

## **CHAPTER - II**

### **IGNOU Teleconferencing Programmes : Contents, Methods, Media and Modes**

#### **2.0 Introduction**

This chapter discusses the methods, tools, techniques used for analysing the teleconferencing programmes presented by IGNOU in terms of content, methods, media and modes for the objective 1, which is aimed at analysing the teleconferencing programmes presented by IGNOU in terms of contents, methods, media and modes. The subsequent sections therefore, contain the detailed report of all the aspects of the teleconferencing programmes presented by IGNOU.

#### **2.1 Sample**

The sample included selected IGNOU teleconferencing (TC) programmes telecast from January 1999 to February 2000.

The selection of TC programmes were based on the factors, namely, number of learners present, power connectivity and availability of telephone or fax machine for learners to help in two-way communication during question-answer session. Selected IGNOU TC programmes were video recorded for the purpose of content analysis. (For details of TC programme schedule, see appendix 1).

#### **2.2 Instrumentation**

Observation schedule was prepared aiming at finding out the pedagogical, technical and non-technical aspects of the teleconferencing programmes in terms of contents, methods, media and modes.

The literature in the present context was studied and collected from various sources by post and personal visits. For the observation schedule, a large number of items were constructed. Initially to determine the suitability of the developed tool, some TC programmes were content analysed and entries were made; the completed observation schedule were examined thoroughly. Further, a number of experts and researchers were consulted. Some experts from Developmental Educational Communication Unit (DECU), Indian Space Research Organisation (ISRO) were also contacted for the purpose. Apart from this, researcher herself observed IGNOU TC programmes for about 3 months before constructing the tool. Some of the items were modified and changed bearing in mind the suggestions of the experts. Moreover, a diary was maintained to make other observations of teleconferencing programmes, which were not present in observation schedule.

The content validity of the observation schedule was assessed through the judgement of experts in the field of education and also personnel associated with IGNOU-TC programmes.

### **2.2.1 Content**

In this section, information like whether the contents of the teleconferencing programmes were corresponding to the courses / topics, their comprehensiveness, relevance to the topic, logical organisation of content, language used and other such details were collected.

### **2.2.2 Method**

In this section the details of type of teaching material and teaching technique and their appropriateness to the corresponding topic, speed of narration and so on, were included to collect data.

### **2.2.3 Media**

This part of observation schedule included type of media used for question - answer session, quality of sound and video, technical and non-technical disturbances, both during tele-lecture as well as talkback (question-answer) sessions.

### **2.2.4 Mode**

In this, information regarding type of mode used, type of questions asked, whether objective or subjective type, length of the questions, whether questions directly related to content or not and other such details were taken into consideration for the present study.

### **2.2.5 Miscellaneous**

Under this section, questions on anchor person's role in summarizing the main points of the session (lecture) as well as learner's behavioural activities throughout the TC programmes were observed and noted. (For details of contents, methods, media, modes and miscellaneous part of observation schedule, see appendix 2a)

## **2.3 Procedure for Data Collection**

The data were collected by using participant observation method which was done at the receiving end. To make sure the smooth running of live TC programme, the investigator did the prior checking of the connectivity, power supply, direction of dish antenna, seating arrangement, etc.

In order to note the behavioural activities of participating learners, the investigator was present in viewing room at least 30 minutes before the transmission of the teleconferencing programmes and left after the programme was over and all the participants had left the viewing room.

Observations of each session were made and all the observations and activities were noted in the observation schedule as per the instructions indicated against each statement. Separate observation schedule was filled for each programme. In addition, the investigator maintained field diary to note other relevant observation. To make sure that nothing was missed under observation schedule, recording of the selected teleconferencing programmes was also done.

Observation of pre-telecast and post-telecast activities was also done. The seating and physical arrangements including how learners were seated, location of television set and telephone as well as fax machine was also observed. In addition, presence of technical and other staff was noted. These observations were noted in a separate diary.

#### **2.4 Analysis of the Data and Interpretation**

The main research technique used to analyse the Observation Schedule was content analysis. Further, the relative frequencies of various items under different themes, like, contents, methods, media and modes were computed.

The observation schedule was divided themewise in different sections. Itemwise / statementwise frequencies were computed for each theme. Common responses were pooled and put under the formed category.

The data were analyzed in terms of the audio-video quality during question-answer and tele-lecture session. The comprehensiveness of language used, suitability and adequacy of the content with respect to topic, compatibility and uniformity of method, speed of narration, type of teaching techniques and teaching material used, type of questions asked by the learners and the kind of

media used both during talkback and tele-lecture sessions were considered while analyzing the data.

For analyzing content and method, help from respective area experts (subjectwise) was taken in order to assess appropriateness, logical sequencing, conceptual clarity of the content and appropriateness of the method used. (For details of Observation Schedules and TC programmes schedules, see appendix 1 and 2a).

#### **2.4.1 Subjective analysis and Interpretation of the Data**

The following text gives the details of analysis and interpretation with respect to TC programmes of IGNOU subjects. A total of nine IGNOU subjects were taken for the observation of TC programmes. These subjects were taken from each category, that is, Degree (both at graduation and post graduation level), Diploma (both at graduation and post graduation level), and certificate.

The subjects were Masters in Library and Information Science (MLIS), Post Graduate Diploma in Journalism and Mass Communication (PGDJMC), Post Graduate Diploma in Higher Education (PGDHE), Bachelor of Science in Nursing (B.Sc.–Nursing), Diploma in Early Childhood Care and Education (DECE), Diploma in Creative Writing in English (DCE), Certificate in Disaster Management (CDM), Bachelor's of Computer Applications (BCA) and Certificate in Computing (CIC).

For the purpose of analysis and interpretation, each subject's TC programmes were content-analysed separately. But in case of BCA and CIC, since there were common TC programmes for both the subjects, the analysis and interpretation was compared and presented commonly.

#### 2.4.1.1 Master's Degree in Library and Information Science (MLIS)

The content analysis of MLIS-TC programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.1.

**Table 2.1: Itemwise frequency and percentage of content quality of TC programmes for MLIS**

N = 13

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) comprehensive	7	53.8
	(ii) Having proper terminology	6	46.1
2.	The content was suitable with respect to the topic	7	53.8
3.	The duration of tele-lecture was adequate	11	84.6
4.	The duration of question answer session was adequate	6	46.1
5.	The teaching points were logically sequenced	7	53.8
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	7	53.8
	(ii) Having conceptual clarity	7	53.8
	(iii) Logically organized	7	53.8
	(iv) Adequate	7	53.8
	(v) Appropriate to the cognitive levels of the learners	10	76.9
	(vi) Recapitulated	1	7.6

Table 2.1 presents that, under the quality of content of TC programmes of Master's Degree in Library and Information Science (MLIS) a little more than fifty three percent of the TC programmes had comprehensive language, suitability of the content with respect to respective topic & logically sequenced teaching points

The duration of tele-lecture was found adequate for about eighty five percent of the programmes while inadequate for more than fifty percent of the programmes for talkback (question-answer) session.

A little more than fifty percent of the content covered under TC programmes were logically organized, adequate and relevant to the topic with conceptual clarity. Contents of more than seventy five percent of the programmes were found appropriate to the cognitive levels of the learners. It was surprising to observe that only one out of a total of thirteen, that is, around seven percent of the TC programmes were recapitulated.

**Table 2.2: Itemwise frequency and percentage of quality of method of TC programmes for MLIS**

N = 13

Sr. No.	Item(s) for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	7	53.8
	(ii) Subject matter (content)	7	53.8
2.	Method used for TC had :		
	(i) Compatibility	7	53.8
	(ii) Continuity	7	53.8
	(iii) Captions (wherever required)	-	-
	(iv) Modulation of voice	6	46.1
	(v) Uniformity	5	38.4
	(vi) Fluency	6	46.1
3.	The speed of narration was		
	(i) Slow	3	23.1
	(ii) Moderate	6	46.1
	(iii) Fast	4	30.7
4.	Type of teaching technique used were		
	(i) Lecture	8	61.5
	(ii) Discussion	4	30.7
	(iii) Case study	-	-
	(iv) Demonstration	2	15.3
	(v) Practicals	-	-
5.	The type of teaching material used		
	(i) Print	2	15.3
	(ii) Black board	-	-
	(iii) Video film	-	-
	(iv) Graphs	-	-
	(v) Overhead projector (OHP)	5	38.4
	(vi) Slides	-	-
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures	-	-
	(ix) Inputs through computer	2	15.3
6.	Summarization of main points by anchor person		
	(i) Sometimes	1	7.6
	(ii) Never	12	92.4

From the table 2.2, it is evident that, a little more than fifty percent of the TC programmes used methods, which were suitable to the topic and subject matter as well as it had compatibility and continuity. The method used lacked fluency, uniformity and modulation of voice and none of the methods had captions. Only forty six percent of the programmes had moderate speed of narration, others were either slow or fast. Mostly lecture (in sixty-one percent programmes) followed by discussion (in thirty percent programmes) and demonstration (in fifteen percent programmes) were used as teaching methods. It was found that the Over Head Projector (in thirty eight percent programmes), printed materials (in fifteen percent programmes) and computers (in fifteen percent programmes) were used as teaching aids. Anchor person rarely summarized the main points of the programme.

**Table 2.3: Itemwise frequency and percentage of mode quality of TC programmes for MLIS**

N = 13

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	5	38.4
	(ii) Lecture with learner initiated interaction	2	15.3
	(iii) Lecture with anchor person or instructor facilitated interaction	6	46.1
2.	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	5	38.4
	(iii) Relevant to course / subject	2	15.3
	(iv) Any other	-	-

It is evident from the table 2.3 that, for MLIS TC programmes, overall interaction level was very low. Lecture with anchor persons and instructor facilitated interaction was higher (forty six percent) compared to learner initiated interaction (fifteen percent). In most of the question-answer sessions, the

questions asked were out of context (in thirty eight percent) and only in a few sessions questions were relevant to the content (in fifteen percent).

**Table 2.4: Itemwise frequency and percentage of media quality of TC programmes for MLIS**

N = 13

Sr. No.	Items for Media quality	Frequency	Percentage (%)
1.	Type of media used for talkback session		
	(i) Fax	3	23.07
	(ii) STD	-	-
	(iii) Mail	-	-
2.	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	8	61.5
	(ii) Clear during question-answer (talkback) session	5	38.4
3.	Video quality of TC Programmes		
	(i) Good during tele-lecture session	8	61.5
	(ii) Good during talkback session	5	38.4

From the table 2.4 it is seen that, the interaction level was low. It may be due to unavailability of STD phone in viewing room, learners asked their queries through fax from outside the study center. The audio and video quality was good for a little more than sixty percent of the programmes during tele-lecture sessions while only thirty eight percent during talkback sessions.

**Table 2.5: Frequency and percentage of type of TC programmes for MLIS**

N = 13

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1.	Classroom oriented programme	2	15.4
2.	Enrichment programme	12	92.3
3.	Recreational programme	-	-

It is evident from table 2.5, that though there were combination of programme's type, but most of the programmes were enrichment type (ninety two percent) while only fifteen percent of the programmes were classroom oriented type.

**Table 2.6: Frequency and percentage of post teleconferencing session of MLIS**

N= 13

Sr. No.	Discussion of questions / queries by participants	Frequency	Percentage (%)
1.	Always	-	-
2.	Sometimes	4	30.7
3.	Never	9	69.3

It is observed from the table 2.6, that only sometimes in around thirty percent of the programmes learners used to discuss among themselves about the question and queries raised during TC programmes.

**Table 2.7: Behavioural activities of participants during teleconferencing programmes of MLIS**

*2.7(a) Tele-lecture Session*

N= 13

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	1	7.6
4.	Taking notes	7	53.8
5.	Attentively watching	11	84.6
6.	Attentively listening	11	84.6
7.	Any other (please specify)	-	-

*2.7(b) Talkback Session*

N= 13

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	9	69.0
2.	Chatting	6	46.1
3.	Dozing	-	-
4.	Taking notes	-	-
5.	Attentively watching	4	30.7
6.	Attentively listening	4	30.7
7.	Any other (please specify)	-	-

It is evident from the table 2.7 (a) and (b) that, during tele-lecture session in most of the programmes (more than eighty percent), participants were attentively watching and listening to the resource persons / anchor persons. In a little more than fifty percent of the programmes, learners were taking notes during tele-lecture session. In forty six percent of the programmes, learners were chatting and in around thirty percent, learners were attentively watching and listening the TC programmes while in around sixty nine percent of programmes learners were doodling and showing restless behaviour (like looking here and there; raising eyebrows etc) during talkback session. It may be due to the fact that they could not participate in question-answer session due to unavailability of the telephone set and fax in the viewing room.

#### 2.4.1.2 Post Graduate Diploma in Journalism and Mass Communication (PGDJMC)

The content analysis of PGDJMC programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.2.

**Table 2.8: Itemwise frequency and percentage of content quality of TC programmes for PGDJMC**

N = 8

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) Comprehensive	6	75
	(ii) Having proper terminology	6	75
2.	The content was suitable with respect to the topic	5	62.5
3.	The duration of tele-lecture was adequate	5	62.5
4.	The duration of question-answer session was adequate	5	62.5
5.	The teaching points were logically sequenced	6	75
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	6	75
	(ii) Having conceptual clarity	6	75
	(iii) Logically organized	6	75
	(iv) Adequate	6	75
	(v) Appropriate to the cognitive levels of the learners	6	75
	(vi) Recapitulated	2	25

Table 2.8 shows that, under the quality of content of Post Graduation Diploma in Journalism and Mass Communication (PGDJMC) TC programmes, the language of most of the resource persons was comprehensive and with proper terminologies. The content was suitable with respect to topic in more than sixty percent of the programmes. The duration for tele-lecture and question-answer session was adequate for almost sixty two percent of the programmes. Nearly seventy five percent of the TC programmes under PGDJMC had logically sequenced teaching points. Further, in seventy five percent of the programmes, content covered under TC programmes were conceptually clear, logically organized, appropriate to the topic as well as to the cognitive level of the learners

while recapitulation of the programme was done only sometimes by the resource persons or anchor persons.

**Table 2.9: Itemwise frequency and percentage of the quality of method of TC programmes for PGDJMC**

N = 8

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	6	75
	(ii) Subject matter (content)	6	75
2.	Method used for TC had		
	(i) Compatibility	7	87.5
	(ii) Continuity	6	75
	(iii) Captions (wherever required)	3	37.5
	(iv) Modulation of voice	7	87.5
	(v) Uniformity	6	75
	(vi) Fluency	7	87.5
3.	The speed of narration was		
	(i) Slow	-	-
	(ii) Moderate	7	87.5
	(iii) Fast	1	12.5
4.	Type of teaching methods used were		
	(i) Lecture	8	100
	(ii) Discussion	4	50
	(iii) Case study	-	-
	(iv) Demonstration	-	-
	(v) Practicals	-	-
5.	The type of teaching material used		
	(i) Print	1	12.5
	(ii) Black board	-	-
	(iii) Videofilm	4	50
	(iv) Graphs	-	-
	(v) Overhead projector (OHP)	3	37.5
	(vi) Slides	4	50
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures	-	-
	(ix) Inputs through computer	4	50
6.	Summarization of main points by anchor person		
	(i) Sometimes	2	25
	(ii) Never	6	75

It is evident from the table 2.9 that, for most of the TC programmes, the method used was suitable with respect to topic and subject matter. The method

used had compatibility and continuity. There was modulation of voice, fluency, uniformity and moderate speed of narration in resource person's presentation. Mainly lecture and discussions were used as teaching methods along with video-film, slides and computer. Other teaching material like overhead projector and print material were used only sometimes. To highlight the main points or "Headings" or even while introducing new topic, captions were rarely used. Further, summarization of the main point was done occasionally by the anchor person.

**Table 2.10: Itemwise frequency and percentage of mode quality of TC programmes for PGDJMC**

N = 8

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	-	-
	(ii) Lecture with learner initiated interaction	2	25
	(iii) Lecture with anchor persons or instructor facilitated interaction	6	75
2.	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	6	75
	(iii) Relevant to course / subject	4	50
	(iv) Any other	-	-

Table 2.10 presents that the lecture with anchor person and instructor facilitated interaction was higher than learner initiated interaction.

In most of the question-answer session maximum question asked were out of context, for example, inquiring about assignment submission dates. Only in fifty percent of the programmes, questions were relevant to the ongoing content.

**Table 2.11: Itemwise frequency and percentage of media quality of TC programmes for PGDJMC**

N = 8

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1.	Type of media used for talkback session		
	(i) Fax	4	50
	(ii) STD	-	-
	(iii) Mail	1	12.5
2.	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	5	62.5
	(ii) Clear during question-answer (talkback) session	4	50
3.	Video quality of TC Programmes		
	(i) Good during tele-lecture session	4	50
	(ii) Good during talkback session	4	50

It can be seen from the table 2.11 that, learners asked their queries through fax. This may be due to unavailability of STD phone in viewing room. It was further observed that fax was also done from outside the Study Centre. The sound quality during tele-lecture session was good almost for sixty percent of the programmes, while for talkback session, audio quality was good only for fifty percent of the programmes. The quality of video was good for fifty percent of the programmes during talkback and tele-lecture session, respectively.

**Table 2.12: Frequency and percentage of type of TC programmes for PGDJMC**

N = 8

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1.	Classroom oriented instructional programme	1	12.5
2.	Enrichment programme	6	75
3.	Recreational programme	2	25

Table 2.12 presents that, though there was combination of programmes type, but most of the TC programmes were enrichment type (75 percent). A few of the programmes were recreational (25 percent) and classroom oriented instructional type (12.5 percent).

**Table 2.13: Frequency and percentage of post teleconferencing session of PGDJMC**

N= 8

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1.	Always	-	-
2.	Sometimes	3	37.5
3.	Never	5	62.5

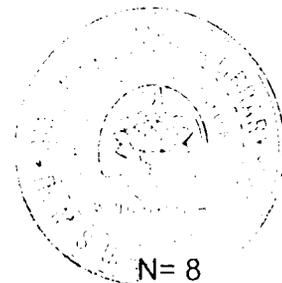
It can be seen from the table 2.13, that in very few programmes, participants were involved in any kind of discussion related to TC programmes during and after the programmes.

**Table 2.14: Behavioural activities of participants during teleconferencing programmes of PGDJMC**

*2.14(a) Tele-lecture Session*

N= 8

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	2	25
5.	Attentively watching	6	75
6.	Attentively listening	5	62.5
7.	Any other (please specify)	-	-



#### 2.14(b) Talkback Session

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	2	25
5.	Attentively watching	6	75
6.	Attentively listening	5	62.5
7.	Any other (please specify)	-	-

It is evident from the table 2.14, that during tele-lecture and talkback session, in most of the programmes, participants were attentively watching and listening to the resource persons (sixty two to seventy five percent of the programmes) while in a very few programmes (only twenty five percent) participants were taking notes at both the session.

#### 2.4.1.3 Post Graduate Diploma in Higher Education (PGDHE)

The content analysis of PGDHE programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.3.

**Table 2.15: Itemwise frequency and percentage of content quality of TC programmes for PGDHE**

N = 8

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) Comprehensive	7	87.5
	(ii) Having proper terminology	7	87.5
2.	The content was suitable with respect to the topic	7	87.5
3.	The duration of tele-lecture was adequate	6	75
4.	The duration of question-answer session was adequate	4	50
5.	The teaching points were logically sequenced	6	75
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	7	87.5
	(ii) Having conceptual clarity	7	87.5
	(iii) Logically organized	6	75
	(iv) Adequate	7	87.5
	(v) Appropriate to the cognitive levels of the learners	7	87.5
	(vi) Recapitulated	-	-

Table 2.15 presents that, under the quality of content of the Post Graduate Diploma in Higher Education (PGDHE) – TC programmes the language of most of the resource persons was comprehensive and with proper terminologies. The content was suitable with respect to topic in more than eighty seven percent of the programmes. The duration for tele-lecture was adequate for seventy five percent of the programmes, while inadequate for question-answer session for almost fifty percent of the programmes. It was further observed that seventy five percent of the TC programmes under PGDHE had logically sequenced teaching points. Further, eighty seven percent of the content covered under TC programmes were appropriate, conceptually clear, appropriate to the topic as well

as to the cognitive levels of the learners. Surprisingly, none of the program content was recapitulated.

**Table 2.16: Itemwise frequency and percentage of quality of method of TC programmes for PGDHE**

N = 8

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1	The method used was suitable to		
	(i) Topic	6	75
	(ii) Subject matter (content)	6	75
2	Method used for TC had		
	(i) Compatibility	6	75
	(ii) Continuity	6	75
	(iii) Captions (wherever required)	-	-
	(iv) Modulation of voice	5	62.5
	(v) Uniformity	6	75
	(vi) Fluency	6	75
3.	The speed of narration was		
	(i) Slow	2	25
	(ii) Moderate	6	75
	(iii) Fast	-	-
4.	Type of teaching methods used were		
	(i) Lecture	8	100
	(ii) Discussion	4	50
	(iii) Case study	-	-
	(iv) Demonstration	-	-
	(v) Practicals	-	-
5.	The type of teaching material used :		
	(i) Print	-	-
	(ii) Black board	-	-
	(iii) Video film	-	-
	(iv) Graphs	1	12.5
	(v) Over head projector (OHP)	7	87.5
	(vi) Slides	-	-
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures	-	-
	(ix) Any other	-	-
6.	Summarization of main points by anchor person		
	(i) Sometimes	3	37.5
	(ii) Never	5	62.5

It can be seen from the table 2.16 that, for most of the TC programmes, the method used was suitable with respect to topic and subject matter. The

method used had compatibility, continuity. In most the TC programmes, there was modulation of voice, fluency, uniformity and moderate speed of narration in resource person's presentation. A combination of teaching methods were used. Among which lecture method was used for all the programmes, while discussion for fifty percent of the programmes, along with Over Head Projector (in eighty seven percent) and graphics (in twelve percent) as teaching material. Summarization of the main points was done sometimes by the anchor person (less than forty percent of the programmes).

**Table 2.17: Itemwise frequency and percentage of mode quality of TC programmes for PGDHE**

N = 8

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	1	12.5
	(ii) Lecture with learner initiated interaction	2	25
	(iii) Lecture with anchor persons or instructor facilitated interaction	5	62.5
2.	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	6	75
	(iii) Relevant to course/subject	2	25
	(iv) Any other	-	-

It can be seen from table 2.17 that the lecture with anchor person and instructor facilitated interaction was higher than with learner initiated interaction. In most of the question-answer session, maximum questions asked were out of context but were relevant to the PGDHE course. (Most of the questions were related to assignment inquiries).

**Table 2.18: Itemwise frequency and percentage of media quality of TC programmes for PGDHE**

N = 8

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1.	Type of media used for talkback session		
	(i) Fax	1	12.5
	(ii) STD	3	37.5
	(iii) Mail	-	-
2.	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	5	62.5
	(ii) Clear during question-answer (talkback) session	4	50
3.	Video quality of TC Programmes		
	(i) Good during tele-lecture session	5	62.5
	(ii) Good during talkback session	4	50

It is evident from table 2.18 that the interaction level was very low and in only thirty seven percent of the programmes questions were asked through phone while in twelve percent using fax. The audio quality during tele-lecture and talkback sessions was good in a little more than sixty percent of the TC programmes. The video quality during tele-lecture and talkback session was good in fifty percent of the TC programmes.

**Table 2.19: Frequency and percentage of type of TC programmes for PGDHE**

N = 8

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1.	Classroom orientated instructional programme	1	12.5
2.	Enrichment programme	7	87.5
3.	Recreational programme	-	-

From the table 2.19, it can be seen that the maximum programmes (87.5 percent) were of enrichment type.

**Table 2.20: Frequency and percentage of post teleconferencing session of PGDHE**

N= 8

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1.	Always	-	-
2.	Sometimes	3	37.5
3.	Never	5	62.5

It can be seen from the table 2.20, that in around forty percent of the programmes, participants were involved in discussion of the questions and queries discussed during TC programmes.

**Table 2.21: Behavioural activities of participants during teleconferencing programmes of PGDHE**

*2.21 (a) Tele-lecture Session*

N= 13

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	1	12.5
5.	Attentively watching	7	87.5
6.	Attentively listening	7	87.5
7.	Any other (please specify)	-	-

*2.21 (b) Talkback Session*

N= 13

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	2	25
5.	Attentively watching	7	87.5
6.	Attentively listening	7	87.5
7.	Any other (please specify)	-	-

Table 2.21 presents that, during tele-lecture and talkback session in most of the programmes (eighty seven percent) participants were attentively watching and listening to the resources persons and anchor persons while very few were

taking notes, that is, in twenty five percent programmes during talkback and in a little more than ten percent programmes during tele-lecture session.

#### 2.4.1.4 Bachelor of Science in Nursing (B.Sc - Nursing)

The content analysis of B.Sc. (Nursing) programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.4.

**Table 2.22: Itemwise frequency and percentage of content quality of TC programmes for B.Sc. (Nursing)**

N = 14

Sr. No.	Items for content quality	Frequency	Percentage (%)
1	The language used for TC program was		
	(i) Comprehensive	12	85.7
	(ii) Having proper terminology	12	85.7
2	The content was suitable with respect to the topic	12	85.7
3	The duration of tele-lecture was adequate	12	85.7
4	The duration of question-answer session was adequate	9	64.2
5	The teaching points were logically sequenced	10	71.4
6	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	11	78.5
	(ii) Having conceptual clarity	11	78.5
	(iii) Logically organized	11	78.5
	(iv) Adequate	11	78.5
	(v) Appropriate to the cognitive levels of the learners	12	85.7
	(vi) Recapitulated	2	14.2

Table 2.22 presents that, under the quality of content of Bachelor of Science in (Nursing) (B.Sc.-Nursing) – TC programmes the language of most of the resource persons was comprehensive and with proper terminologies. The content was suitable with respect to topic in more than eighty percent of the programmes. The duration for tele-lecture was adequate for eighty five percent of the programmes, while sixty four percent for talkback sessions. Little more than seventy percent of the programmes had logically sequenced teaching points. It was further observed that almost seventy eight percent of the

programmes, content covered under TC programmes were conceptually clear, logically organized, adequate and relevant to the topic. A little more than eighty five percent of the programmes content were appropriate to the cognitive levels of the learners. Recapitulation was done only for fourteen percent of the programme.

**Table 2.23: Itemwise frequency and percentage of the quality of method of TC programmes for B.Sc. (Nursing)**

N = 14

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	11	78.5
	(ii) Subject matter (content)	11	78.5
2.	Method used for TC had		
	(i) Compatibility	11	78.5
	(ii) Continuity	12	85.7
	(iii) Captions (wherever required)	2	14.2
	(iv) Modulation of voice	11	78.5
	(v) Uniformity	11	78.5
	(vi) Fluency	11	78.5
3.	The speed of narration was		
	(i) Slow	-	-
	(ii) Moderate	13	92.8
	(iii) Fast	1	7.1
4.	Type of teaching methods used were		
	(i) Lecture	10	71.4
	(ii) Discussion	7	50
	(iii) Case study	2	14.2
	(iv) Demonstration	5	35.7
	(v) Practicals	6	42.8
5.	The type of teaching material used		
	(i) Print	-	-
	(ii) Black board	2	14.2
	(iii) Video film	-	-
	(iv) Graphs	-	-
	(v) Over head projector (OHP)	8	57.1
	(vi) Slides	11	78.5
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures and computer	9	64.2
	(ix) Any other	-	-
6.	Summarization of main points by anchor person		
	(i) Sometimes	4	28.5
	(ii) Never	10	71.4

It is observed from the table 2.23, that for most of the TC programmes, the method used was suitable with respect to topic and subject matter. Also, in most of the programmes, the methods used had compatibility, continuity. There was modulation of voice, fluency, uniformity and moderate speed of narration in resource person's presentation. Among teaching methods, maximum used was lecture method (in more than seventy percent of programmes) while others such as discussion (in fifty percent), practicals (in forty two percent), demonstration (in thirty five percent) and case study (in fourteen percent) were used less. Among teaching material, slides were used more often (in seventy eight percent of programmes) than picture (in sixty four percent) followed by over head projector (in fifty seven percent) and blackboard (in fourteen percent). Summarization of the main points was done by anchor person for very few programmes.

**Table 2.24: Itemwise frequency and percentage of mode quality of TC programmes for B.Sc. (Nursing)**

N = 14

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1	The type of mode used for TC programmes		
	(i) Lecture with no interaction	1	7.1
	(ii) Lecture with learner initiated interaction	3	21.4
	(iii) Lecture with anchor person or instructor facilitated interaction	10	71.4
2	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	5	35.7
	(iii) Relevant to course / subject	11	78.5
	(iv) Any other	-	-

It is evident from table 2.24, that the lecture with anchor person and instructor facilitated interaction was higher than with learner initiated interaction. In most of the question-answer session, maximum questions asked were relevant

to content (seventy eight percent) while there were some out of context ones also (in thirty five percent).

**Table 2.25: Itemwise frequency and percentage of media quality of TC programmes for B.Sc.(Nursing)**

N = 14

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1	Type of media used for talkback session		
	(i) Fax	4	28.5
	(ii) STD	2	14.2
	(iii) Mail	-	-
2	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	12	85.7
	(ii) Clear during question-answer (talkback) session	10	71.4
3	Video quality of TC Programmes		
	(i) Good during tele-lecture session	12	85.7
	(ii) Good during talkback session	10	71.4

It can be seen from the table 2.25, that in more programmes, question were asked through fax than by telephone during talkback session. This might be due to unavailability of STD phone in viewing room.

The sound quality during tele-lecture and talkback session was good in almost eighty five percent of the programmes, while the video quality during tele-lecture and talkback session was good in a little more than seventy percent of the TC programmes.

**Table 2.26: Frequency and percentage of type of TC programmes for B.Sc.(Nursing)**

N = 14

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1.	Classroom oriented instructional programme	1	7.1
2.	Enrichment programme	14	100
3.	Recreational programme	-	-

Table 2.26 presents that, though there was combination of programmes but notably, all (100 percent) the TC programmes were of enrichment type and only around seven percent of the programmes were both, that is, classroom orientation instructional as well as enrichment type.

**Table 2.27: Frequency and percentage of post teleconferencing session of B.Sc. (Nursing)**

N= 14

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1.	Always	-	-
2.	Sometimes	9	64.2
3.	Never	5	35.7

It can be seen from table 2.27, that in sixty four percent of the programmes, participants discussed about the questions/queries emerged during TC programmes.

**Table 2.28: Behavioural activities of participants during teleconferencing programmes of B.Sc. (Nursing)**

*2.28 (a) Tele-lecture Session*

N=14

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	10	71.4
5.	Attentively watching	12	92.8
6.	Attentively listening	12	92.8
7.	Any other (please specify)	-	-

*2.28 (b) Talkback Session*

N=14

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	9	64.2
5.	Attentively watching	12	92.8
6.	Attentively listening	12	92.8
7.	Any other (please specify)	-	-

Table 2.28 presents that, during tele-lecture and talkback session, in most of the programmes participants were attentively watching and listening to the resource persons. Participants were also taking down the notes in both the sessions. In some programmes, learners were even found eating while watching TC programmes.

#### 2.4.1.5 Diploma in Early Childhood care and Education (DECE)

The content analysis of DECE programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.5.

**Table 2.29: Itemwise frequency and percentage of content quality of TC programmes for DECE.**

N = 8

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) Comprehensive	6	75
	(ii) Having proper terminology	6	75
2.	The content was suitable with respect to the topic	6	75
3.	The duration of tele-lecture was adequate	6	75
4.	The duration of question answer session was adequate	4	50
5.	The teaching points were logically sequenced	5	62.5
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	6	75
	(ii) Having conceptual clarity	6	75
	(iii) Logically organized	6	75
	(iv) Adequate	6	75
	(v) Appropriate to the cognitive levels of the learners	7	87.5
	(vi) Recapitulated	1	12.5

Table 2.29 presents that, under the quality of content of TC programmes of Diploma in Early Childhood Care and Education (DECE), three fourth of the programmes had comprehensive language having proper terminologies and content suitable with respect to the topic. The duration of tele-lecture was adequate in seventy five percent of the programmes, while in fifty percent during talkback session. The teaching points were logically sequenced in almost sixty two percent of the programmes. It was observed that the content covered under TC programmes was conceptually clear, logically organized, adequate as well as relevant to the topic in seventy five percent of the programme while appropriate to the cognitive levels of the learners in eighty seven percent of the programmes. Recapitulation was done in twelve percent of the programmes.

**Table 2.30: Itemwise frequency and percentage of the quality of method of TC programmes for DECE**

N = 8

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	4	50
	(ii) Subject matter (content)	4	50
2.	Method used for TC had		
	(i) Compatibility	5	62.5
	(ii) Continuity	5	62.5
	(iii) Captions (wherever required)	-	-
	(iv) Modulation of voice	6	75
	(v) Uniformity	6	75
	(vi) Fluency	6	75
3.	The speed of narration was		
	(i) Slow	-	-
	(ii) Moderate	7	87.5
	(iii) Fast	1	12.5
4.	Type of teaching methods used were		
	(i) Lecture	6	75
	(ii) Discussion	2	25
	(iii) Case study	-	-
	(iv) Demonstration	2	25
	(v) Practicals	-	-
5.	The type of teaching material used		
	(i) Print	-	-
	(ii) Black board	-	-
	(iii) Video film	1	-
	(iv) Graphs	-	-
	(v) Over head projector (OHP)	5	62.5
	(vi) Slides	6	62.5
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures	2	25
	(ix) Any other	-	-
6.	Summarization of main points by anchor person		
	(i) Sometimes	3	37.5
	(ii) Never	5	62.5

It can be seen from table 2.30, that in fifty percent of the programmes, method used was suitable to the topic and subject matter. In a little more than sixty percent of the programmes method used had compatibility and continuity. It was found that in three fourth of the programmes, resource persons and anchor

persons had modulation of voice, uniformity and fluency while presenting TC programmes. The speed of narration was moderate in most of the programmes. In seventy five percent of the programmes, lecture method was used, while discussion and demonstration were used in twenty five percent of the programmes as teaching methods. Overhead projector, slides (sixty two percent) and pictures (twenty five percent) were among the teaching materials which were used in DECE – TC programmes. It was found that summarization of the main points was done sometimes (only in thirty seven percent of the programmes).

**Table 2.31: Itemwise frequency and percentage of mode quality of TC programmes for DECE**

N = 8

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	1	12.5
	(ii) Lecture with learner initiated interaction	-	-
	(iii) Lecture with anchor persons or instructor facilitated interaction	7	87.5
2.	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	5	62.5
	(iii) Relevant to course / subject	7	87.5
	(iv) Any other	-	-

It can be seen from table 2.31, that lecture with anchor-person and instructor facilitated interaction was very high (eighty seven percent of the programmes) and there was no interaction through learner initiated interaction. During question-answer session, in most of the programmes, (eighty seven percent), questions asked were relevant to the content while others were out of context type (sixty two percent).

**Table 2.32: Itemwise frequency and percentage of media quality of TC programmes for DECE**

N = 8

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1	Type of media used for talkback session		
	(i) Fax	4	50
	(ii) STD	-	-
	(iii) Mail	-	-
2	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	6	75
	(ii) Clear during question-answer (talkback) session	5	62.5
3	Video quality of TC Programmes		
	(i) Good during tele-lecture session	6	75
	(ii) Good during talkback session	5	62.5

Table 2.32 shows a low level of interaction. Learners asked their question through fax from outside the study center (fifty percent of the programmers). This may be due to the unavailability of STD phone and fax machine in viewing room. The quality of sound and video was good (in seventy five percent of the programmers) during tele-lecture, while sixty two percent during talkback session.

**Table 2.33: Frequency and percentage of type of TC programmes for DECE**

N = 8

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1	Classroom oriented instructional programme	-	-
2	Enrichment programme	5	62.5
3	Recreational programme	3	37.5

It can be seen from the table 2.33, that most of the TC programmers were enrichment type (sixty two percent) and some were recreational type (thirty seven percent).

**Table 2.34: Frequency and percentage of post teleconferencing session of DECE**

N= 8

Sr. No.	Discussion of questions / queries by participants	Frequency	Percentage (%)
1	Always	-	-
2	Sometimes	5	62.5
3	Never	3	37.5

It is evident from the table 2.34, that in sixty four percent of the programmes, participants sometime discussed the questions and queries emerged from TC programmes.

**Table 2.35: Behavioural activities of participants during teleconferencing programmes of DECE**

*2.35 (a) Tele-lecture Session*

N=8

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	1	12.5
4.	Taking notes	2	25
5.	Attentively watching	7	87.5
6.	Attentively listening	7	87.5
7.	Any other (please specify)	-	-

*2.35 (b) Talkback Session*

N=8

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	1	12.5
5.	Attentively watching	7	87.5
6.	Attentively listening	7	87.5
7.	Any other (please specify)	-	-

It can be seen from the table 2.35, that in eighty seven percent of the programmes, learners were attentively watching and listening to the TC

programmes both during tele-lecture as well as talkback session. In twenty five percent of the programmes, learners took down the notes during tele-lecture session while twelve percent during talkback session.

#### 2.4.1.6 Diploma in Creative Writing in English (DCE)

The content analysis of DECE programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.6.

**Table 2.36: Itemwise frequency and percentage of content quality of TC programmes for DCE**

N = 11

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) Comprehensive	5	45.4
	(ii) Having proper terminology	5	45.4
2.	The content was suitable with respect to the topic	4	36.3
3.	The duration of tele-lecture was adequate	6	54.5
4.	The duration of question-answer session was adequate	6	54.5
5.	The teaching points were logically sequenced	4	36.4
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	3	27.2
	(ii) Having conceptual clarity	1	9
	(iii) Logically organized	2	18.1
	(iv) Adequate	2	18.1
	(v) Appropriate to the cognitive levels of the learners	2	18.1
	(vi) Recapitulated	1	9

It can be seen from the table 2.36, that under the quality of content of diploma in Creative Writing in English (DCE) TC programmes almost forty five percent of the TC programmes had comprehensive language with proper terminologies. Only thirty six percent of the programmes content suitable with respect to the topic as well as logically sequenced teaching points. The duration of tele-lecture and talkback sessions were adequate in more than fifty percent of the programmes. It was observed that less than twenty percent of the

programmes had content, which was adequacy logically organized and appropriate to the cognitive levels of the learners. A little more than one fourth of the TC programmes had content relevant to the topic and less than ten percent of the programme's content was conceptually clear as well as recapitulated by the presenters.

**Table 2.37: Itemwise frequency and percentage of the quality of method of TC programmes for DCE**

N = 11

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	1	9
	(ii) Subject matter (content)	1	9
2.	Method used for TC had		
	(i) Compatibility	2	18.1
	(ii) Continuity	1	9
	(iii) Captions (wherever required)	1	9
	(iv) Modulation of voice	1	9
	(v) Uniformity	1	9
	(vi) Fluency	3	27.2
3.	The speed of narration was		
	(i) Slow	7	63.6
	(ii) Moderate	4	36.3
	(iii) Fast	-	-
4.	Type of teaching methods used were		
	(i) Lecture	10	90.9
	(ii) Discussion	1	9
	(iii) Case study	-	-
	(iv) Demonstration	-	-
	(v) Practicals	-	-
5.	The type of teaching material used		
	(i) Print	-	-
	(ii) Black board	-	-
	(iii) Video film	-	-
	(iv) Graphs	-	-
	(v) Overhead projector (OHP)	1	9
	(vi) Slides	-	-
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures	-	-
	(ix) Any other	-	-
6.	Summarization of main points by anchor person		
	(i) Sometimes	2	18.1
	(ii) Never	9	81.8

It can be seen from the table 2.37 that for less than ten percent of the TC programmes the method used was suitable to the topic and subject matter. Only nine percent of the TC programmes had continuity, captions, modulation of voice and uniformity in the method used. A little more than one fourth of the programmes had fluency in the method used. The speed of narration was slow in more than sixty percent of the programmes. Ninety percent of the programmes used lecture as teaching method and only in nine percent of programmes discussion method and overhead projector as teaching material were used. Summarization of the main points was done sometimes in less than twenty percent of the programmes by anchor person.

**Table 2.38: Itemwise frequency and percentage of mode quality of TC programmes for DCE**

N = 11

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	8	72.7
	(ii) Lecture with learner initiated interaction	1	9
	(iii) Lecture with anchor persons or instructor facilitated interaction	2	18.1
2.	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	10	90.9
	(iii) Relevant to course / subject	1	9
	(iv) Any other	-	-

From the table 2.38, it is evident that the interaction level was very low. Lectures with anchor person and instructor facilitated interaction took place in less than twenty percent of the programmes. In maximum programmes the type of questions asked were out of context type (these questions were asked by other centres, outside Baroda study centre).

**Table 2.39: Itemwise frequency and percentage of media quality of TC programmes for DCE**

N = 11

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1.	Type of media used for talkback session		
	(i) Fax	-	-
	(ii) STD	-	-
	(iii) Mail	-	-
2.	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	4	36.3
	(ii) Clear during question-answer (talkback) session	5	45.4
3.	Video quality of TC Programmes		
	(i) Good during tele-lecture session	9	81.8
	(ii) Good during talkback session	7	63.6

It is evident from the table 2.39, that the interaction level was nil. No question was asked from Baroda Study Centre. The quality of sound was clear in thirty six percent of the programmes during tele-lecture while forty five percent during talkback session. Video quality was good in more than eighty percent of the programmes during tele-lecture while more than sixty percent during talkback session.

**Table 2.40: Frequency and percentage of type of TC programmes for DCE**

N = 11

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1.	Classroom oriented instructional programme	5	45.4
2.	Enrichment programme	6	54.6
3.	Recreational programme	-	-

From the table 2.40, it can be seen that the type of TC programmes under DCE were the combination of classroom oriented instruction as well as enrichment type of the programmes.

**Table 2.41: Frequency and percentage of post teleconferencing session of DCE**

N= 11

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1	Always	-	-
2	Sometimes	3	27.2
3	Never	8	72.7

Table 2.41 shows that very few participants were involved in any kind of discussion related to TC after the program was over.

**Table 2.42: Behavioural activities of participants during teleconferencing programmes of DCE**

*2.42 (a) Tele-lecture Session*

N=11

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	9	81.8
3.	Dozing	2	18.1
4.	Taking notes	-	-
5.	Attentively watching	1	9.9
6.	Attentively listening	1	9.9
7.	Any other (please specify)	-	-

*2.42(b) Talkback Session*

N=11

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	-	-
2.	Chatting	9	81.8
3.	Dozing	1	9.9
4.	Taking notes	-	-
5.	Attentively watching	1	9.9
6.	Attentively listening	1	9.9
7.	Any other (please specify)	-	-

It can be seen from table 2.42, that in most of the programmes learners were chatting, some were even dozing and only very few were attentively watching and listening to the TC Programmes.

### 2.4.1.7 Bachelor's in Computer Applications (BCA) and Certificate in Computing (CIC)

The content analysis of BCA and CIC programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.7.

**Table 2.43: Itemwise frequency and percentage of content quality of TC programmes for BCA and CIC**

N = 12

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) Comprehensive	8	66.6
	(ii) Having proper terminology	8	66.6
2.	The content was suitable with respect to the topic	10	83.3
3.	The duration of tele-lecture was adequate	8	66.6
4.	The duration of question-answer session was adequate	8	66.6
5.	The teaching points were logically sequenced	9	75
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	9	75
	(ii) Having conceptual clarity	10	83.3
	(iii) Logically organized	11	91.6
	(iv) Adequate	9	75
	(v) Appropriate to the cognitive levels of the learners	9	75
	(vi) Recapitulated	5	41.6

Table 2.43 presents that under the quality of content of Bachelor's in computer Application (BCA) and Certificate in Computers (CIC) – TC programmes, the language used was comprehensive and with proper terminologies in more than sixty five percent of the programmes .

The content was suitable with respect to the topic in most of the programmes. The duration of the tele-lecture and question-answer session was not adequate for all the TC programmes. In almost seventy five percent of the programmes teaching points were logically sequenced. The content covered

under TC programmes were adequate and appropriate to the topic as well as the cognitive levels of the learners in three fourth of the total BCA and CIC TC programmes. The content was logically organized in more than ninety percent of the programmes and around eighty percent and more were conceptually clear. Recapitulation was done in less than fifty percent of the programmes.

**Table 2.44: Itemwise frequency and percentage of the quality of method of TC programmes for BCA and CIC**

N = 12

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	10	83.3
	(ii) Subject matter (content)	10	83.3
2.	Method used for TC had		
	(i) Compatibility	9	75
	(ii) Continuity	11	91.6
	(iii) Captions (wherever required)	7	58.3
	(iv) Modulation of voice	10	83.3
	(v) Uniformity	9	75
	(vi) Fluency	10	83.3
3.	The speed of narration was		
	(i) Slow	-	-
	(ii) Moderate	9	75
	(iii) Fast	2	16.6
4.	Type of teaching methods used were		
	(i) Lecture	7	58.3
	(ii) Discussion	7	58.3
	(iii) Case study	-	-
	(iv) Demonstration	9	75
	(v) Practicals	8	66.6
5.	The type of teaching material used		
	(i) Print	-	-
	(ii) Black board	-	-
	(iii) Video film	-	-
	(iv) Graphs	2	16.6
	(v) Overhead projector (OHP)	3	25
	(vi) Slides	2	16.6
	(vii) Charts (flip chart/other chart)	-	-
	(viii) Posters/pictures	-	-
	(ix) Any other (computer)	11	91.6
6.	Summarization of main points by anchor person		
	(i) Sometimes	10	83.3
	(ii) Never	2	16.6

From the table 2.44, it can be seen that the method used was suitable to the topic and subject matter in most of the programmes. There was continuity in method used in more than ninety percent of the programmes while compatibility in three fourth of the programmes captions were used in more than fifty percent of the programmes. There was uniformity, fluency, modulation of voice and moderate speed of narration in seventy five percent programmes. In most of the programmes demonstration and practicals were used as teaching methods alongwith computers. In very few programmes overhead projector (OHP), graphs and slides were used. Summarization of the main points was done sometimes in more than eighty percent of the programmes by anchor person.

**Table 2.45: Itemwise frequency and percentage of mode quality of TC programmes for BCA and CIC**

N = 12

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1	The type of mode used for TC programmes		
	(i) Lecture with no interaction	-	-
	(ii) Lecture with learner initiated interaction	3	25
	(iii) Lecture with anchor persons or instructor facilitated interaction	9	75
2	Type of questions asked		
	(i) Structured	-	-
	(ii) Out of context	5	41.6
	(iii) Relevant to course / subject	10	83.3
	(iv) Any other	-	-

It is evident from the table 2.45, that the lecture with anchor person or instructor facilitated interaction was higher than that of lecture with learner initiated interaction. In most of the programmes questions asked were relevant to the content.

**Table 2.46: Itemwise frequency and percentage of media quality of TC programmes for BCA and CIC**

N = 12

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1	Type of media used for talkback session		
	(i) Fax	3	25
	(ii) STD	-	-
	(iii) Mail	-	-
2	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	10	8
	(ii) Clear during question-answer (talkback) session	8	66.6
3	Video quality of TC Programmes		
	(i) Good during tele-lecture session	11	91.6
	(ii) Good during talkback session	10	83.3

It is evident from the table 2.46, that the interaction level was low. This could be due to unavailability of STD phone in viewing room, learners asked their queries through fax from outside study centre, in only twenty five percent of the programmes as the fax machine was also not available in the centre.

In more than eighty percent of the programmes, and is quality was clear during tele-lecture session and video quality was good during talkback session. During tele-lecture session, video quality was good in little more than ninety percent of the programmes.

**Table 2.47: Frequency and percentage of type of TC programmes for BCA and CIC**

N = 12

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1.	Classroom oriented instructional programme	2	16.6
2.	Enrichment programme	11	91.6
3.	Recreational programme	4	33.3

From the table 2.47, it can be seen that more than ninety percent of the programmes were enrichment type. Some of the programmes were recreational type (33.3 percent), while a few were classroom oriented instructional type.

**Table 2.48: Frequency and percentage of post teleconferencing session of BCA and CIC**

N= 12

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1.	Always	6	50
2.	Sometimes	5	41.6
3.	Never	1	8.3

It can be seen from table 2.48, that almost in fifty percent of the programmes participants were always involved in discussion of questions/queries related to TC programmes.

**Table 2.49: Behavioural activities of participants during teleconferencing programmes of BCA and CIC**

*2.49 (a) Tele-lecture Session*

N=12

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	2	16.6
2.	Chatting	2	16.6
3.	Dozing	-	-
4.	Taking notes	8	66.6
5.	Attentively watching	10	83.3
6.	Attentively listening	10	83.3
7.	Any other (please specify)	-	-

*2.49 (b) Talkback Session*

N=12

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	2	16.6
2.	Chatting	2	16.6
3.	Dozing	-	-
4.	Taking notes	8	66.6
5.	Attentively watching	10	83.3
6.	Attentively listening	10	83.3
7.	Any other (please specify)	-	-

Table 2.49 presents that in more than eighty percent of the programmes learners were watching and listening attentively during tele-lecture and talkback session. In sixty six percent of the programmes, learners were even taking notes. In very few programmes learners were chatting and doodling.

#### 2.4.1.8 Certificate in Disaster Management (CDM)

The content analysis of BCA and CIC programme was done with respect to quality of content, method, mode and media. The technical and non-technical problems under media are presented separately in section 2.4.3.8.

**Table 2.50: Itemwise frequency and percentage of content quality of TC programmes for CDM**

N = 22

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC program was		
	(i) Comprehensive	19	86.3
	(ii) Having proper terminology	18	81.8
2.	The content was suitable with respect to the topic	20	90.9
3.	The duration of tele-lecture was adequate	18	81.8
4.	The duration of question-answer session was adequate	15	68.1
5.	The teaching points were logically sequenced	20	90.9
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	19	86.3
	(ii) Having conceptual clarity	19	86.3
	(iii) Logically organized	18	81.8
	(iv) Adequate	19	86.3
	(v) Appropriate to the cognitive levels of the learners	18	81.8
	(vi) Recapitulated	9	40.9

From the table 2.50, it can be seen that under the quality of content of Certificate in Disaster Management (CDM) – TC programmes, the language of most of the resource persons and anchor persons were comprehensive and with proper terminologies (in more than eighty percent of the programmes). The content was suitable with respect to the topic and teaching points were logically sequential in more than ninety percent of the programmes. The duration of the tele-lecture was adequate in eighty percent and above programmes while little

less than seventy percent during question-answer session. In more than eighty percent of the programmes, the content covered was adequate, conceptually clear, logically organized and appropriate to the topic as well as to the cognitive levels of the learners. Recapitulation was done only for forty percent of the programmes.

**Table 2.51: Itemwise frequency and percentage of the quality of method of TC programmes for CDM**

N = 22

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	19	86.3
	(ii) Subject matter (content)	19	86.3
2.	Method used for TC had		
	(i) Compatibility	18	81.8
	(ii) Continuity	18	81.8
	(iii) Captions (wherever required)	7	31.8
	(iv) Modulation of voice	15	68.1
	(v) Uniformity	17	77.2
	(vi) Fluency	17	77.2
3.	The speed of narration was		
	(i) Slow	-	-
	(ii) Moderate	21	95.4
	(iii) Fast	1	4.5
4.	Type of teaching methods used were		
	(i) Lecture	22	100
	(ii) Discussion	19	86.3
	(iii) Case study	-	-
	(iv) Demonstration	-	-
	(v) Practicals	-	-
5.	The type of teaching material used		
	(i) Print	-	-
	(ii) Black board	-	-
	(iii) Videofilm	14	68.1
	(iv) Graphs	9	40.9
	(v) Overhead projector (OHP)	20	90.9
	(vi) Slides	2	9
	(vii) Charts (flip chart/other chart)	9	40.9
	(viii) Posters/pictures	-	-
	(ix) Any other (Map)	18	81.8
6.	Summarization of main points by anchor person		
	(i) Sometimes	8	36.3
	(ii) Never	14	63.6

Table 2.51 presents that for most of the TC programmes, the method used was suitable with respect to the topic and subject matter in more than eighty five percent of the programmes. Method used for most TC programmes had compatibility, continuity (more than eighty percent), uniformity and fluency in more than seventy five percent of the programmes. Captions were used only for around thirty percent of the programmes. The speed of narration was moderate for almost ninety five percent of the programmes. It was observed that lecture method was used for all the CDM – TC programmes. Discussion method was used in a little more than eighty five percent of programmes. It was found that in most of the programmes, a large number of teaching materials like over head projector (in ninety percent programs), maps (eighty one percent of the programmes), video film (sixty eight percent of programmes), graphs and charts (forty percent of programmes) and slides (nine percent of programmes) were used. Summarization of the main points was done sometimes in less than forty percent of the programmes by anchor person.

**Table 2.52: Itemwise frequency and percentage of mode quality of TC programmes for CDM**

N = 22

Sr. No.	Items for Mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	2	9
	(ii) Lecture with learner initiated interaction	4	18
	(iii) Lecture with anchor persons or instructor facilitated interaction	16	72.7
2.	Type of questions asked		
	(i) Structured	4	18.1
	(ii) Out of context	8	36.3
	(iii) Relevant to course / subject	19	63.6
	(iv) Any other	-	-

It can be seen from table 2.52, that lecture with anchor person and instructor facilitated interaction was higher than that of learner initiated interaction. In most of the programmes questions asked were relevant to the topic (sixty three percent programmes), some were out of context type (thirty six percent programmes) while other were structured (eighteen percent programmes).

**Table 2.53: Itemwise frequency and percentage of media quality of TC programmes for CDM**

N = 22

Sr. No.	Item(s) for Media quality	Frequency	Percentage (%)
1.	Type of media used for talkback session		
	(i) Fax	4	18.1
	(ii) STD	-	-
	(iii) Mail	3	13.6
2.	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	18	81.8
	(ii) Clear during question-answer (talkback) session	9	40.9
3.	Video quality of TC Programmes		
	(i) Good during tele-lecture session	18	81.8
	(ii) Good during talkback session	16	72.7

It is evident from the table 2.53, that the interaction level was low since there was no STD phone in viewing room, so questions were asked through fax (eighteen percent of the programmes) and through mail (thirteen percent of programmes).

The sound and video quality of TC programmes during tele-lecture was good in a little more than eighty percent of programmes while the sound quality during talkback session was good only in forty percent of programmes.

**Table 2.54: Frequency and percentage of type of TC programmes for CDM**

N = 22

Sr. No.	Type of TC Programme(s)	Frequency	Percentage (%)
1	Classroom oriented instructional programme	2	9
2	Enrichment programme	22	100
3	Recreational programme	4	18.1

It can be seen from table 2.54, that all the programmes were enrichment type. Some were in combination of enrichment type as well as recreational type or classroom oriented instructional type.

**Table 2.55: Frequency and percentage of post teleconferencing session for CDM**

N = 22

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1	Always	5	22.7
2	Sometimes	10	45.4
3	Never	7	31.8

It is evident from the table 2.55 that in few programmes (forty five percent), participants were involved in some kind of discussion related to the TC programmes.

**Table 2.56: Behavioural activities of participants during teleconferencing programmes***2.56(a) Tele-lecture Session*

N=22

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	15	68.1
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	16	72.7
5.	Attentively watching	18	81.8
6.	Attentively listening	18	81.8
7.	Any other (please specify)	-	-

### 2.56 (b) Talkback Session

N=22

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	14	63.6
2.	Chatting	-	-
3.	Dozing	-	-
4.	Taking notes	14	63.6
5.	Attentively watching	20	86.3
6.	Attentively listening	17	77.2
7.	Any other (please specify)	-	-

Table 2.56 presents that in more than seventy five percent of the programmes learners were watching and listening attentively during tele-lecture and talkback session. In many of the programmes learners were taking notes, some of them were even doodling and chatting.

#### 2.4.2 Analysis and Interpretation of all the selected IGNOU Programmes

The content analysis and interpretation of all the TC programmes of nine selected IGNOU subjects with respect to quality of content, method, mode and media are presented here below:

**Table 2.57: Overall itemwise frequency and percentage of content quality of TC-programmes.**

N=96

Sr. No.	Items for content quality	Frequency	Percentage (%)
1.	The language used for TC programmes was		
	(i) Comprehensive	70	72.9
	(ii) Having proper terminology	68	70.8
2.	The content was suitable with respect to the topic	71	73.9
3.	The duration of tele-lecture was adequate	72	75
4.	The duration of question answer session was adequate	57	59.3
5.	The teaching points were logically sequenced	67	69.7
6.	The content covered under TC programmes were		
	(i) Appropriate / relevant to the topic	68	70.8
	(ii) Having conceptual clarity	67	69.7
	(iii) Logically organized	67	69.7
	(iv) Adequate	67	69.7
	(v) Appropriate to the cognitive level of the learners	71	73.9
	(vi) Recapitulated	21	21.8

It can be seen from table 2.57, that under the quality of content of overall TC programmes, the language used for TC programmes was comprehensive with proper terminology in more than seventy percent of the programmes. In most of the TC programmes the content was suitable with respect to the topic. The duration of tele-lecture was adequate for most of the TC programmes but comparatively inadequate for question-answer session. Almost in seventy percent of the programmes, the teaching points were logically sequenced, the content was conceptually clear, adequate, logically organised and appropriate to the topic as well as to the cognitive level of the learners. It was observed that recapitulation was done only for around twenty percent of the programmes.

**Table 2.58: Overall itemwise frequency and percentage of the quality of method of TC-programmes.**

N=96

Sr. No.	Items for Quality of Method	Frequency	Percentage (%)
1.	The method used was suitable to		
	(i) Topic	64	66.6
	(ii) Subject matter (content)	64	66.6
2.	Method used for TC had		
	(i) Compatibility	65	67.7
	(ii) Continuity	66	68.7
	(iii) Captions (wherever required)	20	20.8
	(iv) Modulation of voice	61	63.5
	(v) Uniformity	61	63.5
	(vi) Fluency	66	68.7
3.	The speed of narration was		
	(i) Slow	13	13.5
	(ii) Moderate	73	76
	(iii) Fast	10	10.4
4.	Type of teaching methods used were		
	(i) Lecture	79	82.2
	(ii) Discussion	55	57.2
	(iii) Case study	2	2
	(iv) Demonstration	18	18.7
	(v) Practicals	14	14.5
5.	The type of teaching material used		
	(i) Print	3	3.1
	(ii) Black board	2	2
	(iii) Video film	19	19.7
	(iv) Graphs	12	12.5
	(v) Over head projector (OHP)	52	54.1
	(vi) Slides	25	26
	(vii) Charts (flip charts/other charts)	9	9.3
	(viii) Posters/pictures	11	11.4
	(ix) Any other		
	(a) Maps	18	18.7
	(b) Computer	17	17.7
6.	Summarization of main points by anchor person		
	i) Sometimes	33	34.3
	ii) Never	63	65.6

It is evident from the table 2.58, that for more than sixty percent of the TC programmes, the method used was suitable with respect to topic and subject matter. The method used, had compatibility, continuity and fluency in most of its

TC programmes. There was modulation of voice, uniformity and moderate speed of narration in resource person's presentation for around seventy percent of the TC programmes. It was astonishing to note that captions were used only for twenty percent of the programmes. In maximum number of programmes, the teaching methods used was lecture (eighty two percent programmes) followed by discussion (fifty seven percent of the programmes). Other methods like demonstration and practicals were also used, but rather rarely. Among the teaching materials, overhead projector was used for more than fifty percent of the programmes and slides were used for twenty five percent of the programmes and material like maps, computer, graphs in between ten to twenty percent programmes and others were used very sparingly. Summarization of the main points by anchor person was done sometimes only for around thirty five percent of the programmes.

**Table 2.59: Overall itemwise frequency and percentage of mode quality of TC-programmes.**

N=96

Sr. No.	Items for mode quality	Frequency	Percentage (%)
1.	The type of mode used for TC programmes		
	(i) Lecture with no interaction	18	18.7
	(ii) Lecture with learner-initiated interaction	17	17.7
	(iii) Lecture with anchor persons or instructor facilitated interaction	61	63.5
2.	Type of questions asked		
	(i) Structured	4	4.1
	(ii) Out of context	50	52
	(iii) Relevant to course / subject	56	58.3
	(iv) Any other	-	-

Table 2.59, presents that lecture with anchor person and instructor facilitated interaction was higher than that during the learner facilitated interaction. It was observed that in more than fifty percent of the TC programmes

(56%), questions asked were relevant to the subject / course, whereas, in fifty percent of the programmes, the questions were out of context but relevant to the subject / course.

**Table 2.60: Overall itemwise frequency and percentage of media quality of TC-programmes.**

N=96

Sr. No.	Items for mode quality	Frequency	Percentage (%)
1.	Type of media used for talkback session		
	(i) Fax	23	23.9
	(ii) STD	5	5.2
	(iii) Mailing	4	4.1
2.	Sound (audio) quality of TC programmes		
	(i) Clear during tele-lecture session	68	70.8
	(ii) Clear during question-answer (talkback) session	50	52
3.	Video quality of TC programmes		
	(i) Good during tele-lecture session	73	76
	(ii) Good during talkback session	61	63.5

It is evident from the table 2.60, that interaction level was very low due to unavailability of STD phone in the viewing room. Participants asked their questions through private fax, from outside the study centre. Only twenty three percent of the programme learners asked their queries using fax and in one or two programmes, participants could use STD/Phone from the coordinator's room.

The audio and video quality during tele-lecture session was good in more than seventy percent of the programmes. During question-answer session (talkback session), audio quality was good in a little more than fifty percent of the programmes while video quality was good in more than sixty percent of the programmes.

**Table 2.61: Overall itemwise frequency and percentage of type of TC-programmes.**

N=96

Sr. No.	Type of TC programmes	Frequency	Percentage (%)
1.	Classroom oriented instructional programme	14	14.5
2.	Enrichment programme	83	86.4
3.	Recreational programme	13	13.5

It can be seen from table 2.61, that most of the TC programmes (eighty six percent) were enrichment type. Very few were classroom oriented instructional and recreational type.

**Table 2.62: Overall frequency and percentage of post teleconferencing session**

N= 96

Sr. No.	Discussion of questions/queries by participants	Frequency	Percentage (%)
1.	Always	11	11.4
2.	Sometimes	42	43.7
3	Never	43	44.7

It can be seen from table 2.62, that in very few programmes (eleven percent), participants were always involved in discussion related to TC programmes.

**Table 2.63: Overall behavioural activities of participants during teleconferencing programmes**

*2.63 (a) Tele-lecture Session*

N= 96

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	17	17.2
2.	Chatting	26	27
3.	Dozing	6	6.2
4.	Taking notes	46	47.9
5.	Attentively watching	72	75
6.	Attentively listening	71	73.9
7.	Any other (please specify)	-	-

### 2.63(b) Talkback Session

N= 96

Sr. No.	Behavioural Activities	Frequency	Percentage (%)
1.	Doodling	25	25.9
2.	Chatting	17	17.7
3.	Dozing	1	1.5
4.	Taking notes	36	37.5
5.	Attentively watching	67	69.7
6.	Attentively listening	63	65.6
7.	Any other (please specify)	-	-

It is evident from table 2.63, that during tele-lecture session, nearly in three fourth of the total programmes, learners were attentively watching and listening to the TC programmes while during the talkback session, in more than sixty five percent of the programmes, learners were watching and listening attentively.

In some of the programmes, learners were taking notes while in a few others, they were chatting, doodling and even dozing during tele-lecture as well as talkback sessions.

### 2.4.3 Technical and Non-Technical Problems

The following text gives the details of all the selected IGNOU TC programmes both subjectwise as well as Overall analysis and interpretation related to technical and non technical problems of IGNOU TC programmes.

During each TC programmes, some technical as well as non technical problems were observed.

The technical problems were grouped into four major categories. These were:

- (a) Audio disturbances
- (b) Video disturbances
- (c) Power failure
- (d) Technician's absence

The non-technical problems were grouped into five major categories.

These were

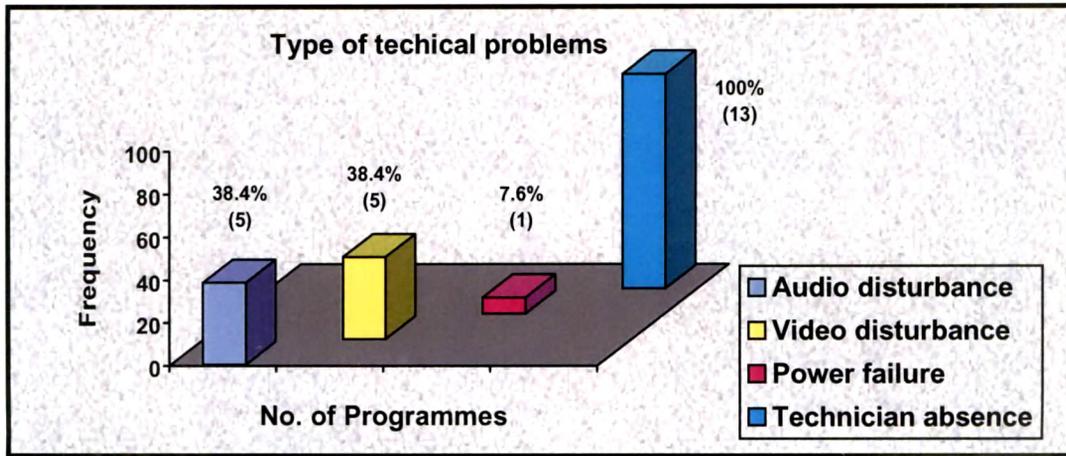
- (a) Category I: disturbances due to incoming calls / phones
- (b) Category II: External noise which covers sound of the vehicle, typewriter, etc.
- (c) Category III: Disturbances due to chatting / talking among participants, moderator and IGNOU staff members.
- (d) Category IV: Internal disturbances due to movement of participants, non-participation and study centre's staff member.
- (e) Category V: Distraction or disturbance due to unclear visuals, tapping on the table by resource person, transparencies not legible etc.

The observation of stated technical and non-technical type of problems was done and is presented subjectwise hereunder.

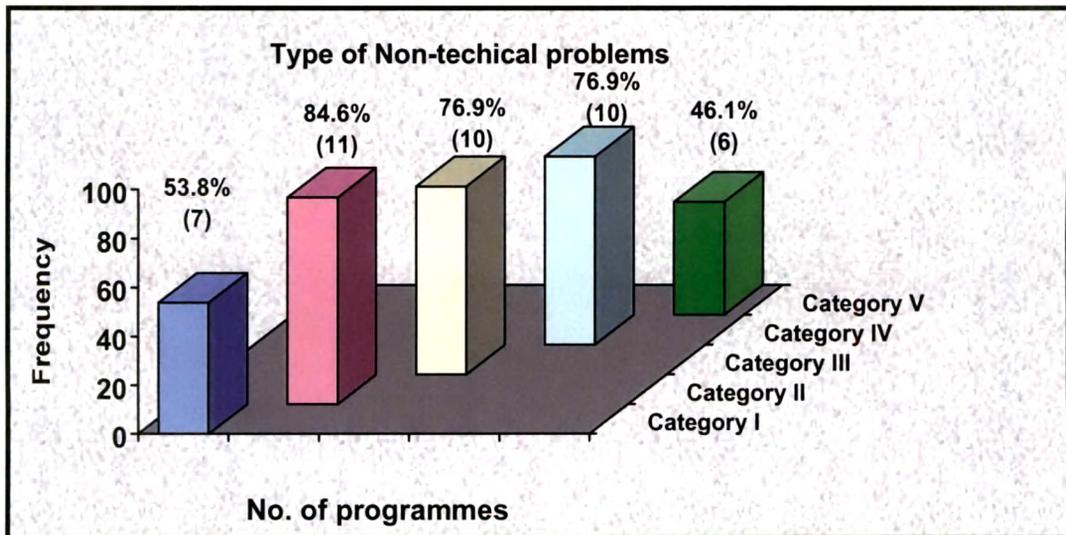
#### 2.4.3.1 Technical and Non-technical Problems related to MLIS-TC Programmes

Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of MLIS were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

Graph 2.1(a) Frequencies and percentages of type of technical problems in MLIS TC programme



Graph 2.1(b) Frequencies and percentages of type of Non-technical problems in MLIS TC programme



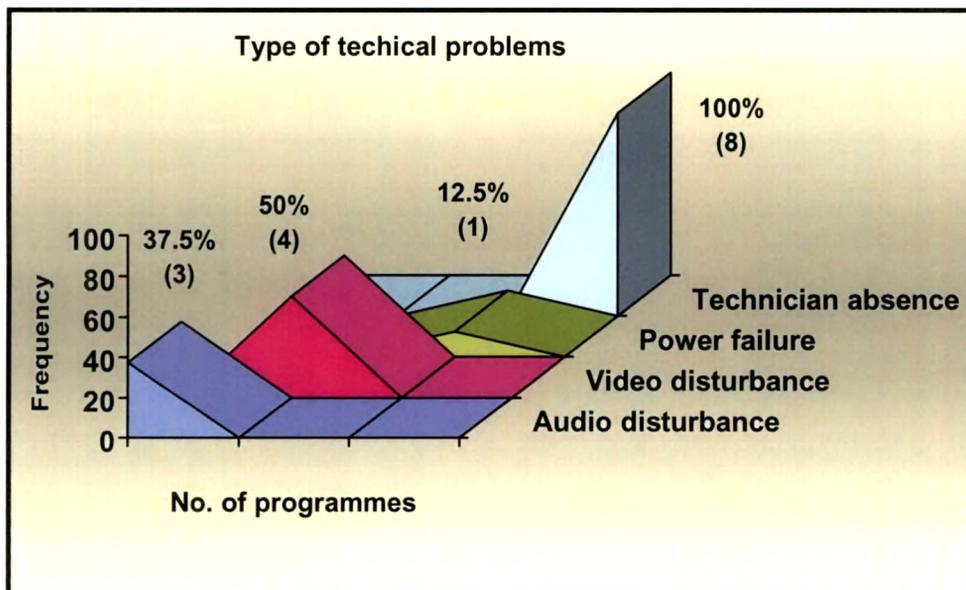
From the graph 2.1(a), it is clear that in MLIS - TC programmes, technician absence was found in all the programmes and power failure was just in one of the programmes under technical problems.

Under non-technical problems as seen in graph 2.1(b), maximum was found was in category II, III and IV type of non-technical problems. These were disturbances due to sound of vehicle since parking area was adjacent to the viewing room, a chatting and movement of IGNOU staff members and moderator as office and viewing room were common.

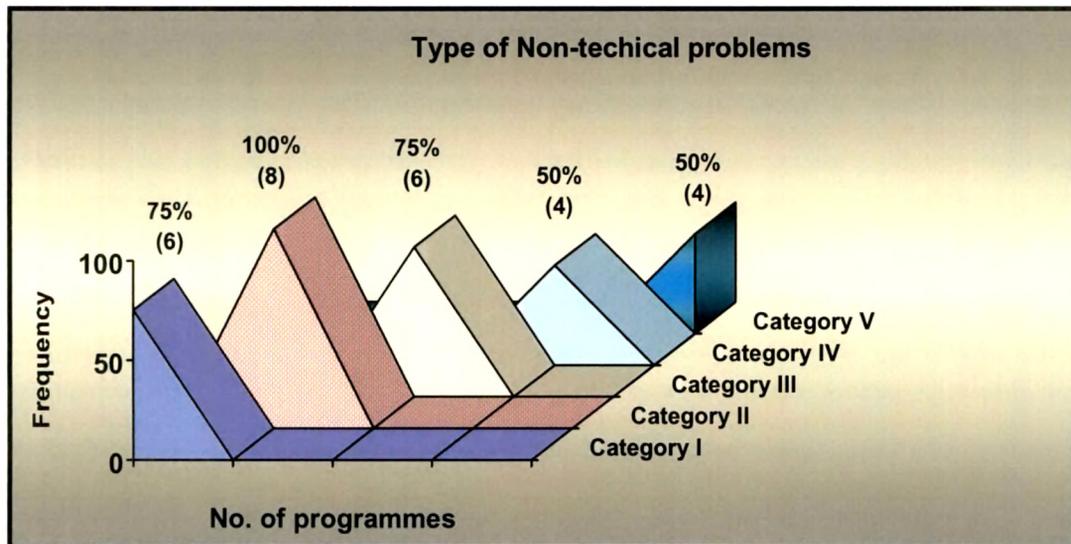
2.4.3.2 Technical and Non-technical Problems related to PGDJMC-TC Programmes

Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of PGDJMC were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.2(a) Frequencies and percentages of type of technical problems in PGDJMC TC programme**



**Graph 2.2(b) Frequencies and percentages of type of Non-technical problems in PGDJMC TC programme**



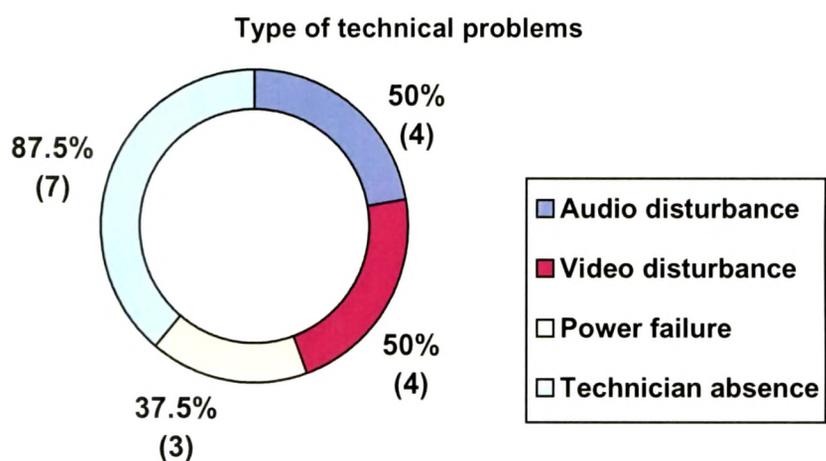
Graph 2.2(a), indicates that in PGDJMC TC programmes, technician's absence was found in all the programmes, whereas video disturbance in fifty percent and audio disturbance in less than forty percent of the programmes. Under non-technical problems, category II, that is, external noise due to vehicle was observed in all the programmes. Disturbances due to incoming official calls and chatting among staff members were causes of disturbance in almost three-fourth of the programmes.

2.4.3.3 Technical and Non-technical Problems related to PGDHE-TC Programmes

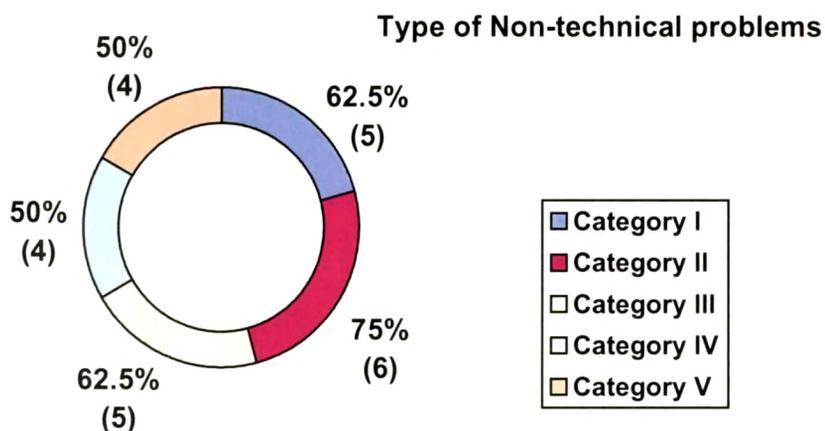
Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of PGDHE were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to

incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.3(a) Frequencies and percentages of type of technical problems in PGDHE TC programme**



**Graph 2.3(b) Frequencies and percentages of type of Non-technical problems in PGDHE TC programme**



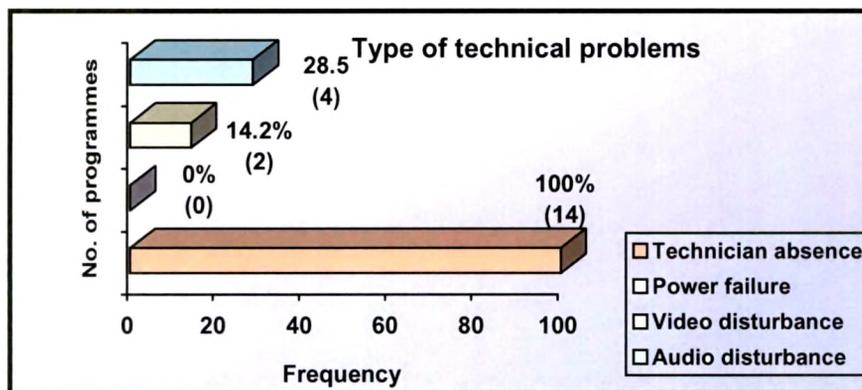
It was observed that in PGDHE TC programmes, audio-visual disturbance was found in almost fifty percent of the programmes, whereas, technical disturbance was found in maximum programmes (87.5%) as shown in Graph 2.3(a).

Under non-technical problems maximum were category II that is noise due to vehicle parking followed by category I and III, where disturbance was due to official phone calls and talking among IGNOU staff members.

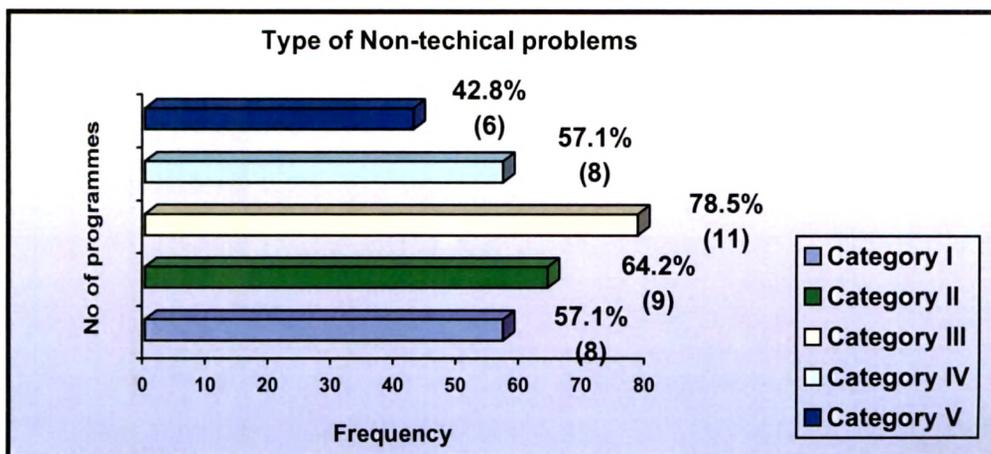
2.4.3.4 Technical and Non-technical Problems related to B.Sc.(Nursing)-TC Programmes

Here the specific type of technical problems caused/occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of B.Sc. (Nursing) were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.4(a) Frequencies and percentages of type of technical problems in B.Sc (NURSING) TC programme**



**Graph 2.4(b) Frequencies and percentages of type of Non-technical problems in B.Sc (NURSING) TC programme**

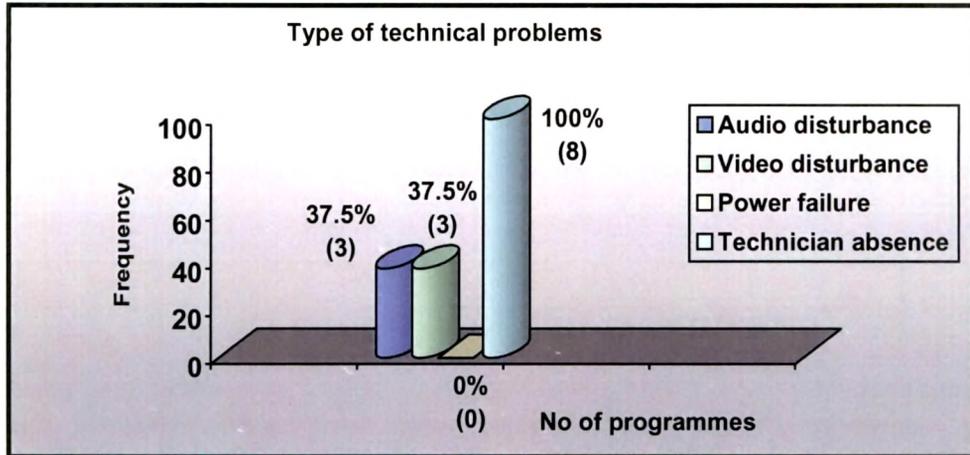


Graph 2.4(a), indicates that in B.Sc. (Nursing) TC programmes apart from technician absence there were not much technical problems. Under non-technical problems maximum were disturbances due to chatting among staff members and vehicle sound.

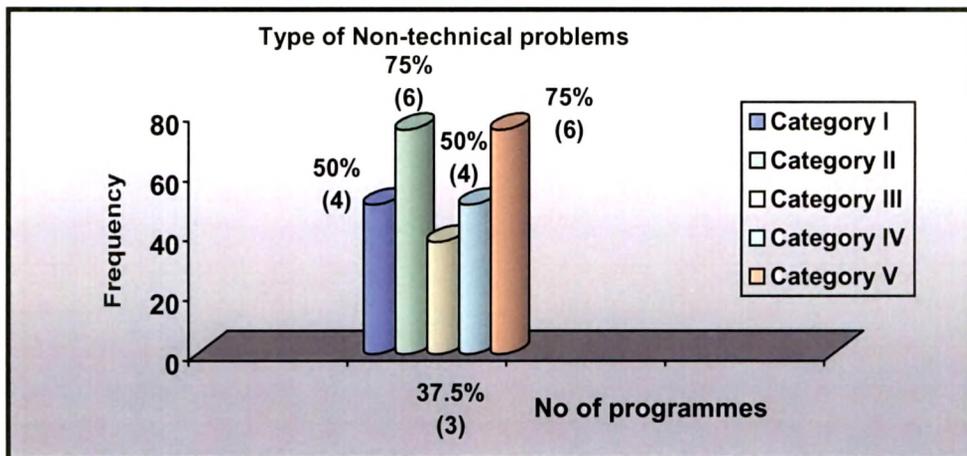
2.4.3.5 Technical and Non-technical Problems related to DECE-TC Programmes

Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of DECE were observed and presented graphically. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.5(a) Frequencies and percentages of type of technical problems in DECE TC programme**



**Graph 2.5(b) Frequencies and percentages of type of Non-technical problems in DECE TC programme**

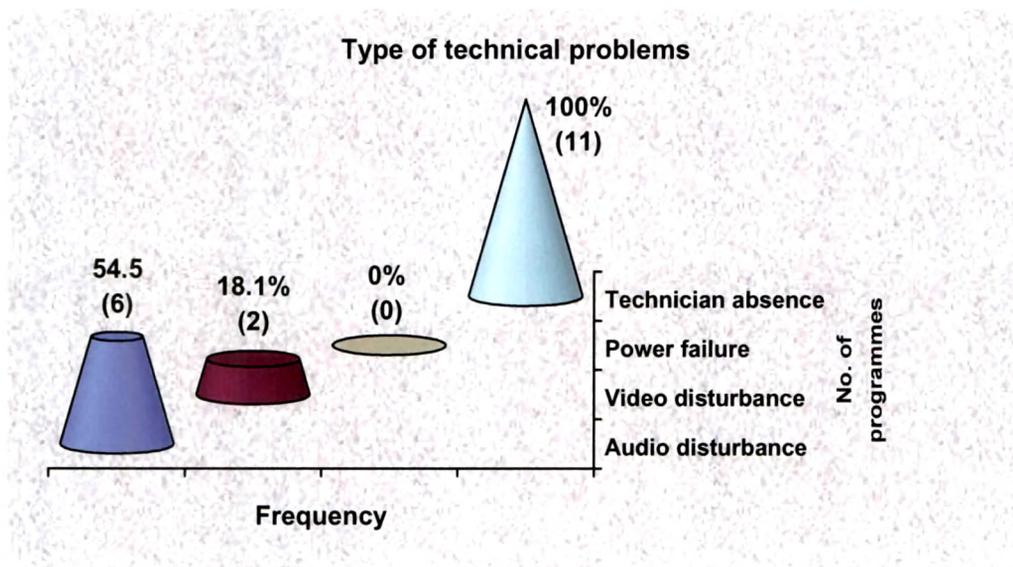


It is clear from the graph 2.5(a), that in DECE TC programmes, audio-visual disturbances were observed in equal number of the programmes. Technician's absence was felt in all the programmes. Graph 2.5(b), indicates there were maximum disturbances due to vehicle parking, office file shuffling and tapping the table by the resource persons as well as distraction due to unclear visuals.

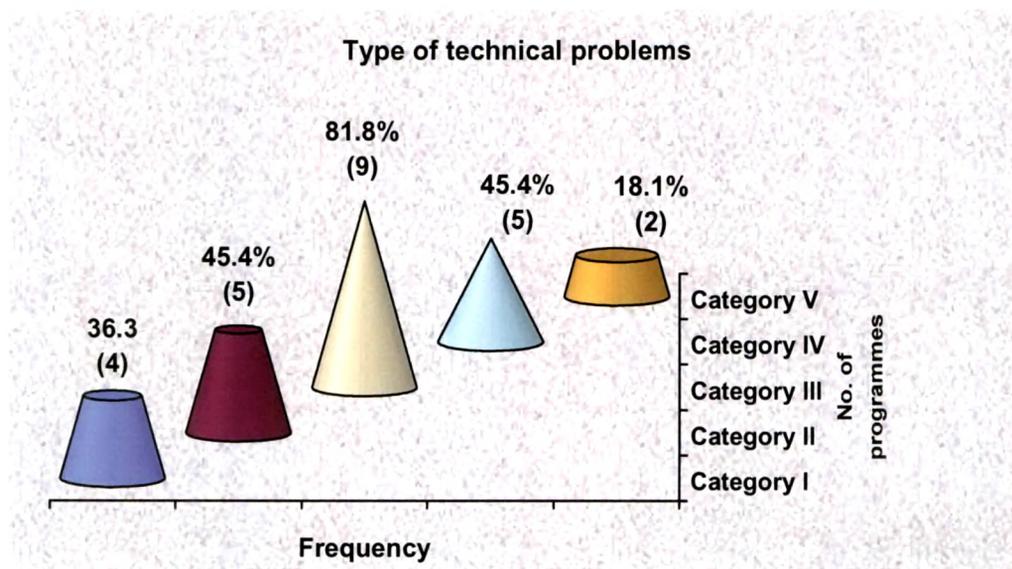
2.4.3.6 Technical and Non-technical Problems related to DCE-TC Programmes

Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of DCE were observed and presented graphically. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.6(a) Frequencies and percentages of type of technical problems in DCE TC programme**



**Graph 2.6(b) Frequencies and percentages of type of Non-technical problems in DCE TC programme**



It was observed in DCE - TC programmes that the technician's absence was found in all the programmes. Audio disturbance was found in more than fifty percent of the programmes while video disturbance was not much. [Graph 2.6(a)].

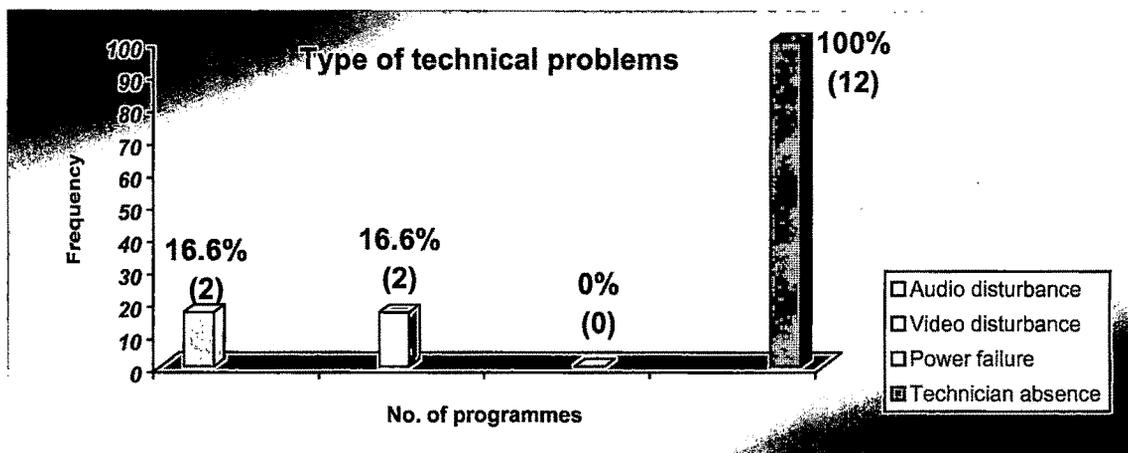
Under non-technical problems maximum were of category III type, that is, disturbances due to chatting among staff members of IGNOU study centre.

#### 2.4.3.7 Technical and Non-technical Problems related to BCA and CIC -TC Programmes

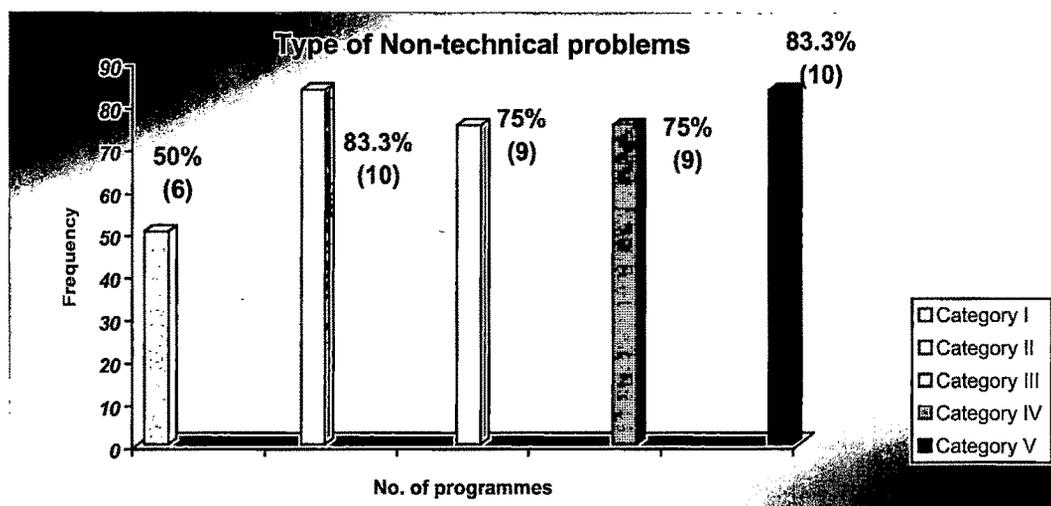
Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of BCA and CIC were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the

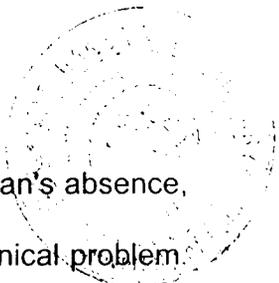
participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.7(a) Frequencies and percentages of type of technical problems in BCA and CIC TC programme**



**Graph 2.7(b) Frequencies and percentages of type of Non-technical problems in BCA and CIC TC programme**





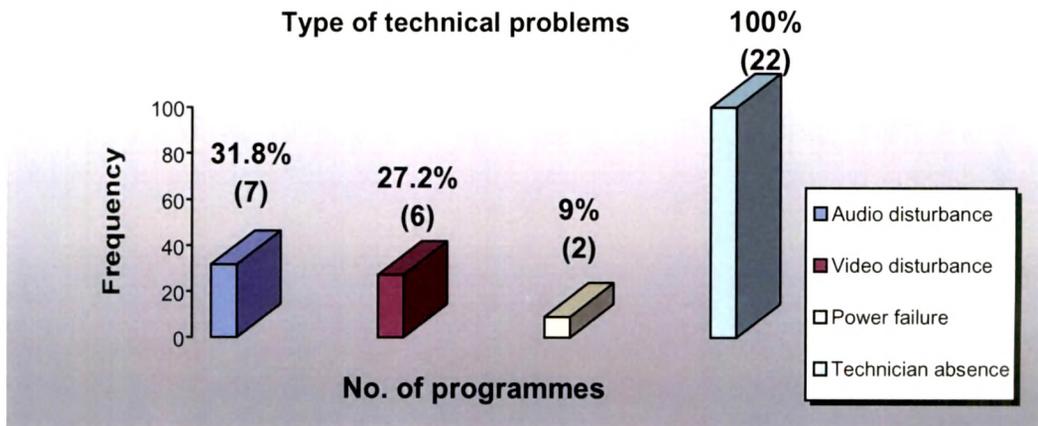
From the Graph 2.7(a), it is clear that except for the technician's absence, which was found in all the programmes, there were not much technical problem. Non-technical problems were more compared to technical problems in BCA and CIC TC programmes.

Under non-technical problems, maximum was external noise. Inability to see the keyboard disturbed the learners as they were unable to understand the computer commands properly. Disturbances were also caused due to talking among IGNOU staff - members and movements of participants / non-participants and study centre staff members.

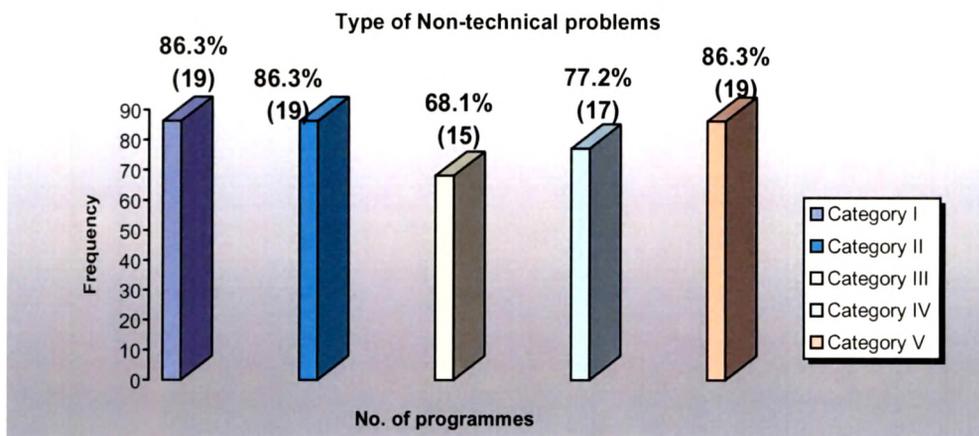
#### 2.4.3.8 Technical and Non-technical Problems related to CDM-TC Programmes

Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of TC programmes of CDM were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.8(a) Frequencies and percentages of type of technical problems in CDM TC programme**



**Graph 2.8(b) Frequencies and percentages of type of Non-technical problems in CDM programme**



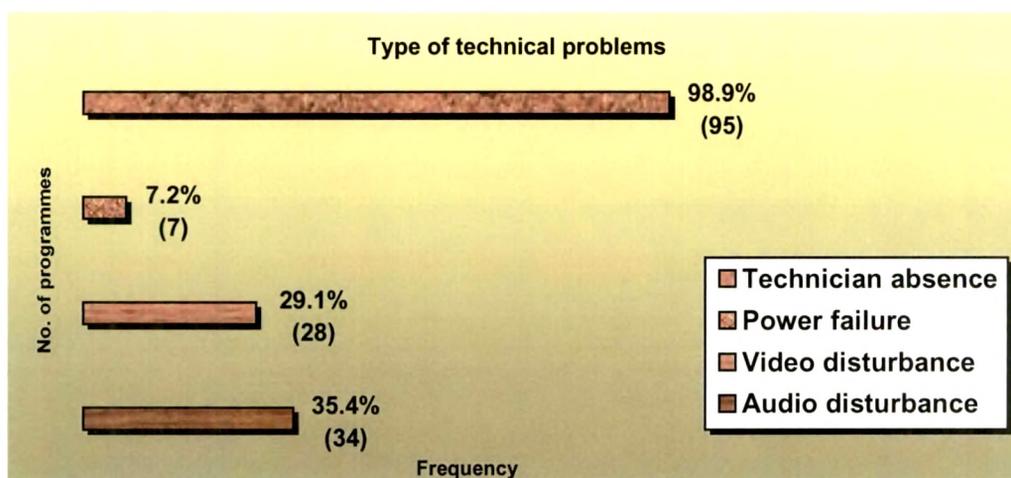
In CDM - TC programme, audio-video disturbance was not very high but the technician's absence was found in all the programmes under technical problems (Graph 2.8 a).

Under non-technical problem, maximum disturbance were due to category I, II and V. This include disturbances due to incoming official phone-calls, sound of vehicle, unclear visuals especially maps.

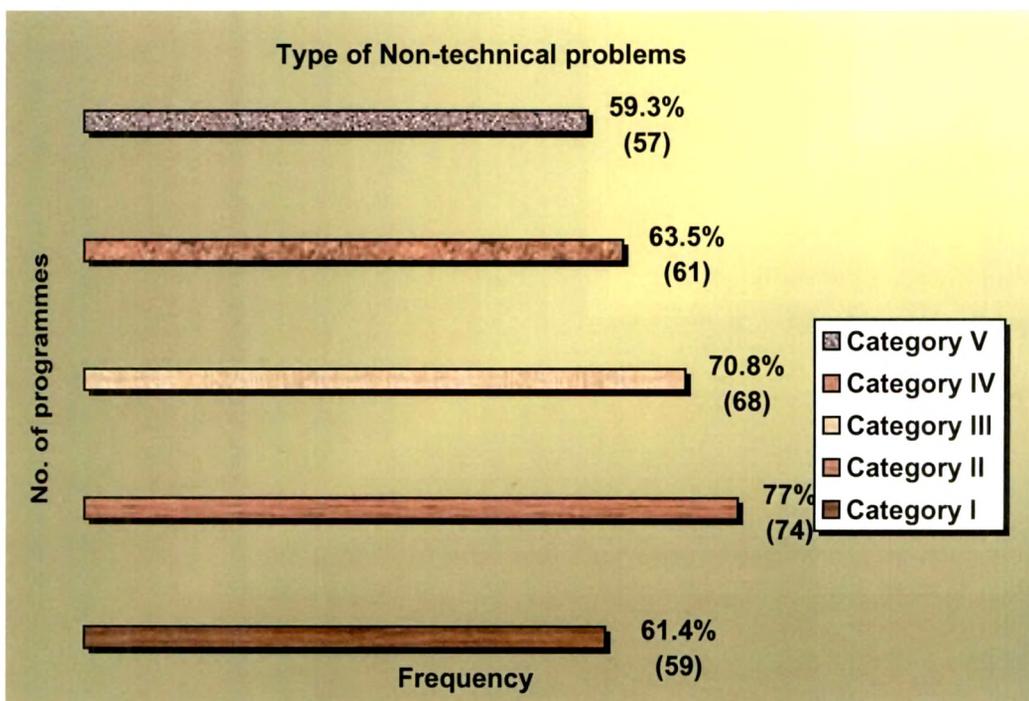
2.4.3.9 Technical and Non-technical Problems related to Overall - TC Programmes

Here the specific type of technical problems occurred due to audio-video disturbance or power failure or absence of technician during the transmission of overall TC programmes were observed and presented graphically followed by discussion. Further, the non-technical problems such as disturbances due to incoming phone calls, sound of vehicle or typewriter, talking amongst the participants or IGNOU staff members as well as distraction due to movement of learners and unclear visual aids were observed.

**Graph 2.9(a) Frequencies and percentages of type of technical problems in overall TC programme**



**Graph 2.9(b) Frequencies and percentages of type of Non-technical problems in overall programme**



Overall it was observed that non-technical problems were more compared to the technical ones. Under technical problems, the absence of a technician was felt in most of the programmes. Although the power failure was not found much, but if there was a provision of generator in the viewing room, probably that could have solved this problem (Graph 2.9a).

It was a common problem observed in most of the TC programmes that transparencies shown on screen as part of lecture were not legible. The answers to some of the questions were also found to be "vague".

The sound of vehicles and movements of the non-participants and staff members of IGNOU study centre who were otherwise involved in their day to day office work was the common problem observed in almost all the TC programmes

under non-technical problems. Problems due to non-availability of phone and fax were also faced throughout the programmes by participants.

Other problems under non-technical problems were like tapping on the table by resource person, answering at a time by more than one resource person, interruption of anchor person in between the answers, lack of eye contact on the resource person's part, rustle of paper while anchor/resource persons were changing or folding the paper.

Many a time camera was also not focused on the speaker. Clothing of resource person and anchor person was also one of the factors contributing to the distraction of viewers.

Apart from these non-technical disturbances another problem observed was that of time. It was observed that the number of TC programmes viewers decreased during weekdays (Monday to Friday) as IGNOU learners normally do not have counselling classes on these days and generally learners do not prefer to come to the study centre for attending TC programmes.

## **2.5 Findings and Discussion**

The observation of IGNOU-TC programmes was done for the period of fourteen months, that is, from January 1999 to February 2000.

Total nine IGNOU subjects were taken for the observation of TC programmes. These subjects were taken from each category, that is, Degree (both at graduation and post graduation level), Diploma (both at graduation and post graduation level) and certificate.

The subjects were Masters in Library and Information Science; Post Graduate diploma in Journalism and Mass Communication; Post graduate diploma in Higher Education; B.Sc. Nursing; Diploma in Early Childhood Care

and Education; Diploma in Creative Writing in English; Certificate in Disaster Management; Bachelor's of Computer Applications and Certificate in Computing.

The total observation duration of TC programmes for nine subjects was of eighty five hours.

The telecast sequence for each TC programmes was as follows:

- Signature tune of Doordarshan
- Signature tune of IGNOU-TDCC teleconferencing
- Welcome to viewers (learners) and introduction of subject expert(s) for TC programme-1 by anchor person.

It was observed that in each subject four to twelve topics were covered through TC mode. The duration of individual programme segment was normally of sixty minutes. This duration was divided based on the programme formats that is tele-lecture session or information - in (lecture, discussion, demonstration, etc.) and talkback session or information - out (question-answer, discussion, brainstorming, etc.). The duration per tele-lecture session was of forty to forty five minutes followed by talkback session of fifteen to twenty minutes.

There was only one anchor person per programme and the number of resource persons (subject experts) varied from one to four depending on TC programmes. All the programmes were in English with occasional use of Hindi during talkback (question-answer) session.

### **2.5.1 Pre-Session**

Normally very few participants (at times only one or two learners) used to come for TC programmes/sessions. Amongst those who attended, a few participants arrived on time. Most of them walked in barely a few seconds before the session while quite a few walked in late. This was observed in most of the TC

sessions and programmes. Participants arriving late disturbed the session as chairs were pulled and placed by them, which made quite a bit of noise. Amongst the participants, greetings and an update about work were exchanged. Participants were also observed walking in late after the question-answer session.

### **2.5.2 *During Session***

There were two main observations, one, that the participants were seen watching and listening to the programmes attentively, and two, that some of the participants were seen taking notes. It has been mentioned that participants wanting to ask questions seemed more interested in the sessions. In fact, at times, question-answer session used to activate the participants, especially when the question asked by one of the participants from their receiving end was accepted and subsequently answered by the resource persons. Discussions normally used to begin if the answers were not satisfactory. At times, participants discussed animatedly amongst themselves when the question posed by other receiving end was felt to be irrelevant.

Further, it was noticed that as the session progressed, some began chatting among themselves, while some dozed off. Dozing off was at its peak in those sessions of the programmes where the timings of the TC programmes were at noon (especially after lunch hours). Some participants were also observed dozing and chatting during sessions when the presentation was made just through a lecture. Doodling was rare but it was observed especially amongst those sitting near the door or the window and when the sessions or programmes were too monotonous.

It was found that the participants were highly disappointed when they were unable to ask and participate in question-answer (talkback) session due to the unavailability of STD or fax machine in the viewing room. Another thing which had put off the participants was numerous phone calls for the staff members and it was a major nuisance as it disturbed the session (as the viewing room and office were common).

It was observed that, presentation or TC programmes that utilized demonstration or discussion as an additional method to lecture generated much more response.

The attentiveness of the participants was entirely dependent on the presentation of the resource persons. Whenever resource persons utilized the demonstrative technique in their presentations and used live models or photographs or black boards, the level of attentiveness increased. But if the resource persons only lectured, then the level dipped low.

Further, the presentations where teaching methods like lecture or discussions were supported by more of audio-visual aids gathered more attention of learners and learners found them more lively and interesting.

On the other hand, presentations where audio-visual aids were not incorporated, they were more of talking head approach and hence appeared like solo talks. Such presentations were monotonous and highly ineffective (e.g. TC programmes on Diploma in Creative writing in English).

### **2.5.3 Post-Session**

A general observation has been that participants made for the exit as soon as the session ended. Very few discussions took place. Their discussions normally revolved around complaining about less time allocated for question-

answer session and unavailability of fax or phone at the centre. They were also found discussing about their assignments among themselves.

#### **2.5.4 Other Observations**

Some of the TC programmes were syllabus based. Most of the TC programmes were enrichment type. These programmes were generally presented on the scheduled days and time (based on the TC schedule). However, in some of the cases, the TC programmes were not presented on scheduled time due to administrative, technical or non-technical problems (like unavailability of personnel to open the study centre or viewing room, power-failure or even satellite failure).

It was found that the time allotted for the talkback (question-answer) session somehow was not enough as many who had asked the questions could not get the reply. Also, some wanted to ask a question, but could not as the telephones were constantly engaged.

Further, it was observed that the quality of the signals was not good in some programmes and that there was no technically qualified person deputed at the study centre to ensure the reception quality during the TC programmes. It was found that the participants were highly disappointed when they were unable to view the sessions properly due to poor video and audio quality.

Maximum resource persons utilized the lecture method during their presentations and only some utilized demonstration method while few weaved in discussions also. Though resource persons did make efforts to use other teaching materials along with their lectures. Overhead projector (OHP) and slides were amongst the most used teaching material followed by video films and computers.

The content was relevant and logically organised. It was explained clearly and was comprehensive and informative. However, contents further need to be transacted through strategic approach to facilitate and enhance interaction between resource persons and learners.

The language being English for teleconferencing programmes, the programmes were largely comprehensible. But some learners having vernacular background showed apprehensions about the comprehensibility of the language. They felt inhibited in discussing and asking questions.

Some of the resource persons were carrying concinnity and were precise in replying during question-answer sessions and held greater attention span of learners and quality interaction. However, some were lacking in the specific communication skills required for this type of two- way communication technology (eye-contact, synchronised body movements, conciseness, ease of posture). Such programmes ended up with nearly "no interaction".

From the above interpretation and findings it could be concluded that more time be given for talkback sessions. Then the TC programmes will be more useful for the learners. Added support for this finding can be found in several discussions [Keegan, 1982; Moore, 1989; Mason, 1994; Sahoo, 1994; Burt, 1997; and Mishra, 1999(Refer Chapter-I)] where they stressed on the importance of interaction of learners with tutors or resource persons especially when teaching-learning is carried out through teleconferencing mode. Moreover, the very essence of two-way audio and one-way video lies in "interactivity". Also, inadequate infrastructure like improper seating arrangements and inadequacy of basic equipments like telephone and fax needed for effective utilization of technologies were some of the major constraints. Another area of concern is the

lack of use of audio visual aids. In most of the programmes either very few teaching aids along with lecture method were used or simple lecture with discussion method were used. Resource persons should use combination of properly developed teaching materials along with different teaching methods. This may help in holding the attention and concentration of learners. Supporting this finding, *Sinha et al. (1994)*, stated that lack of use of teaching aids resulted in dull and monotonous presentation, which do not evoke enough interest and attention of the students. Further, there is a need to summarize the main points, recapitulate the contents and use of captions wherever required. The quality of audio and video need to be improved in order to make the TC programmes effective for distance learners was evident by the findings of *Jones (1995)*, which stated that the success of any interactive telecourses depends on how technology was used especially the audio and video quality of the technology. Last, but not the least, instructors (resource persons and anchors) need to develop media related instructional skills. Lack of eye contact, improper body language and delayed answers might also lead to ineffective use of this technology. Similar to this, other authors like *Abbot et al. (1995)* and *Massoumian (1989)*, reported that teacher's frequent eye contact with learners adds to the credibility of the presenter. Further, *Hsu and Sammons (1998)*, stressed that proper body language is an important element to make TC technology more effective and *Patricia, et al. (1998)* stated that in two-way audio and one-way video learners were most influenced by instructor's teaching style. Thus, in order to make TC programmes more effective, resource persons and anchors need to develop technology savvy skills.