

## CHAPTER - IV

### Reactions of Learners Towards IGNOU TC

#### 4.0 Introduction

In this chapter the details about objective III of the present investigation, that is, to study the reactions of distance learners regarding preparation, presentation, duration, talkback, technical and non-technical problems and utility aspect of IGNOU teleconferencing with respect to selected variables are given.

The variables selected for the present objective are:

Sex

Employment (Working / Non-working)

Medium of instruction (In their last qualifying examination)

Type of programme.

Level of exposure to electronic media

Level of exposure to TC.

To study this objective a combination of qualitative and quantitative approaches were used. A survey type research design was used.

#### 4.1 Hypotheses

To study the present objective III following hypothesis were formulated.

1. The reaction of respondents will not differ significantly with respect to sex regarding the preparation of IGNOU teleconferencing (TC) programmes.
2. The reaction of respondents will not differ significantly with respect to sex regarding the presentation of IGNOU teleconferencing (TC) programmes.
3. The reaction of respondents will not differ significantly with respect to sex regarding the duration of IGNOU teleconferencing (TC) programmes.

4. The reaction of respondents will not differ significantly with respect to sex regarding the talkback of IGNOU teleconferencing (TC) programmes.
5. The reaction of respondents will not differ significantly with respect to sex regarding the utility of IGNOU teleconferencing (TC) programmes.
6. The reaction of respondents will not differ significantly with respect to sex regarding technical and non-technical problems of IGNOU teleconferencing (TC) programmes.
7. There will be no significant difference in the reaction of respondents with respect to sex regarding overall aspects of IGNOU teleconferencing (TC) programmes.
8. There will be no significant difference in the reactions of respondents with respect to employment regarding the preparation of IGNOU teleconferencing (TC) programmes.
9. There will be no significant difference in the reactions of respondents with respect to employment regarding the presentation of IGNOU teleconferencing (TC) programmes.
10. There will be no significant difference in the reactions of respondents with respect to employment regarding the duration of IGNOU teleconferencing (TC) programmes.
11. There will be no significant difference in the reactions of respondents with respect to employment regarding the talkback of IGNOU teleconferencing (TC) programmes.
12. There will be no significant difference in the reactions of respondents with respect to employment regarding the utility of IGNOU teleconferencing (TC) programmes.

13. There will be no significant difference in the reactions of respondents with respect to employment regarding technical and non-technical problems of IGNOU teleconferencing (TC) programmes.
14. There will be no significant difference in the reactions of respondents with respect to employment regarding overall aspects of IGNOU teleconferencing (TC) programmes.
15. The reaction of respondents will not differ significantly with respect to medium of instruction regarding the preparation of IGNOU teleconferencing (TC) programmes.
16. The reaction of respondents will not differ significantly with respect to medium of instruction regarding the presentation of IGNOU teleconferencing (TC) programmes.
17. The reaction of respondents will not differ significantly with respect to medium of instruction regarding the duration of IGNOU teleconferencing (TC) programmes.
18. The reaction of respondents will not differ significantly with respect to medium of instruction regarding the talkback of IGNOU teleconferencing (TC) programmes.
19. The reaction of respondents will not differ significantly with respect to medium of instruction regarding the utility of IGNOU teleconferencing (TC) programmes.
20. The reaction of respondents will not differ significantly with respect to medium of instruction regarding technical and non-technical problems of IGNOU teleconferencing (TC) programmes.

21. The reaction of respondents will not differ significantly with respect to medium of instruction regarding overall aspects of IGNOU teleconferencing (TC) programmes.
22. There will be no significant difference in the reactions of respondents with respect to type of programme regarding the preparation of IGNOU teleconferencing (TC) programmes.
23. There will be no significant difference in the reactions of respondents with respect to type of programme regarding the presentation of IGNOU teleconferencing (TC) programmes.
24. There will be no significant difference in the reactions of respondents with respect to type of programme regarding the duration of IGNOU teleconferencing (TC) programmes.
25. There will be no significant difference in the reactions of respondents with respect to type of programme regarding the talkback of IGNOU teleconferencing (TC) programmes.
26. There will be no significant difference in the reactions of respondents with respect to type of programme regarding the utility of IGNOU teleconferencing (TC) programmes.
27. There will be no significant difference in the reactions of respondents with respect to type of programme regarding technical and non-technical problems of IGNOU teleconferencing (TC) programmes.
28. There will be no significant difference in the reactions of respondents with respect to type of programme regarding overall aspects of IGNOU teleconferencing (TC) programmes.

29. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding the preparation of IGNOU teleconferencing (TC) programmes.
30. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding the presentation of IGNOU teleconferencing (TC) programmes.
31. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding the duration of IGNOU teleconferencing (TC) programmes.
32. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding the talkback of IGNOU teleconferencing (TC) programmes.
33. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding the utility of IGNOU teleconferencing (TC) programmes.
34. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding technical and non-technical problems of IGNOU teleconferencing (TC) programmes.
35. There will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding overall aspects of IGNOU teleconferencing (TC) programmes.
36. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding the preparation of IGNOU teleconferencing (TC) programmes.

37. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding the presentation of IGNOU teleconferencing (TC) programmes.
38. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding the duration of IGNOU teleconferencing (TC) programmes.
39. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding the talkback of IGNOU teleconferencing (TC) programmes.
40. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding the utility of IGNOU teleconferencing (TC) programmes.
41. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding technical and non-technical problems of IGNOU teleconferencing (TC) programmes.
42. There will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding overall aspects of IGNOU teleconferencing (TC) programmes.

#### **4.2 Delimitation**

Present study is delimited to learners who attended teleconferencing programmes in Baroda study Centre (M.S. University Campus) from 1999 to 2001 for the present objective (III).

#### **4.3 Sample**

The sample consisted of selected IGNOU students / learners who were exposed to IGNOU TC programmes. The sample was selected from those

learners who were attending programmes at Baroda Study Centre of IGNOU (M.S. University, General Education Building).

There were six types of programmes being offered by IGNOU at different levels. These are programmes at Master's level, Bachelor's level, Advanced Diploma, Post Graduate Diploma, Diploma and Certificate level. While drawing the sample, investigator found that none of the respondents belonged to Advanced Diploma level, thus this level was dropped.

A total of 80 respondents from different levels comprised the sample for the present objective III. The break up of sample is present as follows:

**Table 4.1: Sample break-up for different IGNOU programme(s)**

| Sr. No. | Name of the Programme                                      | Categorization                            |             |
|---------|--|---|-------------|
| 1.      | Master's Degree in Library & Information Science           | Master's Programme + Bachelor's Programme | Degree      |
| 2.      | Bachelor's of Information Technology                       |   |             |
| 3.      | Bachelor of Science in Nursing                             |   |             |
| 4.      | Post Graduate Diploma in Higher Education                  | Diploma + Post Graduate Diploma           | Diploma     |
| 5.      | Post Graduate Diploma in Human Resource Management         |   |             |
| 6.      | Post Graduate Diploma in Journalism and Mass Communication |   |             |
| 7.      | Post Graduate Diploma in Maternal and Child Health         |   |             |
| 8.      | Diploma in Creative Writing in English                     |   |             |
| 9.      | Diploma in Creative Writing in Hindi                       |   |             |
| 10.     | Diploma in Early Childcare and Education                   |   |             |
| 11.     | Certificate in Computing                                   | Certificate                               | Certificate |
| 12.     | Certificate in Disaster Management                         |   |             |

The sample was constituted of learners from 12 different programmes of IGNOU who were exposed to IGNOU TC programmes.

Initially, it was decided that respondents would be selected randomly from all the IGNOU programmes wherever teleconferencing was used as one of the

instructional strategies. Later on, it was found that only few learners viewed teleconferencing programmes in their respective courses as teleconferencing was not the compulsory component. Thus, learners from only those programmes comprised the sample, who either viewed or were already exposed to teleconferencing programmes.

#### **4.4 Instrumentation**

In order to measure the reactions of respondents regarding different aspects of IGNOU TC with respect to sex, employment, medium of instruction, type of programme, level of exposure to electronic media and teleconferencing programmes, reaction scale alongwith profile schedule for background information of the respondents were constructed.

##### **4.4.1 Description of the Tools**

The details of profile schedule and reaction scale are described in the following text.

###### **4.4.1.1 Profile Schedule**

The profile schedule was related to the background information of each participating respondent. It had biographical sketch like age, sex as well as other details pertaining to selected variables.

There were questions to gather information, such as, educational qualification along with medium of instruction in their last qualifying examination. The schedule was also aimed at, apart from obtaining the past information of the learners, whether their enrolment was for degree, diploma or certificate type of courses, whether they were employed, whether they had received the reading material or their exposure level to electronic media like television, video, telephone and teleconferencing as an educational aid (See Appendix 4).

#### 4.4.1.2 Reaction Scale

The main purpose of this reaction scale was to document learner's/ respondent's reactions regarding different aspects of IGNOU TC programmes such as – preparation, presentation, duration, talkback (question-answer session), utility, and technical and non-technical problems.

More than this, an open ended question was included to get their reactions, comments about some relevant points, which might not have been included in the previous items. The reactions of learners were measured on 3-point scale, namely, Agree, Undecided and Disagree (see appendix 4-a).

#### **4.4.2 Preparation of the Profile Schedule and Reaction Scale**

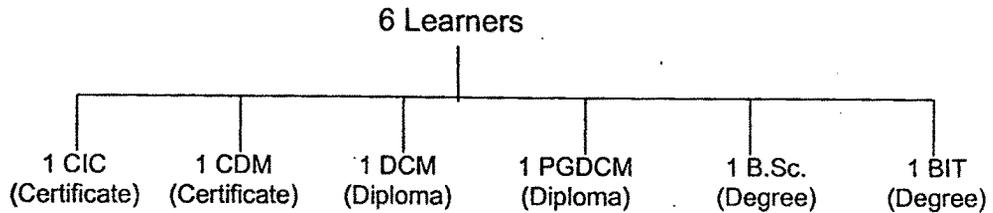
The related literature and a large number of items in the present context were studied. Number of items were constructed with the area experts and other researchers. Some of the items were modified and changed according to the reactions of the experts for the final construction of reaction scale as well as profile schedule.

#### **4.4.3 Validity and Reliability of the Reaction Scale**

For the content validity and for checking the language, the tool was assessed through the judgement of the experts in the field of measurement, distance education, language and also personnel associated with IGNOU teleconferencing. Changes were made in the reaction scale as per the suggestions and comments received from the experts.

The reliability of the reaction scale was checked by the test-retest method. A total of six learners, two each from degree, diploma and certificate courses of IGNOU were administered the test with a gap of 20 days. While selecting the learners, investigator made sure that these learners were exposed to IGNOU TC.

Apart from this, investigator also took the contact addresses of these learners, for the purpose of giving them retest after the gap of 20 days. The first test was administered on 5<sup>th</sup> September, 1999 and the retest on 26<sup>th</sup> September, 1999.



Correlation coefficient was computed between the two sets of scores obtained using the Karl Pearson's formula:

$$r = \frac{\sum XY}{\sqrt{\sum X^2 \times \sum Y^2}}$$

The reliability of the tool (Reaction Scale) was found to be 0.82.

#### 4.5 Classification of Variables of the Participating Learners

The variables such as sex, employment status, medium of instruction, type of programme, level of exposure to electronic media and TC have been classification as shown in the following table.

**Table 4.2: Variablewise Categorization Of Participating Learners.**

| Sr. No. | Variable                              | Category  | Score / Numbers |
|---------|---------------------------------------|---|-----------------|
| 1.      | Sex                                   | Male<br>Female  | 1<br>2          |
| 2.      | Employment                            | Working<br>Non-working  | 1<br>2          |
| 3.      | Medium of Instruction                 | Hindi<br>English<br>Gujarati                                      | 1<br>2<br>3     |
| 4.      | Type of programme                     | Degree<br>Diploma<br>Certificate                                  | 1<br>2<br>3     |
| 5.      | Level of exposure to electronic media | Low (2-3 times)<br>Middle (4-5 times)<br>High (more than 5 times) | 1<br>2<br>3     |
| 6.      | Level of exposure to teleconferencing | Low (2-3 times)<br>Middle (4-5 times)<br>High (more than 5 times) | 1<br>2<br>3     |

For the purpose of statistical analysis each category of variables was given some numeral symbols as presented in table 4.2. Similarly, for profile schedule - 'Yes' was marked 2 and 'No' was marked 1.

To analyze the reactions of the learners regarding each item of reaction scale, a 3-point reaction scale was prepared where " Agree" was given 3, "Undecided" was given 2 and "Disagree" was given 1.

#### **4.6 Procedure of Data Collection**

A profile schedule along with reaction scale was administered to respondents from December 1999 to February 2001. The investigator personally went to Baroda IGNOU Study Centre on the scheduled TC days and administered the tool. Before administering the tool, the investigator took permission from the Centre Co-ordinator. The respondents were explained the purpose of the data collection. They were also assured that their responses would be kept confidential and would be used only for the research purpose. The duration for data collection was 14 months as due to flexibility in the system of Distance Education, very few learners used to attend regular TC programmes. Investigator used to be present during administration of the tool. If the learners found any difficulties, then those were clarified at that time only. Investigator used to check each completed / responded tool in order to avoid any confusion or unmarked response(s).

#### **4.7 Data Analysis and Interpretation**

The data were analyzed both quantitatively and qualitatively. Each set of tool, that is, profile schedule along with reaction scale was given a marking as stated under 'Scoring Plan and Categorization' section. These scores were later transferred into a coding sheet [Chi Square ( $\chi^2$ ) was applied].

The equation for Chi-square ( $\chi^2$ ) is stated hereunder:

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

(Chi-square formula for testing agreement observed and expected results) where,

$f_o$  = Frequency of occurrence of observed or experimentally determined facts.

$f_e$  = Expected frequency of occurrence on some hypothesis

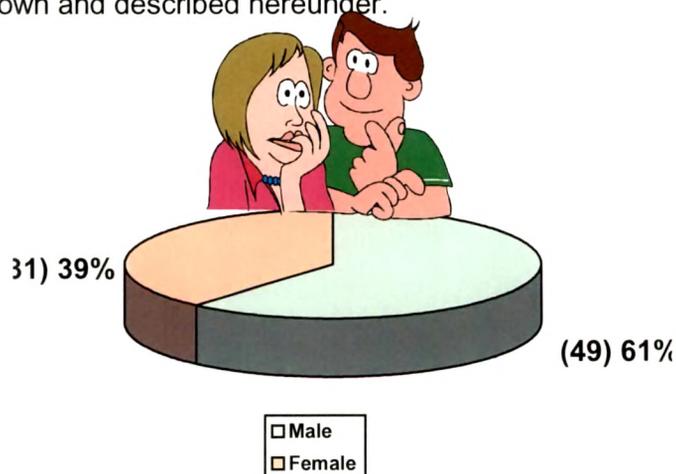
[Source : Garette, 1961, pp. 253-54]

The responses of open ended item on reaction scale were analyzed qualitatively by putting the responses of each respondent under a particular category.

#### 4.7.1 Participant's Profile

The following describes the background information of participating learners where percentage distribution of learners with respect to different variables (sex, age, employment, medium of instruction, level of exposure to electronic media and teleconferencing and type of IGNOU programmes) is presented.

4.7.1.1 Sex: Under this variable, the total number of male and female learners is shown and described hereunder.

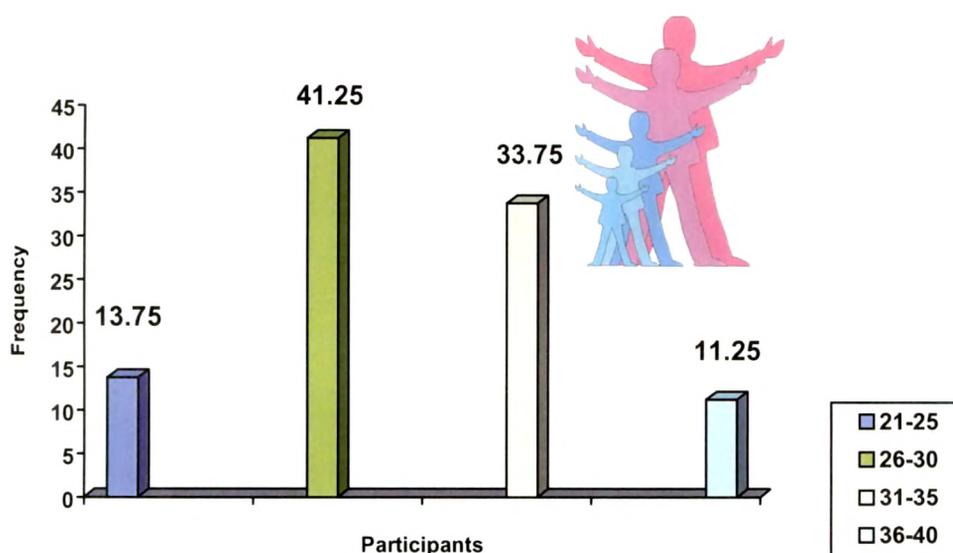


Graph 4.1: Percentage Distribution of the Learners with respect to the sex.

It is evident from graph (4.1), that in all 80 participants were present for IGNOU TC programmes. Majority (61.25%) of the participants were males.

4.7.1.2 Age: The description of learners with respect to different age groups is presented as below.

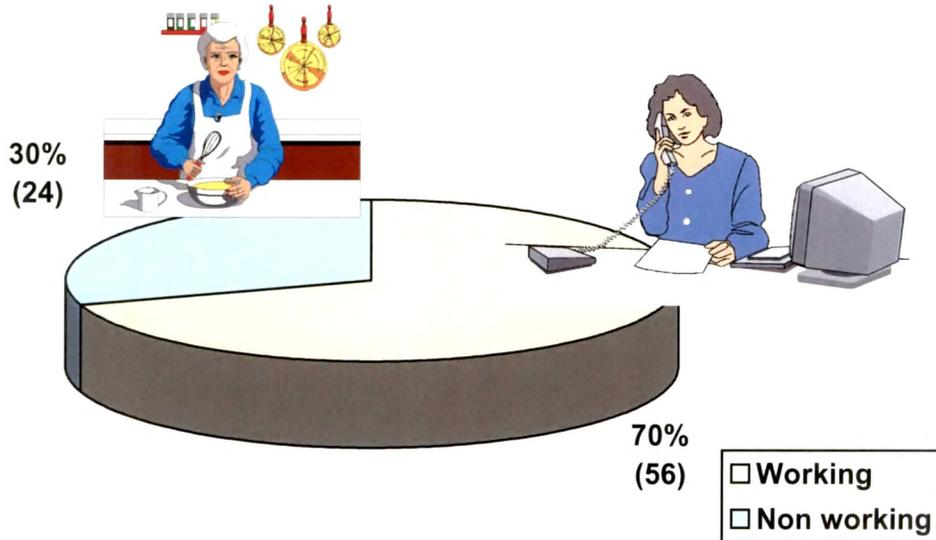
**Graph 4.2 Percentage Distribution of the Learners with respect to the Age.**



From the graph (4.2), it can be stated that 41.25 percent of the participants were in the age group of 26 to 30 years, 33.75 percent were in the age group of 31 to 35 years; 13.75 percent in 21 to 25 years and only 11.25 percent were in the age group of 30-40 years.

4.7.1.3 Employment: Under this, the details of employment status of learners in terms of working and not working is described hereunder.

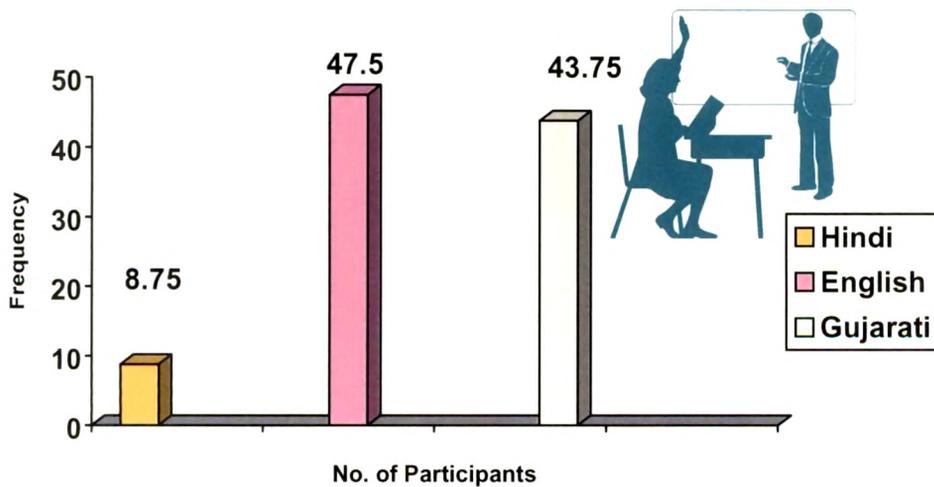
**Graph 4.3 Percentage Distribution of the Learners with respect to the Employment.**



Graph (4.3), shows that majority (70%) of the participants were working and only 30 percent participants were non-working.

4.7.1.4 Medium of Instruction: The details regarding medium of instruction in the last qualifying examination of learners is presented hereunder.

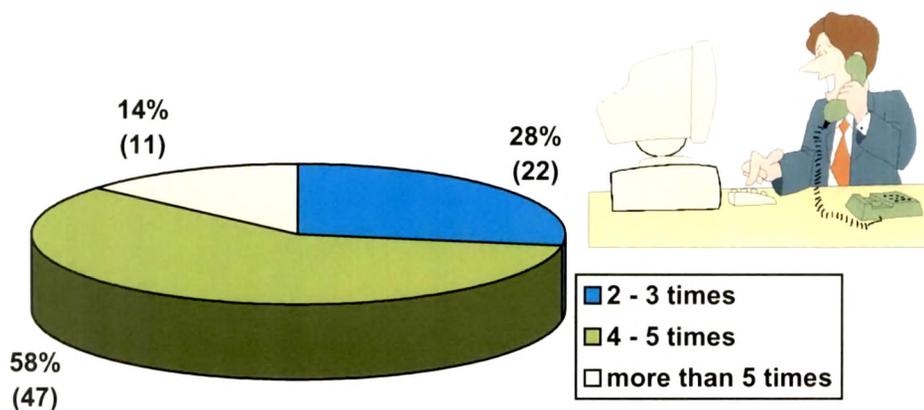
**Graph 4.4 Percentage Distribution of the Learners with respect to the Medium of Instruction.**



It is clear from the graph (4.4) that only 8.75 percent participants had Hindi as medium of instruction in their last qualifying examination. 47.50 percent participants had English and 43.75 percent participants had Gujarati as medium of instruction in their last qualifying examination.

4.7.1.5 Exposure to Electronic Media: Here the earlier level of exposure of learners to electronic media as a teaching-learning mode is described.

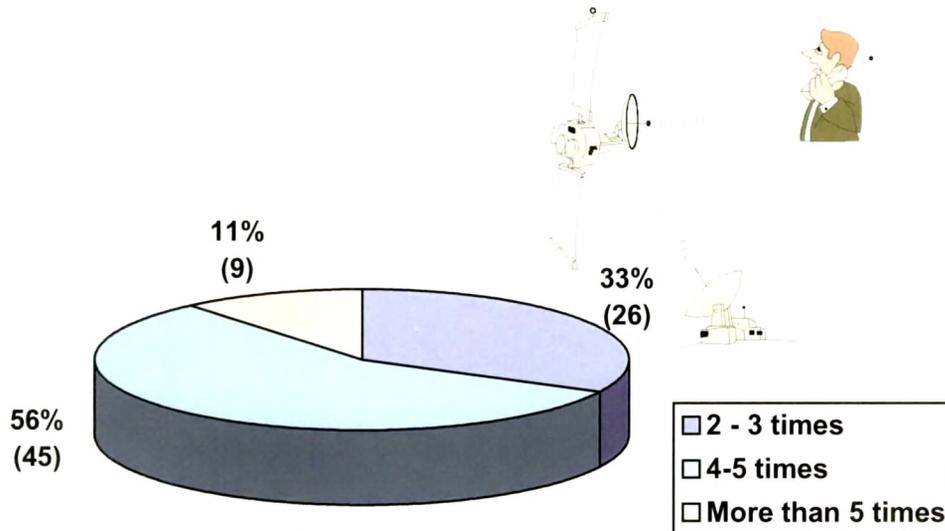
**Graph 4.5 Percentage Distribution of the Learners with respect to the Exposure to Electronic Media.**



It can be stated from graph (4.5) that 58.75 percent participants had medium level of exposure to electronic media, that is, they were exposed to electronic media for around 4-5 times. 27.50 percent participants had low level of exposure, that is, only twice or thrice, while 13.75 percent of participants had high level of exposure to electronic media, that is, more than 5 times.

4.7.1.6 Exposure to teleconferencing: Under this, the earlier level of exposure of learners to teleconferencing is described as below.

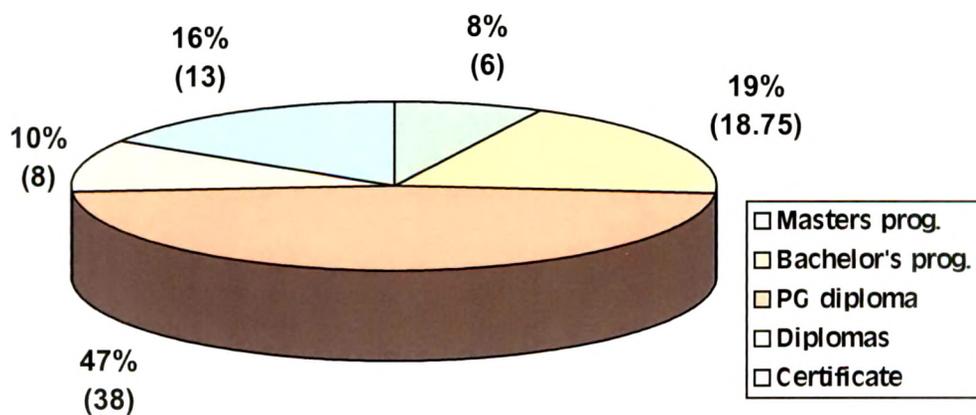
**Graph 4.6 Percentage Distribution of the Learners with respect to the Exposure to Teleconferencing.**



Graph (4.6) presents that 56.25 percent participants had medium level (4-5 times) of exposure to teleconferencing programmes. 32.50 percent participants had low level (2-3 times) of exposure and only 11.25 percent participants had high level (more than 5 times) of exposure to teleconferencing programmes.

4.7.1.7 Types of Programmes: Under this, the type of IGNOU programme learners belonged is described.

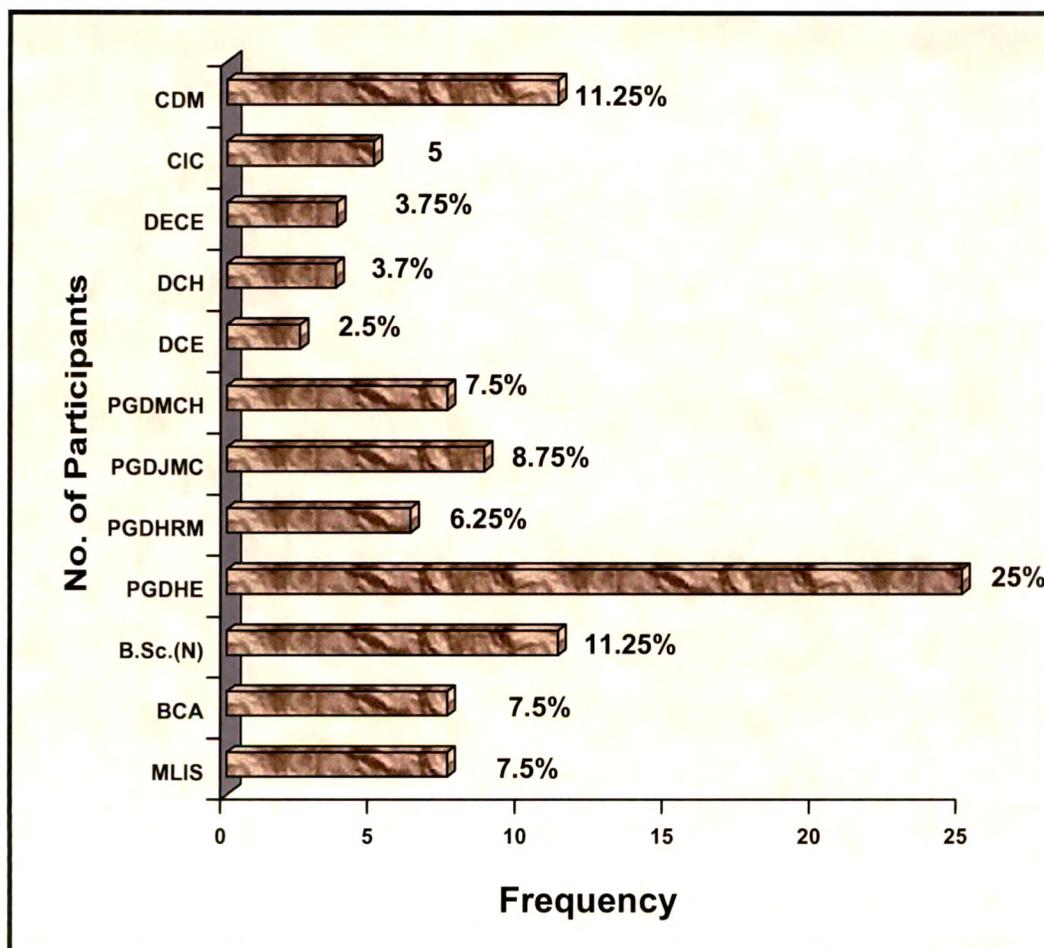
**Graph 4.7 Percentage Distribution of the Learners with respect to the Type of the Programme.**



From the graph (4.7), it is evident that more number of participants (57.50%) belonged to Diploma type of programmes, whereas 47.50 percent participants were from Post Graduate Diplomas and 10 percent from Diploma. 26.25 percent participants belonged to Degree type of programme where, 18.75 percent were from Bachelor's programme and 7.50 percent from Master's programme. Only 16.25 percent belonged to certificate type of programmes. Further, the break up of participants according to the names of the programmes is shown in the graph (4.8).

4.7.1.8 Names of the Programmes: Under this, the names of IGNOU programme in which learners had enrolled, is described.

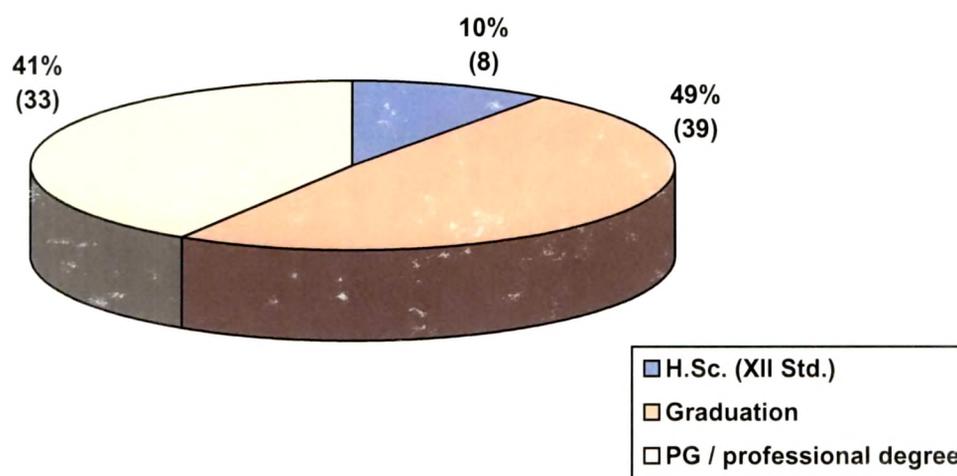
**Graph 4.8 Percentage Distribution of the Learners with respect to the Names of the Programme.**



It is evident from the graph 4.8 that among all the programmes of IGNOU, one-fourth of the learners were from PGDHE whereas 11.25% each from CDM and B.Sc.(nursing).The lowest number of learners were from DCE (2.5%) and DCH (3.7%) and DECE (3.75%).

4.7.1.9 Educational Qualification (Level of Education): Under this, the level of educational qualification before their enrolment in respective IGNOU programmes is described and presented hereunder.

**Graph 4.9 Percentage Distribution of the Learners with respect to the Educational Qualification.**



Graph (4.9) shows that mostly participants (48.75%) were graduates (medium level of qualification). Some participants, that is, 10 percent had passed higher secondary (low level of educational qualification) and 41.25 percent participants had professional degrees or post graduates (high level of educational qualification).

#### **4.7.2 Aspectwise And Overall Reactions Of Learners Regarding IGNOU TC Programmes**

Here the reaction of participating learners towards various aspects of IGNOU TC programmes with respect to selected variables are described. The following text would deal with the analysis and interpretation related to the null hypotheses of the reactions of learners towards IGNOU TC programme in terms of sex, employment, medium of instruction, type of programme, level of exposure to electronic media and teleconferencing. Chi-square ( $\chi^2$ ) values along with percentages and observed and expected frequencies for each variable with respect to the various aspects (preparation, presentation, duration, talkback, utility, technical and non-technical problems) of TC are described.

The Chi-square ( $\chi^2$ ) values which were found to be significant, have been presented with their interpretation separately. On the other hand, those not found to be significant have been clubbed together aspect-wise with respect to variable and presented for their interpretation.

##### **4.7.2.1 Reactions of Learners with respect to Sex regarding different aspects of IGNOU TC**

The reactions of male and female learners were collected towards preparation, presentation, duration, utility, technical and non- technical problems and talkback aspects of IGNOU TC. The analysis of male and female learners' reaction towards each aspect is presented hereunder.

##### **4.7.2.1.1 *Reaction of Learners with respect to Sex regarding Preparation aspect of IGNOU TC***

The reactions of male and female learners towards preparation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.3:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for the preparation of IGNOU- TC.**

| Sex          |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|-------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 124   | 48        | 148      | 320       |               |
|              | %     | 15.5  | 6.0       | 18.5     | 40.0      |               |
|              | $f_e$ | 126.4 | 51.2      | 142.4    |           |               |
| Male         | $f_o$ | 192   | 80        | 208      | 480       |               |
|              | %     | 24.0  | 10.0      | 26.0     | 60.0      |               |
|              | $f_e$ | 189.6 | 76.80     | 213.60   |           |               |
| Column Total |       | 316   | 128       | 356      | 800       |               |
|              |       | 39.5  | 16.0      | 44.5     | 100.0     |               |

$\chi^2 = 0.76$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

**4.7.2.1.2 Reaction of Learners with respect to Sex regarding Presentation aspect of IGNOU TC**

The reactions of male and female learners towards presentation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.4:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for the presentation of IGNOU- TC.**

| Sex          |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|-------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 196   | 90        | 258      | 544       |               |
|              | %     | 14.4  | 6.6       | 19.0     | 40.0      |               |
|              | $f_e$ | 196   | 82.8      | 265.2    |           |               |
| Male         | $f_o$ | 294   | 117       | 405      | 816       |               |
|              | %     | 21.6  | 8.6       | 29.8     | 60.0      |               |
|              | $f_e$ | 294.0 | 124.2     | 397.8    |           |               |
| Column Total |       | 490   | 207       | 663      | 1360      |               |
|              |       | 36.0  | 15.2      | 48.8     | 100.0     |               |

$\chi^2 = 1.35$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

4.7.2.1.3 *Reaction of Learners with respect to Sex regarding Duration aspect of IGNOU TC*

The reactions of male and female learners towards duration of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.5:**  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for the Duration of IGNOU- TC.

| Sex          |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|-------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 65    | 14        | 113      | 192       |               |
|              | %     | 13.5  | 2.9       | 23.5     | 40.0      |               |
|              | $f_e$ | 68.4  | 20.4      | 103.2    |           |               |
| Male         | $f_o$ | 106   | 37        | 145      | 288       |               |
|              | %     | 22.1  | 7.7       | 30.2     | 60.0      |               |
|              | $f_e$ | 102.6 | 30.6      | 154.8    |           |               |
| Column Total |       | 171   | 51        | 258      | 480       |               |
|              |       | 35.6  | 10.6      | 53.8     | 100.0     |               |

$\chi^2 = 5.15$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

4.7.2.1.4 *Reaction of Learners with respect to Sex regarding Talkback aspect of IGNOU TC*

The reactions of male and female learners towards talkback of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.6:**  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for the Talkback of IGNOU- TC.

| Sex          |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|-------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 129   | 60        | 227      | 416       |               |
|              | %     | 12.4  | 5.8       | 21.8     | 40.0      |               |
|              | $f_e$ | 124   | 64.8      | 227.2    |           |               |
| Male         | $f_o$ | 181   | 102       | 341      | 624       |               |
|              | %     | 17.4  | 9.8       | 32.8     | 60.0      |               |
|              | $f_e$ | 186   | 97.2      | 340.8    |           |               |
| Column Total |       | 310   | 162       | 568      | 1040      |               |
|              |       | 29.8  | 15.6      | 54.6     | 100.0     |               |

$\chi^2 = 0.91$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

4.7.2.1.5 *Reaction of Learners with respect to Sex regarding Utility aspect of IGNOU TC*

The reactions of male and female learners towards utility of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.7:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for the Utility of IGNOU- TC.**

| Sex          |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 137    | 95        | 343      | 575       | 1.25          |
|              | %     | 9.5    | 6.6       | 23.9     | 40.0      |               |
|              | $f_e$ | 130.35 | 101.56    | 343.08   |           |               |
| Male         | $f_o$ | 189    | 159       | 515      | 863       |               |
|              | %     | 13.1   | 11.1      | 35.8     | 60.0      |               |
|              | $f_e$ | 195.64 | 152.43    | 514.91   |           |               |
| Column Total |       | 326    | 254       | 858      | 1438      |               |
|              |       | 22.7   | 17.7      | 59.7     | 100.0     |               |

$\chi^2 = 1.25$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

Table 4.3, 4.4, 4.5, 4.6 and 4.7 reveal that the  $\chi^2$  values are 0.76, 1.35, 5.15, 0.91 and 1.25 for preparation, presentation, duration and time, talkback and utility aspects respectively which were not found significant at 0.05 level with  $df=2$ . It means that the male and female learners did not differ significantly in their reactions towards preparation, presentation, duration and time, talkback and utility of IGNOU - TC.

Thus, the null hypotheses number 1, 2, 3, 4 and 5 stating that the reaction of respondents will not differ significantly with respect to sex regarding preparation, presentation, duration, talkback and utility aspects of IGNOU teleconferencing respectively, are not rejected.

4.7.2.1.6 *Reaction of Learners with respect to Sex regarding Technical and Non-technical Problems of IGNOU TC*

The reactions of male and female learners towards technical and non-technical problems of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.8:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for Technical and Non-technical problems of IGNOU- TC.**

| Sex          |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|-------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 78    | 41        | 201      | 320       |               |
|              | %     | 9.8   | 5.1       | 25.1     | 40.0      |               |
|              | $f_e$ | 93.6  | 40.0      | 186.4    |           |               |
| Male         | $f_o$ | 156   | 59        | 265      | 480       |               |
|              | %     | 19.5  | 7.4       | 33.1     | 60.0      |               |
|              | $f_e$ | 140.4 | 60.0      | 279.6    |           |               |
| Column Total |       | 234   | 100       | 466      | 800       |               |
|              |       | 29.3  | 12.5      | 58.3     | 100.0     |               |

$\chi^2 = 6.26^*$  df = 2; significant at 0.05 level with  $\chi^2_{tab} = 5.9$

Table 4.8 reveals that the calculated  $\chi^2$  value (6.26) is higher than the table value (5.90) at 0.05 level. Thus, the null hypothesis that there will be no significant difference in the reaction of respondents with respect to sex regarding technical and non-technical problems of IGNOU-TC is rejected.

More number of male respondents (31.1%) than female respondents (25.1%) agreed towards technical and non-technical problems of teleconferencing.

Only 5.1% of female and 7.4% of male respondents were undecided while 9.8% of females and 19.5% of males showed disagreement towards technical and non-technical problems of IGNOU - teleconferencing.

4.7.2.1.7 *Reaction of Learners with respect to Sex for Overall aspects of IGNOU TC*

The reactions of male and female learners towards overall aspects of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.9:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Sex for Overall aspects of IGNOU- TC.**

| Sex          |       | Agree   | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|---------|-----------|----------|-----------|---------------|
| Female       | $f_o$ | 729     | 348       | 1290     | 2367      |               |
|              | %     | 12.3    | 5.9       | 21.8     | 40.0      |               |
|              | $f_e$ | 738.73  | 360.76    | 1267.49  |           |               |
| Male         | $f_o$ | 1118    | 554       | 1879     | 3551      |               |
|              | %     | 18.9    | 9.4       | 31.8     | 60.0      |               |
|              | $f_e$ | 1108.26 | 541.23    | 1901.50  |           |               |
| Column Total |       | 1847    | 902       | 3169     | 5918      |               |
|              |       | 31.2    | 15.2      | 53.5     | 100.0     |               |

$\chi^2 = 1.60$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

Table 4.9 reveals that the  $\chi^2$  value was 1.60 for overall aspects which was not significant at 0.05 level with  $df=2$ . It means that the male and female learners did not differ significantly in their reactions regarding overall aspects of IGNOU-TC.

Thus, the null hypothesis number 7, stating that there will be no significant difference in the reactions of respondents with respect to sex, regarding overall aspects of IGNOU - teleconferencing is not rejected.

4.7.2.2 Reactions of Learners with respect to Employment regarding different aspects of IGNOU TC

The reactions of working and non-working learners were collected towards preparation, presentation, duration, utility, technical and non- technical problems

and talkback aspects of IGNOU TC. The analysis of working and non- working learners' reaction towards each aspect is presented hereunder.

4.7.2.2.1 *Reaction of Learners with respect to Employment regarding Preparation aspect of IGNOU TC*

The reactions of working and non- working learners towards preparation of IGNOU TC programme are compared using Chi-square value and presented as follows.

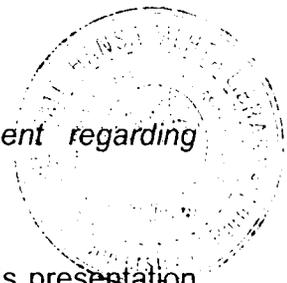
**Table 4.10:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Employment for the preparation of IGNOU-TC.**

| Employment   |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 103    | 44        | 113      | 260       | 0.31          |
|              | %     | 12.9   | 5.5       | 14.1     | 32.5      |               |
|              | $f_e$ | 102.70 | 41.60     | 115.70   |           |               |
| Working      | $f_o$ | 213    | 84        | 243      | 540       |               |
|              | %     | 26.6   | 10.5      | 30.4     | 67.5      |               |
|              | $f_e$ | 213.30 | 86.40     | 240.30   |           |               |
| Column Total |       | 316    | 128       | 356      | 800       |               |
|              |       | 39.5   | 16.0      | 44.5     | 100.0     |               |

$\chi^2 = 0.31$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

Table 4.10 reveals that the  $\chi^2$  value was 0.31 for preparation aspect which was not significant at 0.05 level with  $df=2$ . It means that the working and non-working learners did not differ significantly in their reactions regarding the preparation of IGNOU-TC

Thus, the null hypothesis number 8, stating that there will be no significant difference in the reactions of respondents with respect to employment regarding preparation aspect of IGNOU – teleconferencing, is not rejected.



4.7.2.2.2 *Reaction of Learners with respect to Employment regarding Presentation aspect of IGNOU TC*

The reactions of working and non- working learners towards presentation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.11:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Employment for the presentation of IGNOU- TC.**

| Employment   |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 156    | 86        | 200      | 442       | 9.44**        |
|              | %     | 11.5   | 6.3       | 14.7     | 32.5      |               |
|              | $f_e$ | 159.25 | 67.27     | 215.47   |           |               |
| Working      | $f_o$ | 334    | 121       | 463      | 918       |               |
|              | %     | 24.6   | 8.9       | 34.0     | 67.5      |               |
|              | $f_e$ | 330.75 | 139.72    | 447.52   |           |               |
| Column Total |       | 490    | 207       | 663      | 1360      |               |
|              |       | 36.0   | 15.2      | 48.8     | 100.0     |               |

$\chi^2 = 9.44^{**}$  ; df = 2; significant at 0.01 level with  $\chi^2_{tab} = 9.21$

From the table 4.11, it is evident that the calculated  $\chi^2$  value (9.44) is higher than the table value (9.21) at 0.01 level. Thus, the null hypothesis that there will be no significant difference in the reactions of respondents with respect to employment regarding the presentation of IGNOU-TC is rejected.

More number of working respondents (34%) than that of non-working respondents (14.7%) agreed to the presentation of IGNOU-TC.

Only 6.3% non-working respondents, which is the lowest and 8.9% working respondents were undecided regarding the presentation of IGNOU-teleconferencing. Among respondents, more number of working learners (24.6%) than non-working learners (11.5%) disagreed regarding presentation aspect of IGNOU-teleconferencing.

4.7.2.2.3 *Reaction of Learners with respect to Employment regarding Duration aspect of IGNOU TC*

The reactions of working and non- working learners towards duration of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.12:  $\chi^2$  value, percentages, observed and expected frequencies of respondents according to the Duration of IGNOU- TC.**

| Employment   |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 54     | 15        | 87       | 156       | 0.43          |
|              | %     | 11.3   | 3.1       | 18.1     | 32.5      |               |
|              | $f_e$ | 55.57  | 16.57     | 83.85    |           |               |
| Working      | $f_o$ | 117    | 36        | 171      | 324       |               |
|              | %     | 24.4   | 7.5       | 35.6     | 67.5      |               |
|              | $f_e$ | 115.42 | 34.42     | 174.15   |           |               |
| Column Total |       | 171    | 51        | 258      | 480       |               |
|              |       | 35.6   | 10.6      | 53.8     | 100.0     |               |

$\chi^2 = 0.43$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

4.7.2.2.4 *Reaction of Learners with respect to Employment regarding Talkback aspect of IGNOU TC*

The reactions of working and non- working learners towards talkback of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.13:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Employment for the Talkback of IGNOU- TC.**

| Employment   |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 112    | 51        | 175      | 338       | 2.65          |
|              | %     | 10.8   | 4.9       | 16.8     | 32.5      |               |
|              | $f_e$ | 100.75 | 52.65     | 184.60   |           |               |
| Working      | $f_o$ | 198    | 111       | 393      | 702       |               |
|              | %     | 19.0   | 10.7      | 37.8     | 67.5      |               |
|              | $f_e$ | 209.25 | 109.35    | 383.4    |           |               |
| Column Total |       | 310    | 162       | 568      | 1040      |               |
|              |       | 29.8   | 15.6      | 54.6     | 100.0     |               |

$\chi^2 = 2.65$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

Table 4.12 and 4.13 reveal that the  $\chi^2$  values were 0.43 and 2.65 for duration and time and talkback respectively which were not significant at 0.05 level with  $df=2$ . It means that the working and non-working learners did not differ significantly in their reactions regarding duration and talkback of IGNOU-TC.

Thus, the null hypotheses number 10 and 11, stating that there will be no significant difference in the reactions of respondents with respect to employment regarding the duration and talkback of IGNOU-teleconferencing are not rejected.

#### 4.7.2.2.5 Reaction of Learners with respect to Employment regarding Utility aspect of IGNOU TC

The reactions of working and non- working learners towards utility of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.14:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Employment for the Utility of IGNOU- TC.**

| Employment   |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 122    | 86        | 259      | 467       | 5.91*         |
|              | %     | 8.5    | 6.0       | 18.0     | 32.5      |               |
|              | $f_e$ | 105.87 | 82.48     | 278.64   |           |               |
| Working      | $f_o$ | 204    | 168       | 599      | 971       |               |
|              | %     | 14.2   | 11.7      | 41.7     | 67.5      |               |
|              | $f_e$ | 220.12 | 171.51    | 579.35   |           |               |
| Column Total |       | 326    | 254       | 858      | 1438      |               |
|              |       | 22.7   | 17.7      | 59.7     | 100.0     |               |

$\chi^2 = 5.91^*$ ;  $df = 2$ ; significant at 0.05 level with  $\chi^2_{tab} = 5.90$

Table 4.14 shows that the Calculated  $\chi^2$  value (5.91) is higher than the table value (5.90) at 0.05 level. Thus, the null hypothesis that there will be no significant difference in the reactions of respondents with respect to employment regarding the utility of IGNOU-TC is rejected.

41.7% of working and 18% of non working learners agreed while only 14.2% of working and 8.5% of non-working learners disagreed regarding the utility aspect of IGNOU-teleconferencing. Among learners who were undecided regarding utility aspect were only 6% non working and 14.2% working respondents.

4.7.2.2.6 *Reaction of Learners with respect to Employment regarding Technical and Non-technical problems of IGNOU TC*

The reactions of working and non- working learners towards technical and non-technical problems of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.15:  $\chi^2$  value, percentages, observed and expected frequencies of respondents according to Employment for Technical and Non-technical problems of IGNOU- TC.**

| Employment   |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|--------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 69     | 29        | 162      | 260       | 2.60          |
|              | %     | 8.6    | 3.6       | 20.3     | 32.5      |               |
|              | $f_e$ | 76.05  | 32.5      | 151.45   |           |               |
| Working      | $f_o$ | 165    | 71        | 304      | 540       |               |
|              | %     | 20.6   | 8.9       | 38.0     | 67.5      |               |
|              | $f_e$ | 157.95 | 67.50     | 314.55   |           |               |
| Column Total |       | 234    | 100       | 466      | 800       |               |
|              |       | 29.3   | 12.5      | 58.3     | 100.0     |               |

$\chi^2 = 2.60$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

Table 4.15 reveal that the  $\chi^2$  value was 2.6 for technical and non technical problems which was not significant at 0.05 level with  $df=2$ . It means that the working and non-working learners did not differ significantly in their reactions regarding technical and non-technical problems of IGNOU-TC.

Thus, the null hypothesis number 13, stating that there will be no significant difference in the reactions of respondents with respect to technical and non-technical problems of IGNOU-teleconferencing is not rejected.

4.7.2.2.7 *Reaction of Learners with respect to Employment for Overall aspects of IGNOU TC*

The reactions of working and non- working learners towards overall aspects of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.16:**  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Employment for Overall aspect of IGNOU-TC.

| Employment   |       | Agree   | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|--------------|-------|---------|-----------|----------|-----------|---------------|
| Nonworking   | $f_o$ | 616     | 311       | 996      | 1923      |               |
|              | %     | 10.4    | 5.3       | 16.8     | 32.5      |               |
|              | $f_e$ | 600.16  | 293.09    | 1029.73  |           |               |
| Working      | $f_o$ | 1231    | 591       | 2173     | 3995      |               |
|              | %     | 20.8    | 10.0      | 36.7     | 67.5      |               |
|              | $f_e$ | 1246.83 | 608.90    | 2139.26  |           |               |
| Column Total |       | 1847    | 902       | 3169     | 5918      |               |
|              |       | 31.2    | 15.2      | 53.5     | 100.0     |               |

$\chi^2 = 3.85$ ;  $df = 2$ ;  $\chi^2_{tab}$  at 0.05 level = 5.9

Table 4.16 reveals that the  $\chi^2$  value was 3.85 for overall aspects, which was not significant at 0.05 level with  $df=2$ . It means that the working and non-working learners did not differ significantly in their reactions regarding overall aspects of IGNOU-TC.

Thus, the null hypothesis number 14, stating that there will be no significant difference in the reactions of respondents with respect to employment, regarding overall aspects of IGNOU-teleconferencing is not rejected.

4.7.2.3 Reactions of Learners with respect to Medium of Instruction regarding different aspects of IGNOU TC

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards preparation, presentation,

duration, utility, technical and non- technical problems and talkback aspects of IGNOU TC. The analysis of learners' reaction towards each aspect is presented hereunder.

*4.7.2.3.1 Reaction of Learners with respect to Medium of Instruction regarding Preparation aspect of IGNOU TC*

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards preparation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.17:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for the preparation of IGNOU- TC.**

| Medium of Instruction |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|--------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 153    | 63        | 154      | 370       |               |
|                       | %     | 19.1   | 7.9       | 19.3     | 46.3      |               |
|                       | $f_e$ | 146.15 | 59.20     | 164.65   |           |               |
| Gujarati              | $f_o$ | 136    | 58        | 166      | 360       |               |
|                       | %     | 17.0   | 7.3       | 20.8     | 45.0      |               |
|                       | $f_e$ | 142.2  | 57.6      | 160.2    |           |               |
| Hindi                 | $f_o$ | 27     | 7         | 36       | 70        |               |
|                       | %     | 3.4    | 0.9       | 4.5      | 8.8       |               |
|                       | $f_e$ | 27.65  | 11.2      | 31.15    |           |               |
| Column Total          |       | 316    | 128       | 356      | 800       |               |
|                       |       | 39.5   | 16.0      | 44.5     | 100.0     |               |

$\chi^2 = 4.04$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

*4.7.2.3.2 Reaction of Learners with respect to Medium of Instruction regarding Presentation aspect of IGNOU TC*

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards presentation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.18:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for the Presentation of IGNOU- TC.**

| Medium of Instruction |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|--------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 221    | 87        | 321      | 629       | 5.81          |
|                       | %     | 16.3   | 6.4       | 23.6     | 46.3      |               |
|                       | $f_e$ | 226.6  | 95.73     | 306.63   |           |               |
| Gujarati              | $f_o$ | 233    | 97        | 282      | 612       |               |
|                       | %     | 17.1   | 7.1       | 20.7     | 45.0      |               |
|                       | $f_e$ | 220.50 | 93.15     | 298.35   |           |               |
| Hindi                 | $f_o$ | 36     | 23        | 60       | 119       |               |
|                       | %     | 2.6    | 1.7       | 4.4      | 8.8       |               |
|                       | $f_e$ | 42.87  | 18.11     | 58.01    |           |               |
| Column Total          |       | 490    | 207       | 663      | 1360      |               |
|                       |       | 36.0   | 15.2      | 48.8     | 100.0     |               |

$\chi^2 = 5.81$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

**4.7.2.3.3 Reaction of Learners with respect to Medium of Instruction regarding Duration aspect of IGNOU TC**

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards duration of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.19:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for the Duration of IGNOU- TC.**

| Medium of Instruction |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|-------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 84    | 19        | 119      | 222       | 5.67          |
|                       | %     | 17.5  | 4.0       | 24.8     | 46.3      |               |
|                       | $f_e$ | 79.08 | 23.58     | 119.32   |           |               |
| Gujarati              | $f_o$ | 71    | 24        | 121      | 216       |               |
|                       | %     | 14.8  | 5.0       | 25.2     | 45.0      |               |
|                       | $f_e$ | 76.95 | 22.95     | 116.1    |           |               |
| Hindi                 | $f_o$ | 16    | 8         | 18       | 42        |               |
|                       | %     | 3.3   | 1.7       | 3.8      | 8.8       |               |
|                       | $f_e$ | 14.96 | 4.46      | 22.57    |           |               |
| Column Total          |       | 171   | 51        | 258      | 480       |               |
|                       |       | 35.6  | 10.6      | 53.8     | 100.0     |               |

$\chi^2 = 5.67$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.3.4 *Reaction of Learners with respect to Medium of Instruction regarding Talkback aspect of IGNOU TC*

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards talkback of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.20:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for the Talkback of IGNOU- TC.**

| Medium of Instruction |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|--------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 135    | 77        | 269      | 481       |               |
|                       | %     | 13.0   | 7.4       | 25.9     | 46.3      |               |
|                       | $f_e$ | 143.37 | 74.94     | 262.7    |           |               |
| Gujarati              | $f_o$ | 142    | 73        | 253      | 468       |               |
|                       | %     | 13.7   | 7.0       | 24.3     | 45.0      |               |
|                       | $f_e$ | 139.5  | 72.9      | 255.6    |           |               |
| Hindi                 | $f_o$ | 33     | 12        | 46       | 91        |               |
|                       | %     | 3.2    | 1.2       | 4.4      | 8.8       |               |
|                       | $f_e$ | 27.12  | 14.17     | 49.7     |           |               |
| Column Total          |       | 310    | 162       | 568      | 1040      |               |
|                       |       | 29.8   | 15.6      | 54.6     | 100.0     |               |

$\chi^2 = 2.61$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.3.5 *Reaction of Learners with respect to Medium of Instruction regarding Utility aspect of IGNOU TC*

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards utility of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.21:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for the Utility of IGNOU- TC.**

| Medium of Instruction |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|--------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 146    | 123       | 397      | 666       |               |
|                       | %     | 10.2   | 8.6       | 27.6     | 46.3      |               |
|                       | $f_e$ | 150.98 | 117.63    | 397.37   |           |               |
| Gujarati              | $f_o$ | 148    | 105       | 394      | 647       |               |
|                       | %     | 10.3   | 7.3       | 27.4     | 45.0      |               |
|                       | $f_e$ | 146.67 | 114.28    | 386.04   |           |               |
| Hindi                 | $f_o$ | 32     | 26        | 67       | 125       |               |
|                       | %     | 2.2    | 1.8       | 4.7      | 8.7       |               |
|                       | $f_e$ | 28.33  | 22.07     | 74.58    |           |               |
| Column Total          |       | 326    | 254       | 858      | 1438      |               |
|                       |       | 22.7   | 17.7      | 59.7     | 100.0     |               |

$\chi^2 = 3.25$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

**4.7.2.3.6 Reaction of Learners with respect to Medium of Instruction regarding Technical and Non-technical Problems of IGNOU TC**

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards technical and non-technical problems of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.22:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for Technical and Non-technical problems of IGNOU-TC.**

| Medium of Instruction |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|--------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 115    | 41        | 214      | 370       |               |
|                       | %     | 14.4   | 5.1       | 26.8     | 46.3      |               |
|                       | $f_e$ | 108.22 | 46.25     | 215.52   |           |               |
| Gujarati              | $f_o$ | 97     | 54        | 209      | 360       |               |
|                       | %     | 12.1   | 6.8       | 26.1     | 45.0      |               |
|                       | $f_e$ | 105.3  | 45.0      | 209.7    |           |               |
| Hindi                 | $f_o$ | 22     | 5         | 43       | 70        |               |
|                       | %     | 2.8    | 0.6       | 5.4      | 8.8       |               |
|                       | $f_e$ | 20.47  | 8.75      | 40.77    |           |               |
| Column Total          |       | 234    | 100       | 466      | 800       |               |
|                       |       | 29.3   | 12.5      | 58.3     | 100.0     |               |

$\chi^2 = 5.30$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.3.7 *Reaction of Learners with respect to Medium of Instruction regarding Overall Aspects of IGNOU TC*

The reactions of learners having different medium of instruction in their last qualifying examination were collected towards overall aspects of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.23:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Medium of Instruction for Overall aspect of IGNOU- TC.**

| Medium of Instruction |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|-----------------------|-------|--------|-----------|----------|-----------|---------------|
| English               | $f_o$ | 854    | 410       | 1474     | 2738      |               |
|                       | %     | 14.4   | 6.9       | 24.9     | 46.3      |               |
|                       | $f_e$ | 854.52 | 417.31    | 1466.15  |           |               |
| Gujarati              | $f_o$ | 827    | 411       | 1425     | 2663      |               |
|                       | %     | 14.0   | 6.9       | 24.1     | 45.0      |               |
|                       | $f_e$ | 831.11 | 405.88    | 1425.99  |           |               |
| Hindi                 | $f_o$ | 166    | 81        | 270      | 517       |               |
|                       | %     | 2.8    | 1.4       | 4.6      | 8.7       |               |
|                       | $f_e$ | 161.35 | 78.79     | 276.84   |           |               |
| Column Total          |       | 1847   | 902       | 3169     | 5918      |               |
|                       |       | 31.2   | 15.2      | 53.5     | 100.0     |               |

$\chi^2 = 0.59$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Tables 4.17, 4.18, 4.19, 4.20, 4.21, 4.22, and 4.23 reveal that the  $\chi^2$  values are 4.04, 5.81, 5.67, 2.61, 3.25, 5.30 and 0.59 for preparation; presentation; duration and time; talkback; utility; technical and non-technical problems and overall aspects respectively, which were not significant at 0.05 level with  $df=4$ . It means that the learners with different medium of instruction did not differ significantly in their reactions regarding preparation; presentation; duration and time; talkback; utility; technical and non-technical problems and overall aspects of IGNOU-TC.

Thus, the null hypotheses number 15, 16, 17, 18, 19, 20 and 21, stating that the reactions of respondents will not differ significantly with respect to medium of instruction regarding preparation; presentation; duration and time; talkback; utility; technical and non-technical problems and overall aspects of IGNOU-teleconferencing are not rejected.

#### 4.7.2.4 Reactions of Learners with respect to Type of Programme regarding different aspects of IGNOU TC

The reactions of learners belonging to different types of IGNOU programme were collected towards preparation, presentation, duration, utility, technical and non- technical problems and talkback aspects of IGNOU TC. The analysis of learners' reaction towards each aspect is presented hereunder.

##### 4.7.2.4.1 *Reaction of Learners with respect to Type of Programme regarding Preparation aspect of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards preparation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.24:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Type of Programme for the Preparation of IGNOU- TC.**

| Programme              |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|-------|-------|-----------|----------|-----------|---------------|
| Bachelor & Master      | $f_o$ | 91    | 27        | 92       | 210       |               |
|                        | %     | 11.4  | 3.4       | 11.5     | 26.3      |               |
|                        | $f_e$ | 82.95 | 33.6      | 93.45    |           |               |
| Diploma & P.G. Diploma | $f_o$ | 180   | 73        | 207      | 460       |               |
|                        | %     | 22.5  | 9.1       | 25.9     | 57.5      |               |
|                        | $f_e$ | 181.7 | 73.6      | 204.7    |           |               |
| Certificate            | $f_o$ | 45    | 28        | 57       | 130       |               |
|                        | %     | 5.6   | 3.5       | 7.1      | 16.3      |               |
|                        | $f_e$ | 51.35 | 20.8      | 57.85    |           |               |
| Column Total           |       | 316   | 128       | 356      | 800       |               |
|                        |       | 39.5  | 16.0      | 44.5     | 100.0     |               |

$\chi^2 = 5.40$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Table 4.24 reveals that the  $\chi^2$  value was 5.40 for preparation aspect, which was not significant at 0.05 level with  $df=4$ . It means that the learners from different types of programme did not differ significantly in their reactions regarding preparation aspect of IGNOU-teleconferencing.

Thus, the null hypothesis number 22, stating that there will be no significant difference in the reactions of respondents with respect to type of programme regarding the preparation of IGNOU-teleconferencing was not rejected.

#### 4.7.2.4.2 *Reaction of Learners with respect to Type of Programme regarding Presentation aspect of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards presentation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.25:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Type of Programme for the Presentation of IGNOU- TC.**

| Programme              |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|-------|--------|-----------|----------|-----------|---------------|
| Bachelor & Master      | $f_o$ | 140    | 44        | 173      | 357       |               |
|                        | %     | 10.3   | 3.2       | 12.7     | 26.3      |               |
|                        | $f_e$ | 128.62 | 54.33     | 174.03   |           |               |
| Diploma & P.G. Diploma | $f_o$ | 283    | 109       | 390      | 782       |               |
|                        | %     | 20.8   | 8.0       | 28.7     | 57.5      |               |
|                        | $f_e$ | 281.75 | 119.02    | 381.22   |           |               |
| Certificate            | $f_o$ | 67     | 54        | 100      | 221       |               |
|                        | %     | 4.9    | 4.0       | 7.4      | 16.3      |               |
|                        | $f_e$ | 79.62  | 33.63     | 107.73   |           |               |
| Column Total           |       | 490    | 207       | 663      | 1360      |               |
|                        |       | 36.0   | 15.2      | 48.8     | 100.0     |               |

$\chi^2 = 18.88^{**}$  ; df = 4; significant at 0.01 level with  $\chi^2$  tab = 13.27

It is evident from the table 4.25 that the Calculated  $\chi^2$  value (18.88) is higher than the table value (13.27) at 0.01 level. Thus, the null hypothesis that there will be no significant difference in the reactions of respondents with respect to type of programme regarding the presentation of IGNOU-teleconferencing is rejected.

Among respondents from Bachelors and Masters degree programme, 10.3% disagreed, only 3.2% were undecided and 12.7% agreed regarding presentation aspect of IGNOU-teleconferencing.

28.7% learners agreed, 8% were undecided and 20.8% learners disagreed towards presentation aspect of teleconferencing from diploma and P.G. diploma type of programmes.

From certificate programmes, only 4.9% of learners disagreed, 4% were undecided and 7.4% agreed regarding the presentation of IGNOU-teleconferencing.

4.7.2.4.3 *Reaction of Learners with respect to Type of Programme regarding Duration aspect of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards Duration of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.26:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Type of Programme for the Duration of IGNOU- TC.**

| Programme              |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|-------|-------|-----------|----------|-----------|---------------|
| Bachelor & Master      | $f_o$ | 45    | 13        | 68       | 126       |               |
|                        | %     | 9.4   | 2.7       | 14.2     | 26.3      |               |
|                        | $f_e$ | 44.88 | 13.38     | 67.72    |           |               |
| Diploma & P.G. Diploma | $f_o$ | 103   | 30        | 143      | 276       |               |
|                        | %     | 21.5  | 6.3       | 29.8     | 57.5      |               |
|                        | $f_e$ | 98.32 | 29.32     | 148.35   |           |               |
| Certificate            | $f_o$ | 23    | 8         | 47       | 78        |               |
|                        | %     | 4.8   | 1.7       | 9.8      | 16.3      |               |
|                        | $f_e$ | 27.78 | 8.28      | 41.92    |           |               |
| Column Total           |       | 171   | 51        | 258      | 480       |               |
|                        |       | 35.6  | 10.6      | 53.8     | 100.0     |               |

$\chi^2 = 1.86$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.4.4 *Reaction of Learners with respect to Type of Programme regarding Talkback aspect of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards talkback of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.27:  $\chi^2$  value, percentages, observed and expected frequencies of respondents according to Type of Programme for the Talkback of IGNOU- TC.**

| Programme              |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|-------|--------|-----------|----------|-----------|---------------|
| Bachelor & Master      | $f_o$ | 80     | 43        | 150      | 273       |               |
|                        | %     | 7.7    | 4.1       | 14.4     | 26.3      |               |
|                        | $f_e$ | 81.37  | 42.52     | 149.1    |           |               |
| Diploma & P.G. Diploma | $f_o$ | 176    | 86        | 336      | 598       |               |
|                        | %     | 16.9   | 8.3       | 32.3     | 57.5      |               |
|                        | $f_e$ | 178.25 | 93.15     | 326.6    |           |               |
| Certificate            | $f_o$ | 54     | 33        | 82       | 169       |               |
|                        | %     | 5.2    | 3.2       | 7.9      | 16.3      |               |
|                        | $f_e$ | 50.37  | 26.32     | 92.3     |           |               |
| Column Total           |       | 310    | 162       | 568      | 1040      |               |
|                        |       | 29.8   | 15.6      | 54.6     | 100.0     |               |

$\chi^2 = 3.94$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Tables 4.26 and 4.27 reveal that the  $\chi^2$  value were 1.86 and 3.94 for duration and talkback aspects respectively, which were not significant at 0.05 level with  $df=4$ . It means that the learners from different types of programme did not differ significantly in their reactions regarding duration and time; and talkback aspects of IGNOU-teleconferencing. Thus, the null hypotheses number 24 and 25, stating that there will be no significant difference in the reactions of respondents with respect to the type of programme regarding the duration and talkback aspects of IGNOU-teleconferencing, were not rejected.

#### 4.7.2.4.5 *Reaction of Learners with respect to Type of Programme regarding Utility aspect of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards utility of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.28:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Type of Programme for the Utility aspect of IGNOU- TC.**

| Programme              |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|-------|--------|-----------|----------|-----------|---------------|
| Bachelor & Master      | $f_o$ | 96     | 57        | 225      | 378       |               |
|                        | %     | 6.7    | 4.0       | 15.6     | 26.3      |               |
|                        | $f_e$ | 85.69  | 66.76     | 225.53   |           |               |
| Diploma & P.G. Diploma | $f_o$ | 164    | 149       | 514      | 827       |               |
|                        | %     | 11.4   | 10.4      | 35.7     | 57.5      |               |
|                        | $f_e$ | 187.48 | 146.07    | 493.43   |           |               |
| Certificate            | $f_o$ | 66     | 48        | 119      | 233       |               |
|                        | %     | 4.6    | 3.3       | 8.3      | 16.2      |               |
|                        | $f_e$ | 52.82  | 41.15     | 139.02   |           |               |
| Column Total           |       | 326    | 254       | 858      | 1438      |               |
|                        |       | 22.7   | 17.7      | 59.7     | 100.0     |               |

$\chi^2 = 13.8^{**}$  ; df = 4; significant at 0.01 level with  $\chi^2_{tab} = 13.2$

Table 4.28 reveals that the Calculated  $\chi^2$  value (13.8) is higher than the table value (13.20) at 0.01 level. Thus, the null hypothesis stating that there will be no significant difference in the reactions of respondents with respect to the type of programme regarding the utility aspect of IGNOU-teleconferencing was rejected.

Table 4.28 shows that more percent of diploma and P.G. diploma learners (35.7%) agreed compared to certificate (8.3%) as well as bachelor's and master's degree (15.6%) learners towards utility aspect of teleconferencing.

Only 3.3% from certificate, 4.0% from bachelor's and master's degree and 10.4% from diploma and P.G. diploma learners were undecided in their reactions, while 6.7% from bachelor's and master's, 11.4% from diploma and P.G. diploma and 4.6% of learners from certificate type of programme disagreed regarding the utility aspect of IGNOU-teleconferencing.

4.7.2.4.6 *Reaction of Learners with respect to Type of Programme regarding Technical and Non-technical Problems of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards technical and non-technical problems of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.29:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Type of Programme for Technical and Non-technical problems of IGNOU- TC.**

| Programme              |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|-------|--------|-----------|----------|-----------|---------------|
| Bachelor & Master      | $f_o$ | 60     | 29        | 121      | 210       | 0.46          |
|                        | %     | 7.5    | 3.6       | 15.1     | 26.3      |               |
|                        | $f_e$ | 61.42  | 26.25     | 122.32   |           |               |
| Diploma & P.G. Diploma | $f_o$ | 135    | 56        | 269      | 460       |               |
|                        | %     | 16.9   | 7.0       | 33.6     | 57.5      |               |
|                        | $f_e$ | 134.55 | 57.5      | 267.95   |           |               |
| Certificate            | $f_o$ | 39     | 15        | 76       | 130       |               |
|                        | %     | 4.9    | 1.9       | 9.5      | 16.3      |               |
|                        | $f_e$ | 38.02  | 16.25     | 75.75    |           |               |
| Column Total           |       | 234    | 100       | 466      | 800       |               |
|                        |       | 29.3   | 12.5      | 58.3     | 100.0     |               |

$\chi^2 = 0.46$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Table 4.29 reveals that the  $\chi^2$  value was 0.46 for technical and non-technical problems which was not significant at 0.05 level with  $df=4$ . It means that the learners from different types of programme did not differ significantly in their reactions regarding technical and non-technical problems of IGNOU-teleconferencing.

Thus, the null hypothesis number 27 stating that there will be no significant difference in the reactions of respondents with respect to the type of programme regarding technical and non-technical problems of IGNOU-teleconferencing, was not rejected.

4.7.2.4.7 *Reaction of Learners with respect to Type of Programme regarding Overall aspects of IGNOU TC*

The reactions of learners belonging to different types of IGNOU programmes towards overall aspects of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.30:  $\chi^2$  value, percentages, observed and expected frequencies of respondents according to Type of Programme for Overall aspect of IGNOU- TC.**

| Programme              |                | Agree   | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|------------------------|----------------|---------|-----------|----------|-----------|---------------|
| Bachelor & Master      | f <sub>o</sub> | 512     | 213       | 829      | 1554      | 18.49**       |
|                        | %              | 8.7     | 3.6       | 14.0     | 26.3      |               |
|                        | f <sub>e</sub> | 485.00  | 236.85    | 832.14   |           |               |
| Diploma & P.G. Diploma | f <sub>o</sub> | 1041    | 503       | 1859     | 3403      |               |
|                        | %              | 17.6    | 8.5       | 31.4     | 57.5      |               |
|                        | f <sub>e</sub> | 1062.07 | 518.67    | 1822.25  |           |               |
| Certificate            | f <sub>o</sub> | 294     | 186       | 481      | 961       |               |
|                        | %              | 5.0     | 3.1       | 8.1      | 16.2      |               |
|                        | f <sub>e</sub> | 299.92  | 146.47    | 514.60   |           |               |
| Column Total           |                | 1847    | 902       | 3169     | 5918      |               |
|                        |                | 31.2    | 15.2      | 53.5     | 100.0     |               |

$\chi^2 = 18.49^{**}$  ; df = 4; significant at 0.01 level with  $\chi^2_{tab} = 13.2$

It is evident from table 4.30, that the Calculated  $\chi^2$  value (18.49) is higher than the table value (13.20) at 0.01 level. Thus, the null hypothesis stating that there will be no significant difference in the reactions of respondents with respect to type of programme regarding overall aspect of IGNOU-teleconferencing was rejected.

Among learners from bachelor's and master's degree programme, 14% agreed, 8.7% disagreed, and only 3.6% were undecided compared to learners from diploma and PG diploma programmes, where 31.4% agreed, 17.6%

disagreed, and 8.5% were undecided regarding overall IGNOU tele-conferencing programmes. From certificate programme, only 5% disagreed, 3.1% were undecided and 8.1% of learners agreed towards IGNOU tele-conferencing.

#### 4.7.2.5 Reactions of Learners with respect to the Level of Exposure to Electronic Media regarding different aspects of IGNOU TC

The reactions of learners belonging to different levels of exposure to electronic media were collected towards preparation, presentation, duration, utility, technical and non- technical problems and talkback aspects of IGNOU TC. The analysis of learners' reaction towards each aspect is presented hereunder.

##### 4.7.2.5.1 *Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Preparation aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to electronic media towards preparation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.31:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Level of Exposure to Electronic Media for the Preparation of IGNOU- TC.**

| Media Exposure |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|-------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 48    | 22        | 50       | 120       | 7.73          |
|                | %     | 6.0   | 2.8       | 6.3      | 15.0      |               |
|                | $f_e$ | 47.4  | 19.2      | 53.4     |           |               |
| Low            | $f_o$ | 80    | 26        | 114      | 220       |               |
|                | %     | 10.0  | 3.3       | 14.3     | 27.5      |               |
|                | $f_e$ | 86.9  | 35.2      | 97.9     |           |               |
| Medium         | $f_o$ | 188   | 80        | 192      | 460       |               |
|                | %     | 23.5  | 10.0      | 24.0     | 57.5      |               |
|                | $f_e$ | 181.7 | 73.6      | 204.7    |           |               |
| Column Total   |       | 316   | 128       | 356      | 800       |               |
|                |       | 39.5  | 16        | 44.5     | 100.0     |               |

$\chi^2 = 7.73$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.5.2 *Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Presentation aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to electronic media towards presentation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.32:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Level of Exposure to Electronic Media for the Presentation of IGNOU- TC.**

| Media Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|--------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 70     | 34        | 100      | 204       | 2.17          |
|                | %     | 5.1    | 2.5       | 7.4      | 15.0      |               |
|                | $f_e$ | 73.5   | 31.05     | 99.45    |           |               |
| Low            | $f_o$ | 146    | 53        | 175      | 374       |               |
|                | %     | 10.7   | 3.9       | 12.9     | 27.5      |               |
|                | $f_e$ | 134.75 | 56.10     | 182.35   |           |               |
| Medium         | $f_o$ | 274    | 120       | 388      | 782       |               |
|                | %     | 20.1   | 8.8       | 28.5     | 57.5      |               |
|                | $f_e$ | 281.75 | 119.02    | 381.22   |           |               |
| Column Total   |       | 490    | 207       | 663      | 1360      |               |
|                |       | 36.0   | 15.2      | 48.8     | 100.0     |               |

$\chi^2 = 2.17$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.5.3 *Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Duration aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to electronic media towards duration of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.33:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Level of Exposure to Electronic Media for the Duration aspect of IGNOU- TC.**

| Media Exposure |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|-------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 24    | 8         | 40       | 72        | 2.47          |
|                | %     | 5.0   | 1.7       | 8.3      | 15.0      |               |
|                | $f_e$ | 25.65 | 7.65      | 38.7     |           |               |
| Low            | $f_o$ | 46    | 10        | 76       | 132       |               |
|                | %     | 9.6   | 2.1       | 15.8     | 27.5      |               |
|                | $f_e$ | 47.02 | 14.02     | 70.95    |           |               |
| Medium         | $f_o$ | 101   | 33        | 142      | 276       |               |
|                | %     | 21.0  | 6.9       | 29.6     | 57.5      |               |
|                | $f_e$ | 98.32 | 29.32     | 148.35   |           |               |
| Column Total   |       | 171   | 51        | 258      | 480       |               |
|                |       | 35.6  | 10.6      | 53.8     | 100.0     |               |

$\chi^2 = 2.47$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

**4.7.2.5.4 Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Talkback aspect of IGNOU TC**

The reactions of learners belonging to different levels of exposure to electronic media towards talkback of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.34:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Level of Exposure to Electronic Media for the Talkback of IGNOU- TC.**

| Media Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|--------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 42     | 30        | 84       | 156       | 3.34          |
|                | %     | 4.0    | 2.9       | 8.1      | 15.0      |               |
|                | $f_e$ | 46.50  | 24.30     | 85.20    |           |               |
| Low            | $f_o$ | 94     | 40        | 152      | 286       |               |
|                | %     | 9.0    | 3.8       | 14.6     | 27.5      |               |
|                | $f_e$ | 85.25  | 44.55     | 156.20   |           |               |
| Medium         | $f_o$ | 174    | 92        | 332      | 598       |               |
|                | %     | 16.7   | 8.8       | 31.9     | 57.5      |               |
|                | $f_e$ | 178.25 | 93.15     | 326.60   |           |               |
| Column Total   |       | 310    | 162       | 568      | 1040      |               |
|                |       | 29.8   | 15.6      | 54.6     | 100.0     |               |

$\chi^2 = 3.34$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Tables 4.31, 4.32, 4.33 and 4.34 reveal that the  $\chi^2$  values are 7.73, 2.17, 2.47 and 3.34 for preparation; presentation; duration and time and talkback aspects respectively, which were not significant at 0.5 level with  $df=4$ . It means that the learners with different level of exposure to electronic media did not differ significantly in their reactions regarding preparation; presentation; duration and time and talkback aspects of IGNOU-TC.

Thus, the null hypotheses number 29, 30, 31 and 32 stating that there will be no significant difference in the reactions of respondents with respect to level of exposure to electronic media regarding preparation; presentation; duration and time and talkback aspects of IGNOU-teleconferencing are not rejected.

*4.7.2.5.5 Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Utility aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to electronic media towards utility of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.35:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Level of Exposure to Electronic Media for the Utility aspect of IGNOU- TC.**

| Media Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|--------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 62     | 37        | 117      | 226       |               |
|                | %     | 4.3    | 2.6       | 8.1      | 15.0      |               |
|                | $f_e$ | 48.96  | 38.15     | 128.87   |           |               |
| Low            | $f_o$ | 96     | 52        | 247      | 395       |               |
|                | %     | 6.7    | 3.6       | 17.2     | 27.5      |               |
|                | $f_e$ | 89.54  | 69.77     | 235.68   |           |               |
| Medium         | $f_o$ | 168    | 165       | 494      | 827       |               |
|                | %     | 11.7   | 11.5      | 34.4     | 57.5      |               |
|                | $f_e$ | 187.48 | 146.07    | 493.43   |           |               |
| Column Total   |       | 326    | 254       | 858      | 1438      |               |
|                |       | 22.7   | 17.7      | 59.7     | 100.0     |               |

$\chi^2 = 14.58^{**}$  ;  $df = 4$ ; significant at 0.01 level with  $\chi^2_{tab} = 13.28$

The table 4.35 shows that the calculated  $\chi^2$  value (14.58) is higher than the table value (13.28) at 0.01 level. Thus, the null hypothesis that there will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding the utility aspect of IGNOU-TC is rejected.

34.4% of learners agreed from medium level of exposure when compared to that of low (17.2%) and high (8.1%) level of exposure towards utility aspect of IGNOU tele-conferencing. Among respondents who were undecided, 2.6% were from high, 3.6% from low and 11.5% from medium level of exposure. 4.3% from high level, 6.7% from low level and 11.7% from medium level disagreed regarding utility aspect of IGNOU tele-conferencing.

#### *4.7.2.5.6 Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Technical and Non-technical problems of IGNOU TC*

The reactions of learners belonging to different levels of exposure to electronic media towards technical and non-technical problems of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.36:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Level of Exposure to Electronic Media for Technical and Non-technical problems of IGNOU- TC.**

| Media Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|--------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 40     | 14        | 66       | 120       | 1.49          |
|                | %     | 5.0    | 1.8       | 8.3      | 15.0      |               |
|                | $f_e$ | 35.10  | 15.00     | 69.90    |           |               |
| Low            | $f_o$ | 61     | 26        | 133      | 220       |               |
|                | %     | 7.6    | 3.3       | 16.6     | 27.5      |               |
|                | $f_e$ | 64.35  | 27.50     | 128.15   |           |               |
| Medium         | $f_o$ | 133    | 60        | 267      | 460       |               |
|                | %     | 16.6   | 7.5       | 33.4     | 57.5      |               |
|                | $f_e$ | 134.55 | 57.50     | 267.95   |           |               |
| Column Total   |       | 234    | 100       | 466      | 800       |               |
|                |       | 29.3   | 12.5      | 58.3     | 100.0     |               |

$\chi^2 = 1.49$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Table 4.36 reveals that the  $\chi^2$  value was 1.49 for technical and non-technical problems which was not significant at 0.05 level with  $df=4$ . It means that the learners with different level of exposure to electronic media did not differ significantly in their reactions regarding technical and non-technical problems of IGNOU-TC.

Thus, the null hypothesis number 34 stating that there will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding technical and non-technical problems of IGNOU-teleconferencing is not rejected.

#### 4.7.2.5.7 *Reaction of Learners with respect the Levels of Exposure to Electronic Media regarding Overall aspects of IGNOU TC*

The reactions of learners belonging to different levels of exposure to electronic media towards overall aspects of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.37:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Level of Exposure to Electronic Media for Overall aspect of IGNOU- TC.**

| Media Exposure |       | Agree   | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|----------------|-------|---------|-----------|----------|-----------|---------------|
| High           | $f_o$ | 286     | 145       | 457      | 888       | 12.11**       |
|                | %     | 4.8     | 2.5       | 7.7      | 15.0      |               |
|                | $f_e$ | 277.14  | 135.34    | 475.51   |           |               |
| Low            | $f_o$ | 523     | 207       | 897      | 4627      |               |
|                | %     | 8.8     | 3.5       | 15.2     | 27.5      |               |
|                | $f_e$ | 507.78  | 247.98    | 871.23   |           |               |
| Medium         | $f_o$ | 1038    | 550       | 1815     | 3403      |               |
|                | %     | 17.5    | 9.3       | 30.7     | 57.5      |               |
|                | $f_e$ | 1062.07 | 518.67    | 1822.25  |           |               |
| Column Total   |       | 1847    | 902       | 3169     | 5918      |               |
|                |       | 31.2    | 15.2      | 53.5     | 100.0     |               |

$\chi^2 = 12.11^*$  ; df = 4; significant at 0.05 level with  $\chi^2_{tab} = 9.4$

Table 4.37 shows that the calculated  $\chi^2$  value (12.11) is higher than the table value (9.40) at 0.05 level. Thus, the null hypothesis that there will be no significant difference in the reactions of respondents with respect to the level of exposure to electronic media regarding overall aspects of IGNOU-TC is rejected.

From table 4.37, it is clear that 30.7% of learners agreed from medium level of exposure when compared to that of high (7.7%) and low (15.2%) level of exposure towards overall IGNOU tele-conferencing. Among learners who were undecided, 2.5% were from high, 3.5% from low and 9.3% from medium level of exposure. 4.8% learners from high level, 8.8% from low level and 17.5% learners from medium level of exposure to electronic media disagreed towards overall aspect of IGNOU tele-conferencing programmes.

4.7.2.6 Reactions of Learners with respect to the Level of Exposure to Teleconferencing regarding different aspects of IGNOU TC

The reactions of learners belonging to different levels of exposure to teleconferencing were collected towards preparation, presentation, duration, utility, technical and non- technical problems and talkback aspects of IGNOU TC. The analysis of learners' reaction towards each aspect is presented hereunder.

4.7.2.6.1 *Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Preparation aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to teleconferencing towards preparation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.38:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Exposure for teleconferencing for the Preparation of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|--------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 34     | 16        | 40       | 90        | 3.07          |
|                           | %     | 4.3    | 2.0       | 5.0      | 11.3      |               |
|                           | $f_e$ | 35.55  | 14.4      | 40.05    |           |               |
| Low                       | $f_o$ | 99     | 40        | 131      | 270       |               |
|                           | %     | 12.4   | 5.0       | 16.4     | 33.8      |               |
|                           | $f_e$ | 106.65 | 43.2      | 120.15   |           |               |
| Medium                    | $f_o$ | 183    | 72        | 185      | 440       |               |
|                           | %     | 22.9   | 9.0       | 23.1     | 55.0      |               |
|                           | $f_e$ | 173.8  | 70.4      | 195.8    |           |               |
| Column Total              |       | 316    | 128       | 356      | 800       |               |
|                           |       | 39.5   | 16.0      | 44.5     | 100.0     |               |

$\chi^2 = 3.07$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.6.2 *Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Presentation aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to teleconferencing towards presentation of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.39:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Exposure for teleconferencing for the Presentation aspect of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|--------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 48     | 19        | 86       | 153       |               |
|                           | %     | 3.5    | 1.4       | 6.3      | 11.3      |               |
|                           | $f_e$ | 55.12  | 23.28     | 74.58    |           |               |
| Low                       | $f_o$ | 171    | 73        | 215      | 459       |               |
|                           | %     | 12.6   | 5.4       | 15.8     | 33.8      |               |
|                           | $f_e$ | 165.37 | 69.86     | 223.76   |           |               |
| Medium                    | $f_o$ | 271    | 115       | 362      | 748       |               |
|                           | %     | 19.9   | 8.5       | 26.6     | 55.0      |               |
|                           | $f_e$ | 269.5  | 113.85    | 364.65   |           |               |
| Column Total              |       | 490    | 207       | 663      | 1360      |               |
|                           |       | 36.0   | 15.2      | 48.8     | 100.0     |               |

$\chi^2 = 4.12$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

4.7.2.6.3 *Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Duration aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to teleconferencing towards duration of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.40:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Exposure for teleconferencing for the Duration of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|-------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 20    | 6         | 28       | 54        |               |
|                           | %     | 4.2   | 1.3       | 5.8      | 11.3      |               |
|                           | $f_e$ | 19.23 | 5.73      | 29.02    |           |               |
| Low                       | $f_o$ | 57    | 12        | 93       | 162       |               |
|                           | %     | 11.9  | 2.5       | 19.4     | 33.8      |               |
|                           | $f_e$ | 57.71 | 17.21     | 87.07    |           |               |
| Medium                    | $f_o$ | 94    | 33        | 137      | 264       |               |
|                           | %     | 19.6  | 6.9       | 28.5     | 55.0      |               |
|                           | $f_e$ | 94.05 | 28.05     | 141.9    |           |               |
| Column Total              |       | 171   | 51        | 258      | 480       |               |
|                           |       | 35.6  | 10.6      | 53.8     | 100.0     |               |

$\chi^2 = 3.07$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

**4.7.2.6.4 Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Talkback aspect of IGNOU TC**

The reactions of learners belonging to different levels of exposure to teleconferencing towards talkback of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.41:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Exposure for teleconferencing for the Talkback aspect of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|--------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 27     | 19        | 71       | 117       |               |
|                           | %     | 2.6    | 1.8       | 6.8      | 11.3      |               |
|                           | $f_e$ | 34.87  | 18.22     | 63.9     |           |               |
| Low                       | $f_o$ | 114    | 54        | 183      | 351       |               |
|                           | %     | 11.0   | 5.2       | 17.6     | 33.8      |               |
|                           | $f_e$ | 104.62 | 54.67     | 191.7    |           |               |
| Medium                    | $f_o$ | 169    | 89        | 314      | 572       |               |
|                           | %     | 16.3   | 8.6       | 30.2     | 55.0      |               |
|                           | $f_e$ | 170.5  | 89.1      | 312.4    |           |               |
| Column Total              |       | 310    | 162       | 568      | 1040      |               |
|                           |       | 29.8   | 15.6      | 54.6     | 100.0     |               |

$\chi^2 = 3.82$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Tables 4.38, 4.39, 4.40 and 4.41 reveal that the  $\chi^2$  values were 3.07, 4.12, 3.07 and 3.82 for preparation; presentation; duration and time; and talkback aspects respectively, which were not significant at 0.05 level with  $df=4$ . It means that the learners with different level of exposure to teleconferencing did not differ significantly in their reactions regarding preparation; presentation; duration and time; and talkback aspects of IGNOU-TC.

Thus, the null hypotheses number 36, 37, 38 and 39 stating that there will be no significant difference in the reactions of respondents with respect to level of exposure to teleconferencing regarding preparation; presentation; duration and time; and talkback aspects of IGNOU-teleconferencing, are not rejected.

4.7.2.6.5 *Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Utility aspect of IGNOU TC*

The reactions of learners belonging to different levels of exposure to teleconferencing towards utility of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.42:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to the Exposure for teleconferencing for the Utility aspect of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree  | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|--------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 40     | 28        | 94       | 162       | 9.49*         |
|                           | %     | 2.8    | 1.9       | 6.5      | 11.3      |               |
|                           | $f_e$ | 36.72  | 28.61     | 96.65    |           |               |
| Low                       | $f_o$ | 117    | 69        | 299      | 485       |               |
|                           | %     | 8.1    | 4.8       | 20.8     | 33.7      |               |
|                           | $f_e$ | 109.95 | 85.66     | 289.38   |           |               |
| Medium                    | $f_o$ | 169    | 157       | 465      | 791       |               |
|                           | %     | 11.8   | 10.9      | 32.3     | 55.0      |               |
|                           | $f_e$ | 179.32 | 139.71    | 471.95   |           |               |
| Column Total              |       | 326    | 254       | 858      | 1438      |               |
|                           |       | 22.7   | 17.7      | 59.7     | 100.0     |               |

$\chi^2 = 9.49^*$  ;  $df = 4$ ; significant at 0.05 level with  $\chi^2_{tab} = 9.48$

Table 4.42 shows that the calculated  $\chi^2$  value (9.49) is higher than the table value (9.48) at 0.05 level. Thus, the null hypothesis that there will be no significant difference in the reactions of respondents with respect to the level of exposure to teleconferencing regarding the utility aspect of IGNOU-teleconferencing is rejected.

32.3% of respondents agreed from medium level of exposure when compared to that of low (20.8%) and high (6.5%) level of exposure towards utility aspect of IGNOU-teleconferencing.

Among respondents, who were undecided, only 1.9% were from high, 4.8% from low and 10.9% from medium level of exposure. Again, only 2.8% from high level, 8.1% from low level and 11.8% from medium level disagreed regarding utility aspect of IGNOU-teleconferencing.

#### *4.7.2.6.6 Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Technical and Non-technical Problems of IGNOU TC*

The reactions of learners belonging to different levels of exposure to teleconferencing towards technical and non-technical problems of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.43:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Exposure for teleconferencing for Technical and Non-technical problems of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|-------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 35    | 10        | 45       | 90        | 4.74          |
|                           | %     | 4.4   | 1.3       | 5.6      | 11.3      |               |
|                           | $f_e$ | 26.32 | 11.25     | 52.42    |           |               |
| Low                       | $f_o$ | 73    | 35        | 162      | 270       |               |
|                           | %     | 9.1   | 4.4       | 20.3     | 33.8      |               |
|                           | $f_e$ | 78.97 | 33.75     | 157.27   |           |               |
| Medium                    | $f_o$ | 126   | 55        | 259      | 440       |               |
|                           | %     | 15.8  | 6.9       | 32.4     | 55.0      |               |
|                           | $f_e$ | 128.7 | 55.0      | 256.3    |           |               |
| Column Total              |       | 234   | 100       | 466      | 800       |               |
|                           |       | 29.3  | 12.5      | 58.3     | 100.0     |               |

$\chi^2 = 4.74$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

**4.7.2.6.7 Reaction of Learners with respect the Levels of Exposure to Teleconferencing regarding Overall aspects of IGNOU TC**

The reactions of learners belonging to different levels of exposure to teleconferencing towards overall aspects of IGNOU TC programme are compared using Chi-square value and presented as follows.

**Table 4.44:  $\chi^2$  value, percentages, observed and expected frequencies of learners according to Exposure for teleconferencing for Overall aspect of IGNOU- TC.**

| Teleconferencing Exposure |       | Agree   | Undecided | Disagree | Total Row | $\chi^2$ cal. |
|---------------------------|-------|---------|-----------|----------|-----------|---------------|
| High                      | $f_o$ | 204     | 98        | 364      | 666       | 3.60          |
|                           | %     | 3.4     | 1.7       | 6.2      | 11.3      |               |
|                           | $f_e$ | 207.85  | 101.50    | 356.63   |           |               |
| Low                       | $f_o$ | 631     | 283       | 1083     | 1997      |               |
|                           | %     | 10.7    | 4.8       | 18.3     | 33.7      |               |
|                           | $f_e$ | 623.26  | 304.37    | 1069.36  |           |               |
| Medium                    | $f_o$ | 1012    | 521       | 1722     | 3255      |               |
|                           | %     | 17.1    | 8.8       | 29.1     | 55.0      |               |
|                           | $f_e$ | 1015.88 | 496.11    | 1743.00  |           |               |
| Column Total              |       | 1847    | 902       | 3169     | 5918      |               |
|                           |       | 31.2    | 15.2      | 53.5     | 100.0     |               |

$\chi^2 = 3.60$ ;  $df = 4$ ;  $\chi^2_{tab}$  at 0.05 level = 9.4

Tables 4.43 and 4.44 reveals that the  $\chi^2$  values were 4.74 and 3.60 for technical and non-technical problems and overall aspects respectively, which were not significant at 0.05 level with  $df=4$ . It means that the learners with different level of exposure to teleconferencing did not differ significantly in their reactions regarding technical and non-technical problems and overall aspects of IGNOU-teleconferencing.

Thus, the null hypotheses number 41 and 42, stating that there will be no significant difference in the reactions of respondents with respect to level of exposure to teleconferencing regarding technical and non-technical problems and overall aspects of IGNOU-teleconferencing, are not rejected.

#### **4.8 Findings and Discussion**

The data analysis indicates that most of the learners (61.2%) were males and 41.2% of the learners were in the age group of 26 to 30 years. 70% of them were working and 48.7% of the learners had graduation degree as their last qualifying examination, before enrolling themselves in the present IGNOU subjects. It was found that 47.5% of the respondents had English as medium of instruction in their last qualifying examination. Further, data showed that most of the learners had medium level of exposure to electronic media (58.7%) and teleconferencing (56.2%). Most of the learners (57.5%) were enrolled in Diploma type of the IGNOU programmes. More than fifty per cent (53.5%) of the respondents had agreed to great extent regarding the effectiveness of IGNOU teleconferencing programmes for distance learners. The following are the findings with regard to acceptance and rejection of hypotheses:

- The Chi-Square ( $\chi^2$ ) value was found to be significant at .05 level,  $df=2$  ( $\chi^2_{Cal}=6.2$ ;  $\chi^2_{tab} = 5.9$ ). Thus, the null hypothesis stating that the reaction of

respondents will not differ significantly with respect to sex regarding technical and non-technical problems of IGNOU TC is rejected.

- The Chi-Square ( $\chi^2$ ) value was found to be significant at .01 level,  $df=2$  ( $\chi^2_{\text{Cal}}=9.4$ ;  $\chi^2_{\text{tab}} = 9.2$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to employment regarding presentation aspect of IGNOU TC is rejected.
- The Chi-Square ( $\chi^2$ ) value was found to be significant at .05 level,  $df=2$  ( $\chi^2_{\text{Cal}}=5.9$ ;  $\chi^2_{\text{tab}} = 5.9$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to employment regarding utility aspect of IGNOU TC is rejected.
- The Chi-Square ( $\chi^2$ ) value was found to be significant at .01 level,  $df=4$  ( $\chi^2_{\text{Cal}}=18.8$ ;  $\chi^2_{\text{tab}} = 13.2$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to type of programme regarding presentation aspect of IGNOU TC is rejected.
- The Chi-Square ( $\chi^2$ ) value was found to be significant at .01 level,  $df=4$  ( $\chi^2_{\text{Cal}}=13.8$ ;  $\chi^2_{\text{tab}} = 13.2$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to type of programmes regarding utility aspect of IGNOU TC is rejected.
- The Chi-Square ( $\chi^2$ ) value was found to be significant at .01 level,  $df=4$  ( $\chi^2_{\text{Cal}}=18.4$ ;  $\chi^2_{\text{tab}} = 13.2$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to type of programme regarding overall aspects of IGNOU TC is rejected.
- The Chi-Square ( $\chi^2$ ) value was found to be significant at .01 level,  $df=4$  ( $\chi^2_{\text{Cal}}=14.5$ ;  $\chi^2_{\text{tab}} = 13.2$ ). Thus, the null hypothesis stating that the reaction of

respondents will not differ significantly with respect to level of exposure to electronic media regarding utility aspect of IGNOU TC is rejected.

- The Chi-Square ( $\chi^2$ ) value was found to be significant at .05 level,  $df=4$  ( $\chi^2_{Cal}=12$ ;  $\chi^2_{tab} = 9.4$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to level of exposure to electronic media regarding overall aspects of IGNOU TC is rejected.
- The Chi-Square ( $\chi^2$ ) value was found to be significant at .05 level,  $df=4$  ( $\chi^2_{Cal}=9.4$ ;  $\chi^2_{tab} = 9.4$ ). Thus, the null hypothesis stating that the reaction of respondents will not differ significantly with respect to level of exposure to teleconferencing regarding utility aspect of IGNOU TC is rejected.

The findings and interpretation of the present objective revealed that the significant differences were found in the reactions of male and female respondents with respect to technical and non-technical problems of IGNOU TC. Higher number of males agreed to have faced technical and non-technical problems compared to their counterparts.

The reasons could be that relatively higher number of males might be attending the TC programmes as revealed by *Subayamma* (1998) also that less number of females attend TC programmes. Further, with the sizable viewing of low compatible and low quality of TC, learners might be facing increased level of technical and non-technical problems. This could be supported by *Joshi* (1991) who reported that technical and non-technical disturbances like dialing the STD phone was the major constraints of TC programmes. Such learners, if faced with these disturbances repetitively, loose interest in TC programmes.

Further significant differences were found in the reactions of the learners with respect to previous level of exposure to electronic media and TC. It was

amazing to find that the learners with high level of earlier exposure to electronic media and TC programmes least agreed to the utility and overall aspect of IGNOU-TC. The reasons could be that they might not be satisfied with the present functioning of the technology. As *Subayamma* (1998), indicated that students complained about the low audio-video quality as well as other technical and non technical disturbances in IGNOU-TC programmes. If the disturbances keep repeating in increasing number of programmes, then the cumulative effect of these disturbances might reduce the interest of learners in IGNOU-TC programmes. This can further be supported by *Ritchen*. (1990), who claimed that anxiety of distance learners increased with the number of exposure to TC as with each exposure, learners perceived two way televised instructions as impersonal due to lack of interaction. Further, *Wetzel et al.* (1997), stated that technological dissatisfaction was due to students having repetitive difficulty in operating any necessary equipment or due to non-availability of basic equipments like telephone and fax of TC.

Another reason could be due to repetitive, dry and unfriendly approach of experts in TC programmes. Regarding this, *Sinha, Kishore and Hashmi* (1994), stated that teaching component in most of the TC programmes were usually very long, without any break, without much visual support. Also, the teachers looked unfriendly and they seemed very formal and tensed. Thus it may be deduced that tele-teaching sessions in IGNOU suffer from dull and monotonous presentation which do not evoke enough interest and attention of the learners in long run or with the learners having high exposure to the electronic media and TC programmes.

An equally important finding of the present objective indicated that there was a significant difference in the reactions of working and non-working learners towards presentation and the utility aspect of TC. It found that working learners agreed more compared to their counterparts. The reason found was that working learners did not get enough time to attend regular counselling classes. At the same time, to their rescue, TC which is not so frequent proved helpful in satisfying their doubts and queries directly with the area experts.

Significant differences were also found in the reaction of learners belonging to different types of IGNOU programmes (subjects) with respect to presentation, utility and overall aspect of IGNOU TC. It was found that more number of learners from P.G. Diploma and Diploma types of programmes agreed than their counterparts. This could be attributed to the frequency of TC transmission, that is, the transmission of TC programmes was more frequent in P.G. Diploma and Diploma types of programmes compared to the Degree and Certificate types. In this context, *Wakamatsu* (1998), had indicated that the sense of unnatural compressed video conferencing was overcome by repeated experiences. Thus, it is desirable that teleconferencing programmes should be scheduled more frequently.