL COURSE AND THE FREEDOM TO CHOOSE OWN CAREER.**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.2. What was the opinion of your parents in your joining the technical course?</td>
<td>Encouraging Discouraging</td>
</tr>
<tr>
<td></td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>Q.No.3. Were you given the freedom to choose your career?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>2%</td>
</tr>
</tbody>
</table>

As placed in Table No.-2, 98% of the respondents replied that their parents had encouraged them to join the technical course. Only a negligible percentage of the respondents (2%) replied that their parents had discouraged them.

Table No.-2, also indicates that 98% of the respondents were given the freedom to choose their own career and only 2% of the respondents were not given the freedom to choose their own career.
Girls have to face more problems in the technical institutions than boys.
TABLE NO. 3

ACCOMMODATION OF THE GIRL STUDENTS

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.3. Where do you stay.</td>
<td></td>
</tr>
<tr>
<td>a) Hostel.</td>
<td>83%</td>
</tr>
<tr>
<td>b) Own House.</td>
<td>11%</td>
</tr>
<tr>
<td>c) Rented House.</td>
<td>4%</td>
</tr>
<tr>
<td>d) Relatives House.</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table No.3, reveals that 83% of the girl students stay in the hostel, 11% live in their own house, 4% live in rented house and only 2% of the girl students stay in relatives house.

TABLE NO.4.

GIRLS HAVE TO FACE MORE PROBLEMS IN THE TECHNICAL INSTITUTIONS THAN BOYS

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 5. Do you feel that girls have to face more problems in the technical institutions than boys?</td>
<td>YES  68%  NO  32%</td>
</tr>
</tbody>
</table>
As shown in Table No.4, it was observed that 68% of the girl students feel that girls have to face more problems in the technical institutions than boys. Only 32% of the girl students did not feel that girls have to face more problems in the technical institutions than boys.

**TABLE NO.5.**

TECHNICAL COURSES ARE MORE EXPENSIVE THAN GENERAL COURSES.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.6. Do you think that technical courses are more expensive than general courses?</td>
<td>YES 56% NO 44%</td>
</tr>
</tbody>
</table>

Table No.5, signifies that, 56% of the respondents responded that technical courses are more expensive than general courses. The rest 44% of the respondents responded that technical courses are not more expensive than general courses.

**TABLE NO.6.**

THE STATE HAS MADE CONSIDERABLE PROGRESS IN THE FIELD OF TECHNICAL EDUCATION.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.7. Do you think that our State has made considerable progress in the field of technical education?</td>
<td>YES 32% NO 68%</td>
</tr>
</tbody>
</table>
As placed in Table No.6, 32% of the respondents responded that the State has made considerable progress in the field of technical education. 68% of the girl students replied that the State has not made much progress in the field of technical education.

**TABLE NO.7.**

**LESS NUMBER OF GIRLS JOIN TECHNICAL COURSES DUE TO IMPROPER GUIDANCE AND COUNSELLING.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 7. Do you think that less number of girls join technical courses due to improper guidance and counselling? If yes, what suggestion you can make in this regard?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>96%</td>
</tr>
</tbody>
</table>

Surprisingly enough, Table No.7, reveals that majority of the girl students (96%) responded that less number of girls join technical courses due to improper guidance and counselling. In reply to the sub-question, they suggested that more guidance and counselling centres, especially in rural and backward areas should be set up.

The remaining 4% of the girl students did not think that improper guidance and counselling leads to less girls joining technical courses.
Figure - 6 : According to Table - 9

86%

14%

□ No
□ Yes

Boys and girls have equal efficiency in technical education
TABLE NO.8

TECHNICAL INSTITUTIONS HAS NOT PROVIDED PROPER FACILITIES FOR GIRLS.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.9. Do you feel that your institution has not provided proper facilities for girls?</td>
<td>YES: 53% NO: 47%</td>
</tr>
</tbody>
</table>

As indicated in Table No.8, 53% of the girl students replied that their institution has not provided proper facilities for girls and 47% replied that their institution has provided proper facilities for girls.

TABLE NO.9

BOYS AND GIRLS HAVE EQUAL EFFICIENCY IN TECHNICAL EDUCATION.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.10. Do you believe that boys and girls have equal efficiency in technical education? If yes, why? If no, why?</td>
<td>YES: 86% NO: 14%</td>
</tr>
</tbody>
</table>

The replies received from the girl students shows (Table No.9) that most of the girls students stated that they believe that boys and girls have equal efficiency in technical education. In reply to the sub-question, they replied that technical education requires same merit from both the sexes and boys and girls have the same mental capacities.
About 14% of the girl students stated that they believed that boys and girls do not have equal efficiency in technical education. In reply to the sub-question, they replied that boys are physically stronger than girls which enable them to work more efficiently in the workshops than the girls.

**TABLE NO.10.**

**FAVOURABLE ATTITUDE OF THE SOCIETY TOWARDS TECHNICAL EDUCATION FOR GIRLS.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 11. Do you think that the first step in enhancing the participation of women in technical education is to generate a climate in favour of technical education for girls in our society.</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Strangely enough, Table No. 10, reveals that all the respondents (100%) replied that the society should have a favourable attitude towards technical education for girls which will enhance the participation of women in technical education.
TABLE NO.11.

CULTURAL PREJUDICE IN THE SOCIETY OPERATES AS AN OBSTACLE TO GIRLS TAKING UP TECHNICAL EDUCATION.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 12.</td>
<td>YES</td>
<td>75%</td>
</tr>
<tr>
<td>Do you feel that the cultural prejudice in our society that a highly educated girl would be less amenable to family discipline operates as an obstacle to girls taking up technical education?</td>
<td>NO</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table No.11, signifies that 75% of the respondents feel that the cultural prejudice in our society that a highly educated girl would be less amenable to family discipline operates as an obstacle to girls taking up technical education. 25% of the respondents did not feel the same way.

TABLE NO.12

GIRLS TAKING UP TECHNICAL COURSES ARE LESS FEMININE THAN GIRLS TAKING UP SOME OTHER GENERAL COURSES.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 13.</td>
<td>YES</td>
<td>51%</td>
</tr>
<tr>
<td>Do you think that men tend to think that girls taking up technical courses are less feminine than girls taking up some other general courses?</td>
<td>NO</td>
<td>49%</td>
</tr>
</tbody>
</table>
Acute unemployment among the passed-out students from the technical institutions than the other institutions
According to Table No. 12, 51% of the respondents replied that men tend to think that girls taking up technical courses are less feminine than girls taking up some other general courses. In reply to the sub-question, they replied that men feel that girls in the field of technical education has to face the strain of workshop and field works which makes them more aggressive and independent than other girls. The rest 49% of the respondents replied in the negative.

**TABLE NO.13.**

ACUTE UNEMPLOYMENT AMONG THE PASSED-OUT STUDENTS FROM THE TECHNICAL INSTITUTIONS THAN THE OTHER INSTITUTIONS.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.14. Do you think that there is acute unemployment among the passed-out students from the technical institutions than the other institutions?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>39%</td>
</tr>
</tbody>
</table>

As shown in Table No.13, 39% of the respondents replied that there is more acute unemployment among the passed -out students from the technical institutions than the other institutions. 61% of the respondents replied that this was not the case as there is more scope for employment in the technical field than in the general field.
GIRLS SHOULD LEARN BASIC SKILLS IN HOUSEKEEPING EVEN IF SHE IS EDUCATED IN TECHNICAL COURSES.

Almost all the girls (98%), as shown in Table No. 14, replied that girls should learn basic skills in housekeeping even if she is educated in technical courses. Only a negligible minority (2%) replied that learning basic skills in housekeeping is not necessary for girls taking up technical courses.

GIRLS IN THE STATE ARE AT AN ADVANTAGE THAN GIRLS IN OTHER PARTS OF INDIA.

Almost all the girls (98%), as shown in Table No. 14, replied that girls should learn basic skills in housekeeping even if she is educated in technical courses. Only a negligible minority (2%) replied that learning basic skills in housekeeping is not necessary for girls taking up technical courses.
Surprisingly enough, Table No.15, shows that 29% of the respondents replied that girls in the State are at an advantage than girls in other parts of India. In reply to the sub-question, they replied that the concept of male domination is less conspicuous in our society Women have considerable say in family and social matters. Also the social evils like the dowry system, sati, child marriage, etc., are less in the State in comparison to some other States of India.

The majority of the respondents (71%) replied that girls in the State are at a more disadvantaged position than girls in other parts of India. In reply to the sub-question, they replied that the State is less developed and less industrialized than some other States of India. The scope of employment in the State is less. Also because of the conservative attitude of the family and society which discourage girls from being more daring and modernized.

**TABLE NO.16.**

MORE PUBLICITY OF TECHNICAL EDUCATION PROVISIONS FOR WOMEN THROUGH MASS MEDIA, LINKING TECHNICAL INSTITUTIONS WITH INDUSTRY AND COMMUNITY, AND GREATER INVOLVEMENT OF WOMEN IN POLICY FORMULATIONS AND DECISION MAKING IN THE TECHNICAL FIELD.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.17.</td>
<td></td>
</tr>
<tr>
<td>Do you feel that there should be more publicity of technical education provisions for women through mass media?</td>
<td>YES 100%</td>
</tr>
<tr>
<td>Q. No. 18.</td>
<td></td>
</tr>
<tr>
<td>Do you think that linking of technical institutions with industry and community will improve employment potential in the field of technical education?</td>
<td>YES 100%</td>
</tr>
<tr>
<td>Q. No. 19.</td>
<td></td>
</tr>
<tr>
<td>Do you think that greater involvement of women in policy formulations and decision making in the technical field is needed?</td>
<td>YES 100%</td>
</tr>
</tbody>
</table>
Problem due to the medium of instruction being English
As shown in Table NO.16, all the respondents replied that there should be publicity of technical education provisions for women through mass media.

Table No.16, also indicates that 100% of the respondents replied that technical institutions should be linked with industry and community which will improve employment in the technical field.

Significantly enough, all the respondents (as shown in Table No. 16.) replied that greater involvement of women in policy.formulations and decision making is needed in the technical field.

**TABLE NO. 17.**

**TREATMENT RECEIVED FROM THE MALE TEACHERS OF THE INSTITUTION.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.20</td>
<td></td>
</tr>
<tr>
<td>What is the treatment you have received from the male teachers of your institution ?</td>
<td>Encouraging Discouraging</td>
</tr>
<tr>
<td>100%</td>
<td>X</td>
</tr>
</tbody>
</table>

According to Table No. 17, all the girls students have revealed that the treatment they have received from the male teachers of their institution were encouraging.

**TABLE NO.18.**

**PROBLEM DUE TO THE MEDIUM OF INSTRUCTION BEING ENGLISH.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 21.</td>
<td></td>
</tr>
<tr>
<td>Do you have any problem due to the medium of instruction being English ?</td>
<td>YES NO</td>
</tr>
<tr>
<td>44%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Indifference of guardians towards technical education for girls leads to less girls joining technical courses.
Financial constraints discourage girls from joining technical courses.
As placed in Table No. 18, it was observed that 44% of the respondents had to face problems due to the medium of instruction being English. About 56% of the respondents, however, did not face any problem due to the medium of instruction being English.

**TABLE NO. 19**

INDIFFERENCE OF GUARDIANS TOWARDS TECHNICAL EDUCATION FOR GIRLS LEADS TO LESS GIRLS JOINING TECHNICAL COURSES.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 22. Do you think that indifference of guardians towards technical education for girls leads to less girls joining technical courses?</td>
<td>YES 83%</td>
</tr>
<tr>
<td></td>
<td>NO 17%</td>
</tr>
</tbody>
</table>

Interestingly enough, Table No.19, reveals that majority of the respondents (83%) replied that indifference of guardians towards technical education for girls leads to less girls joining technical courses. Only 17% of the respondents replied that the indifferent attitude of guardians towards technical education for girls does not lead to less girls joining technical courses.

**TABLE NO. 20**

FINANCIAL CONSTRAINTS DISCOURAGE GIRLS FROM JOINING TECHNICAL COURSES.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 23. Do you feel that financial constraints act as a factor in discouraging girls from joining technical courses?</td>
<td>YES 80%</td>
</tr>
<tr>
<td></td>
<td>NO 20%</td>
</tr>
</tbody>
</table>
Figure - 11: According to Table - 21

Lack of proper hostel facilities leads to poor enrolment of girls in technical institutions
As shown in Table No.20, it was observed that approximately 80% of the girls replied that financial constraints discourage girls from joining technical courses. 20% of the girls replied that financial constraints did not discourage girls from joining technical courses.

**TABLE NO.21.**

**LACK OF PROPER HOSTEL FACILITIES LEADS TO POOR ENROLMENT OF GIRLS IN TECHNICAL INSTITUTIONS**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.24.</td>
<td></td>
</tr>
<tr>
<td>Do you think that lack of proper hostel facilities is one of the reason for poor enrolment of girls in technical institutions?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>80%</td>
</tr>
</tbody>
</table>

The replies received from the respondents show that (as shown in Table No 20) 80% of the girls replied that lack of proper hostel facilities is one of the reason for poor enrolment of girls in technical institutions. 20% of the girls replied in the negative.

**TABLE NO.22.**

**SHYNESS OF GIRLS PARTICULARLY FROM RURAL AND BACKWARD AREAS TO JOIN FOR CO-EDUCATIONAL COURSES LEADS TO LESS GIRLS JOINING TECHNICAL COURSES.**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 25.</td>
<td></td>
</tr>
<tr>
<td>Shyness of girls particularly from rural and backward areas to join for co-educational courses leads to less girls joining technical courses. Do you Agree?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>73%</td>
</tr>
</tbody>
</table>
Interestingly, Table No.22, shows that 73% of the respondents agreed that shyness of girls particularly from rural and backward areas to join for co-educational courses leads to less girls joining technical courses. 27% of the respondents disagreed with this.

**TABLE NO.23**

**HAPPINESS FOR CHOOSING COURSE OF STUDY**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No. 26 Are you happy for choosing your course of study? Please remark.</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Table No.23, signifies that all the students have expressed happiness for choosing the technical course. In reply to the sub-question, the respondents replied that they were happy for choosing the technical course as there is better scope for jobs in the technical field. It would also enable them to fulfil their aim of becoming an Engineer, and make them independent, giving them better social status in the society.

**TABLE NO.24**

**LACK OF PRODUCTIVITY IN THE CURRICULUM OF TECHNICAL EDUCATION.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.27. Do you think that there is lack of productivity in the curriculum of technical education?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>90%</td>
</tr>
</tbody>
</table>
Figure - 12: According to Table - 25

Future plans of the girl students

- 50% - Further Study
- 40% - Employment
- 8% - Own business
- 2% - Marriage
Significantly enough, Table No.24 reveals that majority of the respondents (90%) replied that there is lack of productivity in the curriculum of technical education. Only 10% of the respondents replied in the negative.

**TABLE NO. 25.**

**FUTURE PLANS OF THE GIRL STUDENTS.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Girl Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.28. What are your future plans?</td>
<td>Percentage</td>
</tr>
<tr>
<td>a) Marriage.</td>
<td>2%</td>
</tr>
<tr>
<td>b) Employment.</td>
<td>40%</td>
</tr>
<tr>
<td>c) Further Study.</td>
<td>50%</td>
</tr>
<tr>
<td>d) Own Business.</td>
<td>8%</td>
</tr>
<tr>
<td>e) Any other.</td>
<td>X</td>
</tr>
</tbody>
</table>

Table No. 25 shows that 50% of the girl students wanted to study further, 40% wanted to go for employment and 8% wanted to set up their own business after they complete their study. Only a negligible percentage (2%) of the girl students wanted to get married. There was no response in the category "any other".

**SUGGESTIONS FOR THE IMPROVEMENT OF TECHNICAL EDUCATION FOR GIRLS IN ASSAM:**

In response to the open question, "Do you have any suggestions for the improvement of technical education for girls in Assam?" the respondents, made the following suggestions for the improvement of technical education for girls in Assam:

1) Encouragement from parents.
2) Favourable attitude of the society towards technical education for girls.
3) More publicity of technical education provisions for girls (especially in rural and backward areas).

4) Proper guidance and counselling.

5) Proper facilities such as mechanical equipments, proper hostel facilities, adequate finance must be made available. Good staff must be recruited. Diversified curriculum and courses in new and emerging technologies suited to the needs of girls must be introduced.

6) More job opportunities needed. Seat reservations in public sector and Government jobs. Technical institutions must be linked with industry and community. Also more opportunities needed regarding training and placement.

4.2. ANALYSIS AND INTERPRETATION OF THE TEACHERS' RESPONSES TO THE QUESTIONNAIRES.

On critical examination of the replies from the teachers to various questions as referred to in previous Chapter-III, it is observed that there is no such significant variations in their replies.

<table>
<thead>
<tr>
<th>TABLE NO. 1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE STATE HAS MADE CONSIDERABLE PROGRESS IN THE FIELD OF TECHNICAL EDUCATION.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.1.</td>
<td>YES</td>
</tr>
<tr>
<td>Do you think that our State has made considerable progress in the field of technical education? If yes, please specify.</td>
<td>70%</td>
</tr>
</tbody>
</table>

As shown in Table No.1, 70% of the teachers replied that the State has made considerable progress in the field of technical education. In reply to the sub-question, they gave the reason for this as -
i) Gradual increase in the number of girl students.
ii) Implementation of new and diversified courses.
iii) Recruitment of qualified teachers.
iv) Setting up of I.I.T. at North Guwahati.
v) Establishing Residential Girls' Polytechnic at Golaghat.
vi) Quality improvement programmes have been taken.

The rest 30% of the teachers replied that the State has not made considerable progress in the field of technical education.

**TABLE NO. 2.**

**BOYS AND GIRLS HAVE EQUAL EFFICIENCY IN TECHNICAL EDUCATION.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.2.</td>
<td>YES           NO</td>
</tr>
<tr>
<td>Do you believe that boys and girls have equal efficiency in technical education ?</td>
<td>75% 25%</td>
</tr>
</tbody>
</table>

Surprisingly enough, Table No.2, reveals that 75% of the teachers replied that they believe that boys and girls have equal efficiency in technical education. Only 25% of the teachers replied that boys and girls do not have equal efficiency in technical education.

**TABLE NO. 3.**

**IN - SERVICE OR PRE-SERVICE TRAINING OF TEACHERS**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.3.</td>
<td>YES           NO</td>
</tr>
<tr>
<td>Do you have any in-service or pre-service training ? If yes, what type of training ? Discuss.</td>
<td>85% 15%</td>
</tr>
</tbody>
</table>
According to Table No.3, 85% of the teachers have had some sort of in-service or pre-service training such as short-term training, in-service training, Induction Training in TTTI (Calcutta), World Bank training, Continuous Education programmes, Orientation courses, Summer and Winter Schools, etc.

15% of the teachers did not have any sort of in-service or pre-service training.

**TABLE NO. 4.**

**TEACHER'S HELP IN ACADEMIC MATTERS, HELPING STUDENTS WITH THEIR PROBLEMS, AND NECESSITY OF GUIDANCE AND COUNSELLING IN THE INSTITUTION.**

<table>
<thead>
<tr>
<th>Questions.</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.4. Are you in favour of helping students in their academic matters.</td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Q. No.5. Do you feel that you have no time to help the students with their problems? If yes, Why?</td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>99%</td>
</tr>
<tr>
<td>Q. No.6. Do you think that guidance and counselling service is necessary in your institution?</td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

Table No.4, signifies that all the teachers were in favour of helping students in their academic matters.
According to Table No.4, almost all the teachers (99%) replied that they have time to help the students with their problems. Only a negligible percentage of teachers (1%) replied that they have no time to help the students with their problems. In reply to the sub-question, they replied that they were already over burdened with academic work.

Table No.4, also reveals that all the teachers replied that guidance and counselling service is necessary in the institution.

**TABLE NO.5.**

**FINANCIAL CONSTRAINTS DISCOURAGE GIRLS FROM JOINING TECHNICAL COURSES.**

<table>
<thead>
<tr>
<th>Question.</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.7. Financial constraints act as a factor in discouraging girls from joining technical courses. Do you agree?</td>
<td>YES</td>
</tr>
<tr>
<td>27%</td>
<td>63%</td>
</tr>
</tbody>
</table>

As placed in Table No.5, approximately 27% of the teachers replied that financial constraints act as a factor in discouraging girls from joining technical courses. 63% of the teachers did not agree that financial constraints discourage girls from joining technical courses.
TABLE NO.6

LACK OF HOSTEL FACILITIES LEADS TO POOR ENROLMENT OF GIRLS IN TECHNICAL INSTITUTIONS.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.8. Lack of hostel facilities is one reason for poor enrolment of girls in technical institutions. Do you agree?</td>
<td>YES 57%  NO 43%</td>
</tr>
</tbody>
</table>

From Table No. 6, it was observed that 57% of the teachers agreed that lack of hostel facilities is one reason for poor enrolment of girls in technical institutions. 43% of the teachers did not agree that lack of hostel facilities leads to less girls joining technical institutions.

TABLE NO.7

GIRLS FEEL INSECURE IN THE CO-EDUCATIONAL INSTITUTIONS.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.9. Do the girls feel insecure in the co-educational institutions?</td>
<td>YES 15%  NO 85%</td>
</tr>
</tbody>
</table>

Strangely enough, according to Table No.7, only 15% of the teachers replied that girls feel insecure in the co-educational institutions. The majority of the teachers (85%) replied that girls did not feel insecure in the co-educational institutions.
TABLE NO.8

GIRLS FACE DIFFICULTY IN DOING FIELD WORKS

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No. 10. Do the girls face difficulty in doing field works? If yes, why?</td>
<td>YES 32%  NO 68%</td>
</tr>
</tbody>
</table>

Interestingly, majority of the teachers, (68%) replied that the girls did not face difficulty in doing field works. Only 32% of the teachers replied that sometimes the girls face difficulty in doing field works. In response to the sub-question, they replied that this was due to a number of reasons such as much physical labour is involved in field works, family problems, difficulty in handling heavy machines in workshops, inability of girls to work in remote areas and night shifts etc.

TABLE NO.9

MORE ACUTE UNEMPLOYMENT AMONG THE PASSED-OUT STUDENTS FROM TECHNICAL INSTITUTIONS THAN OTHER INSTITUTIONS AND DISCRIMINATION AT THE TIME OF EMPLOYMENT.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.11. Do you think that there is more acute unemployment among the passed-out students from the technical institutions than the other institutions?</td>
<td>YES 28%  NO 72%</td>
</tr>
<tr>
<td>Q. No.12. Do you think girls face discrimination at the time of employment which discourage the girls to join for technical courses? If yes, specify.</td>
<td>YES 25%  NO 75%</td>
</tr>
</tbody>
</table>
According to Table No.9, 28% of the respondents replied that there is more acute unemployment among the passed-out students from the technical institutions. The majority of the respondents (72%) replied that they did not think that there is more unemployment among the passed-out students from the technical institutions than the other institutions.

Table No.9, also revels that the majority of the respondents (75%) replied that girls did not face discrimination at the time of employment. Only 25% of the respondents replied that the girls have to face discrimination at the time of employment. In the reply to the sub-question, the reasons given by the respondents are the following :-

i) Some jobs need more physical labour, that is why some Companies prefer boys over girls.

ii) Some operations like drilling, off-shore duties are not suitable for girls.

iii) Duties like night-shifts, extra-shifts, etc are not preferred by girls on grounds of security.

**TABLE NO.10.**

**JOB PROVISIONS OF GIRLS IN TECHNICAL EDUCATION**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.13. Are you happy with the job provisions of girls in technical education?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>72%</td>
</tr>
</tbody>
</table>
As placed in Table No. 10, it was observed that 72% of the teachers replied that they were happy with the job provisions of girls in technical institutions. 28% of the teachers were not happy with the job provisions of girls in technical institutions.

**TABLE NO. 11.**

**REASON FOR LESS NUMBER OF GIRLS OPTING FOR TECHNICAL EDUCATION.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.14. What reason will you mark for less number of girls opting for technical education?</td>
<td>Percentage</td>
</tr>
<tr>
<td>a) Lack of publicity.</td>
<td>22%</td>
</tr>
<tr>
<td>b) Indifference of the girls.</td>
<td>20%</td>
</tr>
<tr>
<td>c) Guardian’s apathy.</td>
<td>32%</td>
</tr>
<tr>
<td>d) Financial constraints.</td>
<td>15%</td>
</tr>
<tr>
<td>e) Shyness of the girls.</td>
<td>11%</td>
</tr>
</tbody>
</table>

From the responses of the teachers (as shown in Table No. 11), the reasons for less number of girls opting for technical education are known. Guardians' apathy ranks first with 32% and lack of publicity ranks second with 22%. Indifference of the girls and financial constraints ranks third and fourth with 20% and 15% respectively. Last, comes shyness of girls with only 11%.
TABLE NO. 12.

GIRLS PARTICIPATE IN EXTRA-CURRICULAR ACTIVITIES EQUALLY WITH BOYS.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.No.15. Do the girls participate in extra-curricular activities equally with boys?</td>
<td>YES 83%</td>
</tr>
</tbody>
</table>

Significantly enough, Table No. 12, shows that majority of the teachers replied that girls participate in extra-curricular activities equally with boys. Only 17% of the teachers replied that girls do not participate in extra-curricular activities equally with boys.

TABLE NO. 13.

JOB SATISFACTION.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response of the Teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. No.16. Are you happy with this job?</td>
<td>YES 95%</td>
</tr>
</tbody>
</table>

Table No. 13, reveals that almost all the teachers (95%) replied that they were happy with their job. Only a few (5%) replied that they were not happy with their job.

SUGGESTIONS FOR BETTER TECHNICAL EDUCATION FOR GIRLS IN THE STATE.

In response to the open question, "Suggest some measures which help in better technical education for girls in our State?", the following measures were suggested by the teachers for improving technical education for girls in the State:

- [Insert suggestions here]
1) Encouragement from parents and teachers.
2) Proper publicity of technical education provisions for women.
3) Proper facilities such as hostel facilities, common-rooms, etc must be made available.
4) Introduction of varied and women-friendly courses.
5) Job reservations for girls in Government and public sectors. Job security must be provided.
6) Setting up more Guidance and Counselling Centres.

4.3. ANALYSIS AND INTERPRETATION OF THE ATTITUDE SCALE.

The students are directly involved with technical education and on the basis of their experience of their education, they can express their opinions or reaction in a better way. One of the major objective of the present study was to study the attitude of girl students towards technical education. The development of the attitude scale and its administration part have been discussed in Chapter III of this report. The following section presents the analysis and interpretation of the date received through the attitude scale.

This section of the analysis reveals the results of the attitude scale developed by the investigator for measuring the attitude of the girl students towards technical education. It was a five-point scale with 30 statements which was administered on 270 girl students of the 12 technical institutions of Assam. As mentioned the attitude scale was a five-point scale, therefore, the weightage of 5, 4, 3, 2, and 1 scores were given to the five alternatives strongly agree, agree, undecided, disagree and strongly disagree in case of the positive statements and the reverse order in the negative statements. The scoring of individuals on the instrument varies between 30 and 150, with 90 as the neutral point. The methodology applied for the development, analysis and interpretation of the attitude scale has been described in the Chapter III of this report. This section of the analysis discusses the attitudes under the following heads.

1) Attitude of the girl students in total towards technical education.
2) Attitude of the girl students of the co-educational technical institutions and girls' technical institutions towards technical education.
Figure - 13 : According to Table 1

Attitude of the girl students in total towards technical education

- Unfavourable
- Favourable

80% 20%
3) Difference in attitude towards technical education among the students of the co-educational technical institutions and the girls' technical institutions of Assam.

ATTITUDE OF THE GIRL STUDENTS IN TOTAL TOWARDS TECHNICAL EDUCATION.

The following table shows the attitude of the girl students in total towards technical education.

**TABLE NO. 1**

ATTITUDE OF THE GIRLS STUDENTS IN TOTAL TOWARDS TECHNICAL EDUCATION.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Response</th>
<th>Total No.</th>
<th>Mean</th>
<th>Favourable</th>
<th>Unfavourable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Girl students of the technical institutions of Assam.</td>
<td>270</td>
<td>105.98</td>
<td>215</td>
<td>55</td>
</tr>
</tbody>
</table>

F = Frequency.

It is evident from the above Table No. 1, that the attitude of the girl students towards technical education is favourable.

The attitude of the girl students is favourable according to the mean score. The mean 105.98 is higher than the neutral point 90 (as mentioned earlier). Therefore, it is considered as favourable attitude. Although the attitude is favourable yet, 20% of the respondents show an attitude against technical education. Out of 270 respondents, 215 responded in favour and 55 responded against technical education. Therefore, the table shows that 80% of the girl students were in favour whereas 20% were not in favour of technical education. The results are illustrated through the diagram of the previous page.
Figure - 14: According to Table 2

Attitude of the girl students of the co-educational technical institutions towards technical education

80%

Unfavourable

Favourable

79%

Attitude of the girl students of the girls technical institutions towards technical education

21%
ATTITUDE OF THE GIRL STUDENTS OF THE CO-EDUCATIONAL TECHNICAL INSTITUTIONS AND GIRLS' TECHNICAL INSTITUTIONS TOWARDS TECHNICAL EDUCATION.

The following table shows the attitude of the girl students of the co-educational technical institutions and girls' technical institutions towards technical education

**TABLE NO.2.**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Responses</th>
<th>Total No.</th>
<th>Mean</th>
<th>Favourable</th>
<th>Unfavourable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>Co-educational technical Institutions.</td>
<td>175</td>
<td>107.86</td>
<td>140</td>
<td>80%</td>
</tr>
<tr>
<td>2.</td>
<td>Girls' technical institutions.</td>
<td>95</td>
<td>102.55</td>
<td>75</td>
<td>79%</td>
</tr>
</tbody>
</table>

Table No.2, shows that the attitude towards technical education from both the groups of respondents is favourable.

The attitude of the girl students of the co-educational technical institutions are favourable according to mean score of the group. The mean 107.86 is higher than the neutral point 90 (as mentioned earlier). Therefore, it is considered as favourable attitude. Although the attitude is favourable, yet, 20% of the respondents show an attitude against technical education. Out of 175 respondents, 140 responded in favour and 35 responded against technical education. Therefore, the table shows that 80% of the girl students of the co-educational technical institutions of Assam were in favour whereas 20% are not in favour of technical education.
The attitude of the students of the girls' technical institutions towards technical education are also found to be favourable according to the mean level of group. The mean 102.55 is higher than the neutral point 90 (as mentioned earlier). Therefore, it is considered as favourable attitude. Although, the attitude is favourable, yet 21% of the respondents show an attitude against technical education. Out of 95 respondents, 75 responded in favour and 20 responded against technical education. Therefore, the table shows that 79% of the students of the girls' technical institutions of Assam are were in favour whereas 21% were not in favour of technical education.

The results are illustrated through the diagram of the previous page.

**DIFFERENCE OF ATTITUDE OF THE GIRL STUDENTS OF THE CO-EDUCATIONAL TECHNICAL INSTITUTIONS AND GIRLS' TECHNICAL INSTITUTIONS OF ASSAM TOWARDS TECHNICAL EDUCATION.**

The difference of attitude of the girl students of the co-educational technical institutions and girls' technical institutions of Assam towards technical education was found out by computing $X^2$. The $X^2$ was computed by using the following formula:

$$X^2 = \frac{N (AD - BC)^2}{(A + B) (C + D) (A + C) (B + D)}$$

Garrett Book
Page No. 265
Formula - 71.

The Computed value of $X^2$, 0.0421 is much smaller than 3.841 at the 0.05 level of significance and 6.635 at the 0.01 level of significance. Hence, it can be concluded that there is no significant difference of attitude of the girl students of the co-educational technical institutions and the girls' technical institutions of Assam towards technical education.
4.4. **ANALYSIS AND INTERPRETATION OF THE INTERVIEW SCHEDULE OF THE PRINCIPALS OF THE TECHNICAL INSTITUTIONS OF ASSAM.**

In order to supplement the findings of the Questionnaire for girl students and the Questionnaire for teachers, an Interview Schedule for the Principals of the Technical Institutions of Assam was constructed. Interviews with the Principals of all the technical institutions of Assam, numbering 12, were conducted personally by the investigator.

The information collected from these interviews has been summarised below:

All the Principals of the technical institutions of Assam told the investigator that the girl students of their institutions faced some problems.

The problems mentioned are the following:

1) Lack of proper hostel facilities for girls.
2) Shortage of staff.
3) Financial constraints.
4) Problem of water supply and electricity.
5) No regular library facilities.
6) Lack of proper security in the campus.
7) Inadequate transport and communication facilities.
8) No medical facilities in the campus.

Out of 12, 9 Principals of the technical institutions of Assam replied that financial constraints leads to less girls joining technical courses.

According to 4 Principals of the technical institutions of Assam, gender biasness is present in our technical education. The other 8 Principals replied that they did not think that gender biasness is present in our technical education.

Surprisingly, all the Principals replied that lack of proper hostel facilities leads to poor enrolment of girls in the technical field.
From the institutional aspect, all the Principals of the technical institutions of Assam tried to solve the problems faced by the girl students of their institutions. They tried to solve the problems of their girl students within the limited powers given to the Principal by taking up some measures such as speeding up the construction of the girls' hostels, setting up of guidance and counselling centres, etc. Proposals for improving common-rooms and recreational facilities for girls and hostel facilities have also been taken up. The Principals replied that they wanted to help the girl students more, but due to financial constraints they were unable to solve all the problems faced by the girl students in their institutions.

The investigator asked the Principals to suggest some measures which help in better technical education for girls in the State. The measures suggested by the Principals of the technical institutions of Assam which will help in improving technical education for girls in the State are given below:

1) There must be an attitudinal change for technical education of girls. Social constraints must be removed. Teachers must encourage the girls to come for technical education. The parents must also encourage their daughters to study technical courses.

2) Proper facilities for girls must be provided. Hostel facilities should be sufficient and proper. Free studentships may be given to deserving girl candidates. Guidance and counselling must be provided to the girls.

3) Information regarding technical education must be disseminated through different publicity modes. More publicity and exposure needed in this field.

4) All the teaching staff should have long term/short term industrial training. There should be greater efforts for appointing women teachers having proper qualifications.

5) Establishing women's wings in existing Polytechnics, starting of new women's Polytechnics and starting new disciplines especially for girl students.

6) The problem of unemployment and underemployment should be solved. Job opportunities must be made available to the girls.
The Principals of the technical institutions of Assam were asked by the investigator to mention some measures taken by the Government to improve the enrolment of girls in technical education. The measures taken by the Government to improve the enrolment of girls in technical education, as mentioned by the respondents are given below:

1) Establishment of Girls' Polytechnic at Golaghat.

2) World Bank Assisted Project for Technical Education has been taken up in our State where technical education for girls has been given much importance.

3) Modern Office Management (MOM) course has been introduced in the Girls' Polytechnic at Guwahati during the World Bank Project. The intake is decided by the Government of Assam, approved by AICTE. Electronics has been introduced in Residential Girls' Polytechnic at Goalaghat.

4) Construction of girls' hostels has been taken up.

5) Better facilities has been given to lady teachers.

The Government has directed the Directorate of Technical Education and all the existing nine Polytechnics in Assam to interact with employees to help the girl students in getting equal job opportunities in employment.

But admission in the technical institutions of Assam is purely on the basis of merit irrespective of sex. Scholarships are also given on the basis of merit irrespective of sex. No special scholarships are given for girl students.

4.5. ANALYSIS AND INTERPRETATION OF THE PILOT STUDY CONDUCTED ON GIRL STUDENTS OF THE GIRLS' POLYTECHNIC, GUWAHATI

The investigator took a sample of 50 students out of the total number of 88 girl students of the Girls' Polytechnic, Guwahati for the Pilot study. A questionnaire was administered on these 50 students. The responses of these 50 students were analyzed and interpreted before constructing the final questionnaire.
It was found out from the Pilot study that 65% of the respondents joined the technical course due to better job prospective, 25% due to their own interest and 10% due to family encouragement.

All the respondents said that their parents had encouraged them to join the technical course and they were given the freedom to choose their own career.

70% of the respondents responded that girls have to face more problems in the institution than boys, 30% of them responded in the negative.

80% of the girls students replied that technical courses are more expensive than general courses and 15% of them replied otherwise.

According to 65% of the respondents the State has made considerable progress in the field of technical education. 35% of them did not think that the State has made considerable progress in the field of technical education.

80% of the girl students replied that less girls join technical courses due to improper guidance and counselling and 20% replied in the negative.

Majority of the respondent (85%) replied that boys and girls have equal efficiency in technical education. Only 15% of them did not think it that way.

All the respondents replied that society should have a favourable attitude towards technical education for girls. This will increase the participation of women in technical education. There should be more publicity of technical education provisions for women through mass media.

All the respondents agreed that linking technical institutions with industry and community will improve employment potential in the field of technical education. They replied that greater involvement of women in policy formulation and decision making is needed in the technical field.

60% of the girl students felt that there is more acute unemployment among the passed - out students from the technical institutions than the other institutions. The rest 40% replied that this was not the case.
40% of the respondents faced problems due to the medium of instruction being English and 60% did not face any problem due to the medium being English.

Majority of the respondents (80%) replied that guardians' indifference towards technical education for girls leads to less girls joining technical courses. Only 20% of the respondents replied in the negative.

To 60% of the girl students, financial constraints discourage girls from joining technical courses. 40% of them did not feel the same way.

Almost all the respondents (95%), replied that lack of proper hostel facilities leads to poor enrolment of girls in technical institutions. Only a few (5%) replied in the negative.

Surprisingly enough, majority of the students (85%) felt that there is lack of productivity in the curriculum of technical education. Only 15% felt otherwise.

65% of the respondents replied that shyness of girls to join for co-educational courses leads to less girls joining technical courses. About 35% of them did not agree with this.

All the girl student were happy for choosing the technical course because it was a job - oriented course and would enable them to become independent in life.