CHAPTER · IV

CHAPTER –IV

DATA ANALYSIS

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4.1   INTRODUCTION

The analysis and interpretation of data is the most important part of a research report as the material presented here represents the investigator's contribution to the advancement of knowledge. While the previous chapter deals with the tools and the procedure used for the collecting the data, this chapter reports the analysis and interpretation of the data collected. Available data have been analyzed and have been reported here.

For the purpose of data collection, investigator prepared three different questionnaires and these were administered to teachers, resource persons and lecturers of DIETs. Along with these questionnaires, opinionnaires and interview schedules were also prepared for the teachers. For the purpose of data collection from teachers, questionnaires and opinionnaires were administered to four hundred fifty teachers of three districts and for the purpose of the interview forty five teachers were consulted and interview was held by the investigator. All the four hundred fifty questionnaires and opinionnaires were received back, duly responded in by the respondents. For the purpose of data collection from resource persons, questionnaires were administered to one hundred ten resource persons, out of these; ninety questionnaires were received back. For the purpose of data collection from lecturers of DIETs, questionnaires were administered to forty five lecturers, out of these; thirty six questionnaires were received back, duly filled in by the respondents. For the purpose of the data collection regarding the infrastructure facility available in the DIETs, checklist was administered to three DIETs by the investigator. Checklist was filled by the investigator according the facility available in the DIETs. For the purpose of the data collection regarding the observation of two in-service training programmes of selected DIETs, investigator attended the two programmes of each DIETs and noted down the major and minor event happened in the in-service training programmes in the observation schedule.

These data were based on programmes attended by the teachers, resource persons and lecturers of DIETs in the academic year 2000-2001. The analyses of various items in questionnaire have been presented in the following pages.

4.2 ANALYSIS AND INTERPRETATION OF TEACHERS' RESPONSES

In the questionnaire for teachers, there were total forty four questions. Out of these forty four questions, thirty-eight were open ended as well as closed ended, while six questions were fully open ended. For the purpose of data collection, the questionnaire was given to four hundred fifty teachers. The details of the analysis and interpretation of data is given as follows:-

In response to information regarding the in-service training programmes attended by the teachers twenty four teachers had attended content and subject wise in-service training programmes, twelve percent teachers had attended the MLLs in-service training programmes, six percent teachers had attended the orientation programmes for principals, six percent teachers had attended Cluster Resource Group (CRG) in-service training programmes, four percent had attended in-service training programmes of SOPT, four percent teachers had attended integraded multigrade in-service training programmes, four percent teachers had attended 'kathin bindu' (Difficult Point) in-service training programmes; while others attended different in-service training programmes likes SSA, TLM, TQM, training for teaching subjects with activity, computer training, training for tackling students with disabilities, yoga education, grade system, tele-conference, community mobilization, life skill, action research, population education etc. **(Appendix-XXIV)**

The following table shows the qualification of teachers who had attended in-service training programmes during last three in the selected districts.

TABLE NO. 4.1

EDUCATIONAL QUALIFICATION OF TEACHERS

Total teachers	M.A/M.Com/ M.Sc/ B.Ed	B.A/B.Com/ B.Sc/ B.Ed	P.T.C/ C.P.Ed	Others
450	12	25	368	45
Percent	3	6	82	10

From table no. 4.1, it can be seen that the qualification of the teachers .there were total four hundred fifty teachers who had attended in-service training programmes, out of them eighty two percent had P.T.C/C.P.Ed degree, six percent had graduate degree, three percent had post graduate degree; while ten

percent teachers had degree like A.T.D., Drawing Making, Sangeet Visharad and B.P.Ed.

The following table shows the experience of teachers in terms of years who had attended in-service training programmes during last three in the selected districts.

TABLE NO. 4.2

DISTRIBUTION ON THE BASIS OF EXPERIENCE

Years→ Total teachers↓	1-5	6-10	11-15	16-20	21-25	26-30	31-40
450	60	94	50	67	80	60	39
percent	13	21	11	15	18	13	9

From table no. 4.2, it can be seen that there were twenty one percent teachers having experience of six to ten years of teaching; eighteen percent teachers having experience of twenty one to twenty five years of teaching; fifteen percent teachers having experience of sixteen to twenty years of teaching; thirteen percent teachers having experience of twenty six to thirty years of teaching; thirteen percent teachers having experience of one to five years of teaching; eleven percent teachers having experience of eleven to fifteen years of teaching; while nine percent teachers were having thirty one to forty years experience. It indicated that the teachers selected had one year to forty years experience in the field.

TABLE NO. 4.3

CLARITY OF OBJECTIVES

TOTAL RESPONDENTS	YES	NO
450	391	59
Percent	87	13

From table no. 4.3, it can be seen that eighty seven percent teachers opined that they had received the order of in-service training programmes in which the objectives of the in-service training programmes were clearly mentioned and teachers had clarity of the same; while thirteen percent teachers opined that they had received the order of in-service training programmes in which the objectives

of in-service training programmes were not mentioned. It can be summed up that teachers had clarity about the objectives of in-service training programmes and teachers attended the training having definite objectives in the mind.

TABLE NO. 4.4
NEED OF TRAINING

TOTAL RESPONDENTS	YES	NO
450	319	131
Percent	71	29

From table no. 4.4, it can be seen that seventy one percent teachers felt that before the planning of in-service training programmes, it was checked whether training was needed or not; while twenty nine percent teachers felt that it was not checked. Majority of the teachers felt that need based in-service training programmes were organized.

TABLE NO. 4.5
TIME SCHEDULE

TOTAL RESPONDENTS	YES	NO
450	364	86
Percent	81	19

From table no. 4.5, it can be seen that eighty one percent teachers responded that the time schedule was given to them in advance for in-service training programmes; while nineteen percent teachers responded that they did not. It may be possible that some DIETs may have not given time schedule for some programmes. It can be inferred that time schedule was given to them in advance for in-service training programmes, so that they could use maximum time.

TABLE NO. 4.6
SCHOLARLY OPINION IN ORGANIZATION OF TRAINING

TOTAL RESPONDENTS	YES	NO
450	383	67
Percent	85	15

From table no. 4.6, it can be seen that eighty five percent teachers felt that in organization of in-service training programmes, DIETs had taken the scholarly opinions from the experts in the field of education, along with this there was uniqueness in its organization; while fifteen percent teachers opined that there were no scholarly opinions from the experts in organization of in-service training programmes. From the above result it can be concluded that DIETs had taken the scholarly opinions from the experts in the field of education for organization of in-service training programmes.

TABLE NO. 4.7
SCHOLARLY OPINION IN MODULE PREPARATION

TOTAL RESPONDENTS	YES	NO
450	382	68
Percent	85	15

From table no. 4.7, it can be seen that eighty five percent teachers opined that there was uniqueness and scholarly opinions were sought in the preparation of modules; while fifteen percent teachers opined differently. It can be inferred that modules were prepared by the experts in the field and help was taken from the different personnel working of the different departments of universities. The modules were prepared separately for in-service training programmes.

TABLE NO. 4.8
SEPARATE MODULE FOR TEACHERS AND RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
450	232	218
Percent	52	48

From table no. 4.8, it can be seen that fifty two percent teachers responded that there were separate modules for teachers and resource persons; while forty eight percent teachers responded that there were same modules for teachers

and resource persons. From the above result it can be concluded that mix responses in teachers regarding separate modules for teachers and resource persons.

TABLE NO. 4.9

INFORMATION ON MODULES

TOTAL RESPONDENTS	YES	NO
450	386	64
Percent	86	14

From table no. 4.9, it can be seen that eighty six percent teachers replied that the modules were informative; while fourteen percent teachers replied otherwise. It can be inferred that modules given to teachers were informative and prepared with lot of efforts and with scholarly opinions from experts.

TABLE NO. 4.10

MODULES REGARDING CONTENT

TOTAL RESPONDENTS	YES	NO
450	361	89
Percent	80	20

From table no. 4.10, it can be seen that eighty percent teachers felt that modules were related to content of in-service training programmes; while twenty percent teachers felt that modules were not related to the content of in-service training programmes. From the above result it can be concluded that majority of teachers felt that modules were related to content.

TABLE NO. 4.11

OPPORTUNITIES FOR PRESENTING QUESTIONS

TOTAL RESPONDENTS	YES	NO
450	404	46
Percent	90	10

From table no. 4.11, it can be seen that ninety percent teachers felt that resource persons gave them opportunities to present their questions; while ten percent teachers felt that resource persons never gave opportunities for presenting teachers questions in in-service training programmes. It can be concluded that opportunities were given to the teachers for presenting their questions.

TABLE NO. 4.12
TIME FOR STUDY IN RESIDENTIAL PROGRAMME

TOTAL RESPONDENTS	YES	NO
450	363	87
Percent	81	19

From table no. 4.12, it can be seen that eighty one percent teachers opined that there was enough time for study in residential programme; while nineteen percent teachers opined that they did not. This result indicated that in residential programme more time was available for study.

TABLE NO. 4.13
FACILITIES IN RESIDENTIAL PROGRAMME

TOTAL RESPONDENTS	YES	NO
450	400	50
Percent	89	11

From table no. 4.13, it can be seen that eighty nine percent teachers responded that the proper facilities were available in residential programme; while eleven percent teachers felt that proper facilities were not available in residential programme. From this it can be inferred that DIETs had provided proper facilities in residential programme.

TABLE NO. 4.14

TIME DURATION FOR DISCUSSION

TOTAL RESPONDENTS	YES	NO
450	347	103
Percent	77	23

From table no. 4.14, it can be seen that seventy seven percent teachers felt that there was enough time for discussion in in-service training programmes and duration of in-service training programmes was also proper; while twenty three percent teachers felt that duration of in-service training programmes was not proper. It can be summed up that enough time was there for discussion and duration of in-service training programmes was proper.

TABLE NO. 4.15

REINFORCEMENT TO TEACHERS

TOTAL RESPONDENTS	YES	NO
450	372	78
Percent	83	17

From table no. 4.15, it can be seen that eighty three percent teachers responded that DIETs encouraged teachers for attending such kind of in-service training programmes by highlighting them in valedictory function and further calling them as a resource person; while seventeen percent teachers responded that they didn't get any kind of encouragement for attending the in-service training programmes from DIETs. It can be inferred that DIETs encouraged teachers for attending such kind of in-service training programmes.

TABLE NO. 4.16

ACTION TAKEN ON TEACHERS

TOTAL RESPONDENTS	YES	NO
450	337	113
Percent	75	25

From table no. 4.16, it can be seen that seventy five percent teachers opined that DIETs took action on teachers who were late comers or not attending the in-service training programmes regularly; while twenty five percent teachers opined that DIETs did not take action on such teachers. This indicated that DIETs were serious about the maintaining discipline in the in-service training programmes and DIETs took action on teachers who were found wanting in these areas.

TABLE NO. 4.17

AVAILABILITY OF TEACHING AIDS IN SCHOOL

TOTAL RESPONDENTS	YES	NO
450	318	132
Percent	71	29

From table no. 4.17, it can be seen that seventy one percent teachers replied that teaching aids, which were used by them in in-service training programmes were available in their schools; while twenty nine percent teachers had a different view. It can be concluded that majority schools have teaching aids for effective teaching and those were prepared as directed in in-service training programmes.

TABLE NO. 4.18

EDUCATIONAL CLIMATE OF DIETs

TOTAL RESPONDENTS	YES	NO
450	399	51
Percent	89	11

From table no. 4.18, it can be seen that eighty nine percent teachers felt that the educational climate of DIETs was congenial for learning condition; while eleven percent teachers felt that the climate of DIETs was not suitable for learning. Hence, it is inferred that most of teachers were satisfied with the educational climate of DIETs.

TABLE NO. 4.19
FACILITIES OF SCIENCE LABORATORY IN DIETs

TOTAL RESPONDENTS	YES	NO
450	276	174
Percent	61	39

From table no. 4.19, it can be seen that sixty one percent teachers responded that there were facilities of science laboratory in DIETs for conducting science experiments which were introduced in new syllabus; while thirty nine percent teachers responded that science laboratory was not there. From the above result it can be concluded that it fulfilled facilities of science laboratory for experiments.

TABLE NO. 4.20
QUALITY IMPROVEMENT IN PRIMARY EDUCATION

TOTAL RESPONDENTS	YES	NO
450	375	75
Percent	83	17

From table no. 4.20, it can be seen that eighty three percent teachers believed that due to in-service training programmes the quality of primary education was improved; while seventeen percent teachers believed that there was no improvement in primary education due to the in-service training programmes. It can be inferred that majority of the teachers believed that quality can be improved by training programmes.

TABLE NO. 4.21
ADEPTNESS OF IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
450	349	101
Percent	78	22

115

From table no. 4.21, it can be seen that seventy eight percent teachers felt that in-service training programmes were able to cope with new trends of education; while twenty two percent teachers felt that in-service training programmes were not so. It can be conclude that majority of teachers felt that training programmes were in tune with new trends in education.

TABLE NO. 4.22

TEACHING METHOD USED

TEACHING METHODS	TEACHERS' RESPONSE		
	MOSTLY USED	USED SOMETIMES	NEVER USED
Lecture	414 (17%)	081 (03%)	004 (00%)
Demonstration	147 (06%)	238 (10%)	013 (01%)
Project	053 (02%)	197 (08%)	073 (03%)
Seminar	60 (02%)	126 (05%)	188 (08%)
Discussion	361 (15%)	066 (03%)	009 (00%)
Assignment	207 (08%)	102 (04%)	018 (01%)
Others	014 (01%)	023 (01%)	043 (02%)

From table no. 4.22, it can be seen that seventeen percent teachers opined that lecture method was mostly used and fifteen percent opined that discussion method was mostly used. Ten percent opined that demonstration method was used occasionally and eight percent opined project method was used sometimes; while the least used method was seminar. It can be summed up that lecture method was the preferred one followed by discussion in in-service training programmes.

TABLE NO. 4.23

KNOWLEDGE FROM RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
450	413	37
Percent	92	8

From table no. 4.23, it can be seen that ninety two percent teachers were of the opinion that they received new knowledge from resource persons during the in-service training programmes; while eight percent teachers felt that it was not so. It can be concluded that majority of the teachers felt that there is scope to gain new knowledge from resource persons and teachers were really benefited in such training programmes.

TABLE NO. 4.24

PREFERENCE TO WOMEN AS RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
450	362	88
Percent	80	20

From table no. 4.24, it can be seen that, eighty percent teachers replied that women were selected as a resource persons and preference was given to them; while twenty percent teachers replied that women were not selected as a resource persons and preference was not given to them. It can be concluded that in selection of resource persons DIETs gives equal opportunities to men and women.

TABLE NO. 4.25

C.R.C / B.R.C CO-ORDINATORS AS RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
450	186	264
Percent	41	59

From table no. 4.25, it can be seen that fifty nine percent teachers opined that selection of resource persons were not only depended on C.R.C / B.R.C co-ordinators; while forty one percent teachers opined that selection of resource persons were done form the C.R.C / B.R.C co-ordinators. This indicated that mix opinions prevailed in teachers regarding selection of resource persons from C.R.C / B.R.C co-ordinators.

TABLE NO. 4.26
TEACHER EDUCATORS AS RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
450	232	218
Percent	52	48

From table no. 4.26, it can be seen that fifty two percent teachers opined that teacher educators of colleges of education should invited as resource persons for in-service training programmes; while forty-eight percent teachers opined otherwise. From this result it can be summed up that mixed opinions prevailed in the teachers regarding the resource persons invited from colleges of education.

TABLE NO. 4.27
REMUNERATION

TOTAL RESPONDENTS	YES	NO
450	395	55
Percent	88	12

From table no. 4.27, it can be seen that eighty-eight percent teachers opined that remuneration was given to them according to the rules and regulation; while twelve percent teachers opined that remuneration was not paid to them according to rules and regulation. From the above result it can be said that teachers got the remuneration according to rules and regulation.

TABLE NO. 4.28
ECONOMICAL LOSS

TOTAL RESPONDENTS	YES	NO
450	170	280
Percent	38	62

From table no. 4.28, it can be seen that sixty two percent teachers felt that they didn't underwent financial loss in attending in-service training programmes; while thirty eight percent teachers felt that they faced this kind of situation. From this result it can be summed up that in attending in-service training programmes teacher didn't underwent financial loss.

TABLE NO. 4.29
MORE FUNDS TO C.R.Cs

TOTAL RESPONDENTS	YES	NO
450	270	180
Percent	60	40

From table no. 4.29, it can be seen that sixty percent teachers responded that more fund should be provided to C.R.Cs for implementation of these in-service training programmes; while forty percent teachers responded that fund provided by the authorities were enough for implementation. It can be concluded that teachers felt that more financial support was required to put ideas in action which were learnt in in-service training programmes.

TABLE NO. 4.30
ATTITUDE OF THE PRINCIPAL

TOTAL RESPONDENTS	YES	NO
450	102	348
Percent	23	77

From table no. 4.30, it can be seen that seventy seven percent opined that their principals encouraged them to attend the in-service training programmes; while twenty three percent teachers opined that the principals did not have any positive attitude. It can be inferred that teachers didn't face any problems for attending the in-service training programmes from principal.

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TABLE NO. 4.31
VENUE OF IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
450	254	196
Percent	56	44

From table no. 4.31, it can be seen that fifty six percent teachers opined that school activities could be taken care if the venue of in-service training programmes is near by the school; while forty four percent opined that school work could be not taken care though training venue was nearer or far. This indicated that responses were partly divided and mix opinions prevailed in teachers regarding the venue of in-service training programmes.

TABLE NO. 4.32
FEASIBILITY OF IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
450	417	33
Percent	93	7

From table no. 4.32, it can be seen that ninety three percent teachers replied that in-service training programmes should be arranged according to the feasibility of school programme and teachers; while seven percent teachers replied otherwise. It can be concluded that majority of the teachers felt that in-service training programmes should be arranged according the feasibility of teachers and school programmes.

TABLE NO. 4.33
RECEIPT OF INVITATION ORDER IN TIME

TOTAL RESPONDENTS	YES	NO
450	341	109
Percent	76	24

Table no. 4.33 indicated that, seventy six percent teachers opined that invitation order of in-service training programmes was received in time; while twenty four percent teachers opined that the invitation order of in-service training programmes was not received in time. This indicated that teachers received the invitation order in time, so preparation was done by them in advance for attending in-service training programmes.

TABLE NO. 4.34

PROBLEMS REGARDING TRAINING DURING VACATION

TOTAL RESPONDENTS	YES	NO
450	191	259
Percent	42	58

From table no. 4.34, it can be seen that fifty eight percent responded that they faced administrative problems regarding in-service training programmes attended during vacation period; while forty two percent teachers responded that they didn't face any administrative problems. It can be concluded that mix opinion prevailed in teachers regarding problems about the training in vacation period.

TABLE NO. 4.35

WORKING STYLE OF ADMINISTRATIVE OFFICERS

TOTAL RESPONDENTS	YES	NO
450	367	83
Percent	82	18

From table no. 4.35, it can be seen that eighty two percent teachers opined that working style of the administrative officer was feasible with their working style and they didn't face any problems regarding this; while eighteen percent opined that their working style and working style of administrative officer did not matched and administrative officers' working style was not feasible for them. This result indicated that working style of the administrative officers' was feasible and majority of the teachers didn't face any problems regarding this.

PROBLEMS FROM SCHOOL AND TALUKA LEVEL OFFICER

TOTAL RESPONDENTS	YES	NO
450	123	327
Percent	27	73

From table no. 4.36, it can be seen that seventy three percent teachers opined that teacher didn't face problems from the principal of the school and taluka level officer in attending in-service training programmes; while twenty seven percent teachers faced above mention situation. It can be summed up that majority of the teachers didn't face problems from the principal of the school and taluka level officer in attending in-service training programmes.

TABLE NO. 4.37

EVALUATION OF WORK

TOTAL RESPONDENTS	YES	NO
450	326	124
Percent	72	28

From table no. 4.37, it can be seen that seventy two percent teachers opined that work done by the teachers was evaluated by the school principal, B.R.C co-ordinators, C.R.C co-ordinators, DIETs staff and offercers of DPEO; while twenty eight percent teachers opined that work was not evaluated after giving training. From this result, it can be concluded that principals, C.R.C co-ordinators, B.R.C co-ordinators, DIETs staff and officers of DPEO checked the progress of the work after it was imparted by DIETs in in-service training programmes.

TABLE NO. 4.38

SHARING OF EXPERIENCE

TOTAL RESPONDENTS	YES	NO
450	436	14
Percent	97	3

From table no. 4.38, it can be seen that ninety seven percent teachers opined that they shared the knowledge they got in in-service training programmes with the staff in school; while three percent teachers opined that they never shared the knowledge of in-service training programmes with their peer teachers in the school. This indicated that teachers shared the knowledge gained in in-service training programmes with the staff members.

TABLE NO. 4.39

TRAINING GIVEN TO THE NEEDY

TOTAL RESPONDENTS	YES	NO
450	388	62
Percent	86	14

From table no. 4.39, it can be seen that eighty six percent teachers opined that training was given to the needy teachers; while fourteen percent teachers opined that the needy teachers were not included. From the above result it can be sum upped that DIETs invited those teachers who really needed the training; it means that for training programmes of class one, DIETs invited those teachers who were teaching in class one.

TABLE NO. 4.40

IMPLEMENTATION OF TRAINING

TOTAL RESPONDENTS	YES	NO
450	165	285
Percent	37	63

From table no. 4.40, it can be seen that sixty three percent didn't face any kind of difficulties in implementation of knowledge learnt in in-service training programmes; while thirty seven percent teachers encountered difficulties in implementation of knowledge learnt in in-service training programmes. This showed that some teachers favoured while other expressed their opinion negatively.

Opinions were asked to teachers about the need of training programmes for professional development **(Question. No.39, Appendix-XII)** In response this responses were categorized in following table.

TABLE NO.4.41

NEED OF TRAINING PROGRAMME FOR PROFESSIONAL DEVELOPMENT

No.	Opinions	Responses	Percent
1.	Knowledge increased in students and all-round development of students personality	72	24
2.	Teaching became effective	70	23
3.	Knowledge about new trends, new invention, new methods,	56	18
4.	For solution of problems	47	16
5.	Education suffered due to excess of training programmes	26	09
6.	Needed for new syllabus	18	06
7.	Exchange of ideas	11	04
	Total	**300**	**100**

From table no. 4.41, it can be seen that twenty four percent teachers opined that after attending in-service training programmes, its impact was seen on students in terms of gaining knowledge, all-around development of personality, eagerness to know new things etc. Twenty three percent teachers also replied that due to in-service training programmes their teaching became effective and eighteen percent teachers opined that knowledge about new trends, new invention, new teaching techniques and methods was acquired by them; while sixteen percent teachers felt that their problems regarding teaching-learning process were solved, and nine percent teachers replied that due to more training programmes education of students suffered. This indicated that after attending in-service training programmes teaching became effective and due to this knowledge increased in students.

Opinions regarding the statement that considering in-service training programmes as an infallible way to make teacher successful and capable, were asked to the teachers **(Question. No.40, Appendix-XII).** Response of those

teachers who had replied in favour of the statement was categorized in following table.

TABLE NO.4.42

IN-SERVICE TRAINING PROGRAMMES AS AN INFALLIBLE WAY

No.	Opinions	Responses	Percent
1.	Increased teaching proficiency and information about new trends	50	21
2.	Training programmes are the only infallible way	48	20
3.	Teaching became effective	39	16
4.	Solution of confusing questions and information regarding administration	36	15
5.	Students' all around development	25	10
6.	Necessary for new teachers	17	7
7.	Teachers' got inspiration and guidance	15	6
8.	Training depends on resource persons	12	5
	Total	242	100

From table no. 4.42, it can be seen that twenty one percent teachers opined that due to in-service training programmes their teaching proficiency was increased and information about the new trends and new techniques were acquired from in-service training programmes. Twenty percent teachers responded positively and said that in-service training programmes were only the infallible way to make teachers successful and capable. Sixteen percent teachers replied that due to in-service training programmes their teaching became effective and students' understood the topics very easily, as a result quality of education has enhanced. Fifteen percent teachers believed that solution of the confusing questions and information regarding administrative matter was also received. This indicated that in-service training programmes were infallible way to make teachers successful and capable and due to in-service training programmes teaching proficiency of teachers increased.

Response of those teachers who had replied against the statement was categorized in following table.

IN-SERVICE TRAINING PROGRAMMES NOT AS AN INFALLIBLE WAY

No.	Opinions	Responses	Percent
1.	Training programmes are not the only infallible way	95	53
2.	To make successful and capable teachers, it depends upon teachers' visions and interest	63	35
3.	Not needed too much training	22	12
	Total	**180**	**100**

From table no. 4.43, it can be seen that fifty three percent teachers opined that in-service training programmes were not the only infallible way to make teachers successful and capable, but there were some other ways to do so. Thirty five percent teachers showed the other ways and replied that, to become successful and capable, teacher should expand and sharpen his vision to acquire new knowledge and always be interested for knowing new things happening in the field of education.

Illustration of change in school after implementation of knowledge learnt in in-service training programmes were asked from the teachers **(Question. No.41, Appendix-XII)**. In response to this following changes were reported.

ILLUSTRATION OF CHANGE IN SCHOOL AFTER IMPLICATION

No.	Opinions	Responses	Percent
1.	Increased students' creativity, regularity, eagerness, knowledge, and enthusiasm etc.	139	33
2.	Teaching became effective	118	28
3.	Teachers used new teaching methods and teaching aids	84	20
4.	Positive attitude in atmosphere	32	8
5.	Incompletion of syllabus	23	6
6.	Knowledge with fun	13	3
7.	Increased computer literacy	09	2
	Total	**418**	**100**

From table no. 4.44, it can be seen that thirty three percent teachers replied that as a result of in-service training programmes students enhanced their creativity, regularity, eagerness, knowledge and enthusiasm etc. Twenty eight percent teachers opined that their teaching became effective with the help of knowledge gained in the in-service training programmes; while twenty percent teachers replied that after attending in-service training programmes new teaching methods and techniques were used by them and in addition to this use of teaching aids was also increased. It can be concluded that positive changes took place in school as an impact of ideas gained in in-service training programmes.

Opinions regarding the economic problems faced by teachers' during in-service training programmes were asked to the teachers (**Question. No.42, Appendix-XII**). In response to this, fifty eight percent teachers opined that economic problems were not faced by them in attending in-service training programmes; while forty two percent teachers had faced, those who faced economic problems further supplied their reasons, which were categorized in following table.

TABLE NO.4.45
ECONOMIC PROBLEMS FACED BY TEACHERS

No.	Opinions	Responses	Percent
1.	More money was spent to reach the venue of in-service training programmes	87	73
2.	More financial help was needed to prepare T.L.M	22	19
3.	Equality in work and remuneration	10	8
	Total	119	100

From table no. 4.45, it can be seen that seventy three percent teachers responded that it was not possible to reach the place of training programme in time without the help of private vehicles because the training programmes was too far from the school and doing so, traveling expenses increased than whatever received as T.A. Nineteen percent teachers opined that more financial help was needed to prepare T.L.M in school; while eight percent teachers felt that in attending in-service training programmes equality should be maintain in payment of T.A/D.A on the basis of work. It can be summed up that generally

teachers faced problems regarding the venue of in-service training programmes and due to this, traveling expenses increased.

Views were asked to the teachers regarding the drawbacks of in-service training programmes attended by them **(Question. No.43, Appendix-XII)**. In response to this twenty seven percent teachers replied that they were not able to see any drawbacks of in-service training programmes; while seventy three percent teachers opined different drawbacks of in-service training programmes. They are categorized in following table:

<u>**TABLE NO.4.46**</u>

DRAWBACKS OF IN-SERVICE TRAINING PROGRAMMES

No.	Opinions	Responses	Percent
1.	Problems regarding resource persons	42	23
2.	Scarcity of time	33	18
3.	Training was not according to modules	26	14
4.	Unnecessary discussion	22	12
5.	Improper planning	11	06
6.	Quality of refreshment was not upto the mark	10	05
7.	Wastage of time	10	05
8.	Lack of co-ordination	10	05
9.	Lack of discussion	07	04
10.	Training place nearer to school	06	03
11.	Lack of teaching aids in school	05	03
12.	Changes needed in in-service training programmes	03	02
	Total	**185**	**100**

From table no. 4.46, it can be seen that twenty three percent teachers opined that same resource persons were invited time and again without looking to their specialization and many of them were not able to justify their topic and it was also opined that resource persons from departments of education were not invited. Eighteen percent teachers believed that, to justify the content matter and for fruitful discussion, more time was needed. Fourteen percent teachers viewed

that training was not given according to the modules; while twelve percent teachers felt that more time was spent in unnecessary discussion in in-service training programmes. From the above, it can be concluded that majority of teachers felt that there was lacuna in resource persons and management of the classes.

For improvement of the in-service training programmes, suggestions were asked from the teachers **(Question. No.44, Appendix-XII)**. In response, following suggestions were identified which have been categorized in following table:

TABLE NO.4.47

SUGGESTIONS FOR IMPROVEMENT OF IN-SERVICE PROGRAMMES

No.	Opinions	Responses	Percent
1.	Trained and qualified resource persons needed	118	19
2.	More preparation related content matter	94	16
3.	More time needed for exchange of ideas	94	16
4.	Effective organization and planning	60	10
5.	Teaching by different methods	48	8
6.	Training to each teachers	41	7
7.	Solution of confusing questions	36	6
8.	Personal modules	35	6
9.	Place of training programmes near by school	23	4
10.	Discipline should be maintained	21	3
11.	More use of teaching aids	21	3
12.	Excess of training-education suffers	14	2
	Total	**605**	**100**

From table no. 4.47, it can be seen that nineteen percent teachers viewed that resource persons should be trained and qualified. Resource persons having effective skill of presentation should only be invited. In addition to this DIETs should invite resource persons from different institutions of education and especially form Departments of Education. Sixteen percent teachers opined that resource persons should present themselves before the class with preparation

about the content-matter. Sixteen percent teachers replied that more time should be devoted to discussion and to exchange their views with resource persons and fellow teachers. Ten percent teachers believed that effective organization and planning of in-service training programmes should be done by DIETs. From above result it can be inferred that for the improvement of in-service training programmes selection of resource persons needs urgent attention.

4.3 ANALYSIS AND INTERPRETATION OF OPINIONNAIRE FOR TEACHERS

In the opinionnaire for teachers, there were total thirty statements For the purpose of data collection; the opinionnaire was administered to the four hundred fifty teachers. The details of the analysis and interpretation of data have been presented in lines to follow.

TABLE NO. 4.48
INVITATION TO TEACHERS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	152	157	52	10	79	181.09
Percent	34	35	11	02⁻	18	

From table no. 4.48, it can be seen that thirty four percent teachers strongly agreed while thirty five percent teachers agreed with the statement that more or less the same teachers were invited frequently for in-service training programmes; while others were not getting chance for attending in-service training programmes. Further the value of chi-square was 181.09, which was significant at 0.01 level. This indicated that there were differences in the opinions of teachers about inviting them for in-service training programmes. It can be concluded that more or less the same teachers were invited frequently for in-service training programmes.

SCOPE FOR EDUCATIONAL DISCUSSION

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	314	92	20	06	18	748.00
Percent	70	20	05	01	04	

From table no. 4.49, it can be seen that seventy percent teachers strongly agreed with the statement that there was a scope for educational discussion in in-service training programmes. Further the value of chi-square was 748.00, which was significant at 0.01 level. This indicated that there were differences in the opinions of teachers about educational discussion were taking place in in-service training programmes. It can be summed up that educational discussion was taking place in in-service training programmes.

TABLE NO. 4.50

OPPORTUNITIES FOR PRESENTING QUESTIONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	319	64	20	13	34	745.36
Percent	71	14	04	03	08	

From table no. 4.50, it can be seen that seventy one percent teachers strongly agreed with the statement that opportunities were given to the teachers for presenting their questions in in-service training programmes. Further the value of chi-square was 745.36, which was significant at 0.01 level. It indicated that there were differences in opinions of teachers about opportunities given to the teachers for presenting their questions. It can be summed up that majority of the teachers felt that opportunity were given for presenting questions.

TABLE NO. 4.51

TIME FOR AMBIGUOUS QUESTIONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	237	141	17	29	26	415.07
Percent	53	31	04	06	06	

From table no. 4.51, it can be seen that fifty three percent teachers strongly agreed while thirty one percent teachers agreed with the statement that enough time was available for discussion of questions which led to ambiguity. Further the value of chi-square was 415.07, which was significant at 0.01 level. It indicated that there were differences in opinions of teachers about regarding the time available for discussion. From the above result it can be concluded that enough time was available for discussion of questions which led to ambiguity.

TABLE NO. 4.52

SOLUTION OF AMBIGUOUS QUESTIONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	168	182	33	38	29	269.13
Percent	37	41	07	09	06	

From table no. 4.52, it can be seen that thirty seven percent teachers strongly agreed while forty one percent teachers agreed with the statement that ambiguous questions or problems of teachers were solved in in-service training programmes. In addition value of chi-square was 269.13, which was significant at 0.01 level. This indicated that there was difference in the opinions of teachers about the solutions of ambiguous questions or problems. From this it can be concluded that in in-service training programmes teachers received solution of difficult questions or problems.

TABLE NO. 4.53

USE OF TEACHERS OPINIONS IN FOLLOWING PROGRAMMES

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	175	137	41	46	51	169.91
Percent	39	31	09	10	11	

From table no. 4.53, it can be seen that thirty nine percent teachers strongly agreed while thirty one percent teachers agreed with the statement that opinions

taken at the end of in-service training programmes, were taken into consideration in the following in-service training programmes. Further the value of chi-square was 169.91, which was significant at 0.01 level. It indicated that there were differences in the opinions of teachers regarding opinions taken at the end of in-service training programmes, were taken into consideration in the following in-service training programmes and majority of the teachers felt that opinions were taken into consideration in the following in-service training programmes.

TABLE NO. 4.54
DISCIPLINE IN IN-SERVICE TRAINING PROGRAMMES

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	323	87	17	12	11	799.47
Percent	72	19	04	03	02	

From table no. 4.54, it can be seen that seventy two percent teachers strongly agreed with the statement that discipline was maintained in in-service training programmes. Further the value of chi-square was 799.47, which was significant at 0.01 level. This indicated that there were differences in the opinions of teachers about discipline and majority of the teachers felt that disciple was observed in in-service training programmes.

TABLE NO. 4.55
USE OF TEACHING AIDS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	249	145	24	17	15	484.62
Percent	56	32	05	04	03	

From table no. 4.55, it can be seen that fifty six percent teachers strongly agreed while thirty two percent teachers agreed with the statement that different types of teaching aids were used in in-service training programmes. Further the value of chi-square was 484.62, which was significant at 0.01 level. It indicated that there

were differences in the opinions of teachers regarding used of teaching aids. So it can be concluded that majority of the teachers said that teaching aids were used during in-service training programmes.

TABLE NO. 4.56

USE OF TECHNIQUES AND METHODS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	257	132	34	15	12	494.42
Percent	57	29	08	03	03	

From table no. 4.56, it can be seen that fifty seven percent teachers strongly agreed while twenty nine percent teachers agreed with the statement that different techniques and methods were used in in-service training programmes. Further the value of chi-square was 494.42, which was significant at 0.01 level. This indicated that there were differences in the opinions of teachers about use of different techniques and methods used, but majority of the teachers favoured the statement.

TABLE NO. 4.57

CLARITY ABOUT NEW CONCEPTS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	330	79	20	12	09	836.29
Percent	73	18	04	03	02	

From table no. 4.57, it can be seen that seventy three percent teachers strongly agreed with the statement that new concepts were well explained in in-service training programmes. Further the value of chi-square was 836.29, which was significant at 0.01 level. The result indicated that there were differences in the opinions of teachers about information acquired regarding new concepts. So it can be concluded that new concepts were well explained in in-service training programmes.

INFORMATION REGARDING DIFFICULT POINTS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	285	104	31	15	15	588.36
Percent	64	23	07	03	03	

From table no. 4.58, it can be seen that sixty four percent teachers strongly agreed while twenty three percent teachers agreed with the statement that teachers acquired information regarding how to explain difficult points of syllabus to students. Further the value of chi-square was 588.36, which was significant at 0.01 level. This indicated that there were differences in the opinions of teachers about acquisition of information regarding how to explain difficult points of syllabus to students and majority of them felt that teachers acquired information regarding how to explain difficult points of syllabus to students.

TABLE NO. 4.59

TIME SPENT IN INAUGURAL AND VALEDICTORY SESSIONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	78	137	50	55	130	75.31
Percent	17	31	11	12	29	

From table no. 4.59, it can be seen that thirty one percent teachers agreed and seventeen percent teachers strongly agreed with the statement that more time was spent in inaugural and valedictory sessions in in-service training programmes. Further the value of chi-square was 75.31, which was significant at 0.01 level. This indicated that there were differences in the opinions of teachers about the time spent in inaugural and valedictory sessions. So it is clear that more time was spent in inaugural and valedictory sessions in in-service training programmes.

TABLE NO. 4.60

EXPLANATION OF SUBJECTS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	260	123	29	19	19	486.58
Percent	58	27	07	04	04	

From table no.4.60, it can be seen that fifty eight percent teachers strongly agreed with the statement that resource persons explained the subject-matter very well. Further the value of chi-square was 486.58, which was significant at 0.01 level. It can be concluded that subject-matter was well explained by resource persons in in-service training programmes.

TABLE NO. 4.61

PREPARATION ON THE PART OF RESOURCE PERSONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	249	150	21	07	23	500.22
Percent	55	33	05	02	05	

From table no. 4.61, it can be seen that fifty five percent teachers strongly agreed while thirty three percent teachers agreed with the statement that resource persons came with preparation in in-service training programmes. Further the value of chi-square was 500.22, which was significant at 0.01 level. From above result it can be concluded that resource persons were well prepared for in-service training programmes.

TABLE NO. 4.62

REPETITION OF RESOURCE PERSONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	164	167	30	32	57	216.20
Percent	36	37	07	07	13	

From table no. 4.62, it can be seen that thirty six percent teachers strongly agreed while thirty seven percent teachers agreed with the statement that same resource persons were invited by DIETs for different in-service training programmes. Further the value of chi-square was 216.20, which was significant at 0.01 level. It indicated that there were differences in the opinions of teachers regarding above statement, supporting that same resource persons were invited by DIETs for different in-service training programmes.

TABLE NO. 4.63

MONEY SPENT ON IMPLEMENTATION OF TRAINING PROGRAMMES

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	106	127	39	40	138	100.33
Percent	24	28	09	09	30	

From table no. 4.63, it can be seen that twenty four percent teachers strongly agreed while twenty eight percent teachers agreed with the statement that own money were spent for implementation of ideas learnt in in-service training programmes and for preparation and materials of content matter. Further the value of chi-square was 100.33, which was significant at 0.01 level. It can be concluded many teachers felt that own money were spent for implementation of ideas learnt in in-service training programmes and for preparation and materials of content matter.

TABLE NO. 4.64

ADMINISTRATIVE PROBLEMS IN SCHOOLS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	172	127	45	33	73	151.73
Percent	38	28	10	08	16	

From table no. 4.64, it can be seen that thirty eight percent teachers strongly agreed while twenty eight percent teachers agreed with the statement that teachers faced administrative problems when they went for in-service training programmes. Further the value of chi-square was 151.73, which was significant

at 0.01 level. It indicated that there were differences in the opinions of teachers regarding administrative problems. It can be concluded that majority of the teachers faced administrative problems when they went for in-service training programmes.

TABLE NO. 4.65

ADVERSE EFFECTS ON STUDENT'S EDUCATION

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	275	97	22	29	27	517.64
Percent	61	22	05	06	06	

From table no. 4.65, it can be seen that sixty one percent teachers strongly agreed while twenty two percent teachers agreed with the statement that due to frequent in-service training programmes education of students was suffered. Further the value of chi-square was 517.64, which was significant at 0.01 level. It can be concluded that frequent organization of in-service training programmes adversely affects the education of students.

TABLE NO. 4.66

CO-OPERATION AND ENCOURAGEMENT FROM SCHOOLS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	246	118	52	21	13	413.93
Percent	55	26	11	05	03	

From table no. 4.66, it can be seen that fifty five percent teachers strongly agreed while twenty six percent teachers agreed with the statement that encouragement and co-operation was provided to teachers by school for attending different in-service training programmes. Further the value of chi-square was 413.93, which was significant at 0.01 level. From the above result it can be concluded that there were differences in the opinions of teachers regarding co-operation and encouragement from school to teachers for attending in-service training programmes and majority felt that there was encouragement and co-operation was provided to teachers by school.

TABLE NO. 4.67

ROLE OF IN-SERVICE TRAINING PROGRAMMES IN CREATING SCHOOL ATMOSPHERE

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	308	94	17	22	09	716.49
Percent	68	21	04	05	02	

From table no. 4.67, it can be seen that sixty eight percent teachers strongly agreed while twenty one percent teachers agreed with the statement that in-service training programmes were played an important role in creating educational atmosphere of school. Further the value of chi-square was 716.49, which was significant at 0.01 level. Form the result it can be said that there were differences in the opinions of teachers regarding role of in-service training programmes in creating educational atmosphere of school but majority were in favoured.

TABLE NO. 4.68

FREQUENT IN-SERVICE TRAINING PROGRAMMES FOR IMPROVING STUDENTS' LEARNING

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	200	141	33	27	49	262.22
Percent	44	31	08	06	11	

From table no. 4.68, it can be seen that forty four percent teachers strongly agreed while thirty one percent teachers agreed with the statement that frequent in-service training programmes should be organized for improving students' learning at school level. Further the value of chi-square was 262.22, which was significant at 0.01 level. It can be concluded that there were differences in the opinions of teachers regarding frequent in-service training programmes for improving quality of students' learning but majority were in favour of such courses.

TRAINING AND ITS IMPLICATION

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	155	163	51	45	36	177.96
Percent	35	36	11	10	08	

From table no. 4.69, it can be seen that thirty five percent teachers strongly agreed while thirty six percent teachers agreed with the statement that the content learnt in in-service training programmes and role of school climate in its implication, this two things were paradoxical to each other. Further the value of chi-square was 177.96, which was significant at 0.01 level. It indicated that there were differences in the opinions of teachers regarding two different contradictory statements. Majority of them agreed that content learnt in in-service training programmes and role of school climate in its implication, this two things were paradoxical to each other.

TABLE NO. 4.70

USE OF SCHOOL CLIMATE FOR CLASSROOM

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	334	73	20	10	13	856.16
Percent	74	16	05	02	03	

From table no. 4.70, it can be seen that seventy four percent teachers strongly agreed with the statement that as told in in-service training programmes, school climate was useful in creating lively atmosphere of classroom. Further the value of chi-square was 856.16, which was significant at 0.01 level. It indicated that school climate was useful in creating lively atmosphere of classroom.

CHANGES IN IN-SERVICE TRAINING PROGRAMMES ACCORDING TO SCHOOL CLIMATE

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	324	77	28	11	10	793.44
Percent	72	17	06	. 03	02	

From table no. 4.71, it can be seen that seventy two percent teachers strongly agreed with the statement that in-service training programmes should be changed according to the local school climate and its needs. Further the value of chi-square was 793.44, which was significant at 0.01 level. It can be concluded that there was a need to change in-service training programmes according to school climate.

TABLE NO. 4.72

CO-OPERATION AND ENCOURAGEMENT FORM STAFF

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	296	84	26	21	23	620.20
Percent	66	19	06	04	05	

From table no. 4.72, it can be seen that sixty six percent teachers strongly agreed with the statement that co-operation and encouragement was provided by staff for attending different in-service training programmes. Further the value of chi-square was 620.20, which was significant at 0.01 level. It indicated that teachers secured co-operation and encouragement from staff.

TABLE NO. 4.73

IMPLEMENTATION OF IDEAS IN CALSSROOM

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	224	154	25	25	22	390.29
Percent	50	34	06	06	04	

From table no. 4.73, it can be seen that fifty percent teachers strongly agreed while thirty four percent teachers agreed with the statement that less number of teachers in school and other facilities became obstacles in working as suggested in in-service training programmes. Further the value of chi-square was 390.29, which was significant at 0.01 level. From the above result it can be concluded that teachers faced problems in implementation of ideas suggested by resource persons in in-service training programmes.

TABLE NO. 4.74
CHANGES IN THOUGHT

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	306	104	20	12	08	717.33
Percent	68	23	04	03	02	

From table no. 4.74, it can be seen that sixty eight percent teachers strongly agreed with the statement that there was a change in thoughts of teachers after attending in-service training programmes. Further the value of chi-square was 717.33, which was significant at 0.01 level. It can be concluded that majority of the teachers felt that there was a change in thought.

TABLE NO. 4.75
EFFECTIVE RESOURCE PERSONS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	378	39	18	08	07	1159.36
Percent	84	09	·04	02	01	

From table no. 4.75, it can be seen that eighty four percent teachers strongly agreed with the statement that if the different resource persons were invited having effective presentation skill; teachers would be interested in in-service training programmes. Further the value of chi-square was 1159.36, which was significant at 0.01 level. It can be concluded that different resource persons should be invited having effective presentation skill.

EDUCATIONAL ACHIEVEMENT OF STUDENTS

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	296	95	31	18	10	639.18
Percent	66	21	07	04	02	

From table no. 4.76, it can be seen that sixty six percent teachers strongly agreed with the statement that educational achievement of students' was increased because of teachers attending in-service training programmes. Further the value of chi-square was 639.18, which was significant at 0.01 level. It indicates that there were differences in the opinions of teachers, indicating that majority of felt that training was positive impact on achievement of students.

TABLE NO. 4.77

EFFECTIVE TEACHING

Total Respondent	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Chi-square
450	322	83	21	15	09	786.89
Percent	72	18	05	03	02	

From table no. 4.77, it can be seen that seventy two percent teachers strongly agreed with the statement that teaching became more effective due to teachers attending in-service training programmes. Further the value of chi-square was 786.89, which was significant at 0.01 level. The result indicated that in-service training programmes have significant impact on teaching.

4.4 ANALYSIS AND INTERPRETATION OF RESOURCE PERSONS' RESPONSES

In the questionnaire for resource persons, there were total sixteen questions. Out of these sixteen questions, thirteen were open ended as well as closed ended, while three questions were fully open ended. For the purpose of data collection, the questionnaire was given to the ninety resource persons. The details of the analysis and interpretation of data is given as follows:-

TABLE NO. 4.78

EDUCATIONAL QUALIFICATION OF RESOURCE PERSONS

Total respondents	M.A/M.Com/ M.Sc/ B.Ed	B.A/B.Com/ B.Sc/ M.Ed/ Ph.D	B.A/B.Com/ B.Sc/ B.Ed	P.T.C/ C.P.Ed	Others
90	16	3	12	51	08
percent	18	03	13	57	09

From table no. 4.78, it can be seen that there were total ninety resource persons, out of them fifty seven percent had P.T.C/C.P.Ed degree, eighteen percent had post graduate degree, thirteen percent had graduate degree; three percent had doctorate degree; while nine percent resource persons had degrees like A.T.D; B.P.Ed; G.B.T.C; etc. It can be said that majority of the resource persons invited in in-service training programmes had P.T.C/C.P.Ed degree.

TABLE NO. 4.79

DISTRIBUTION ON THE BASIS OF EXPERIENCE

Total respondents	1-5	6-10	11-15	16-20	21-25	26-30	31-40
90	17	19	10	15	09	13	07
percent	19	21	11	17	10	14	08

From table no. 4.79, it can be seen that there were twenty one percent resource persons having experience of six to ten years of teaching; nineteen percent resource persons having experience of one to five years; seventeen percent resource persons having experience of sixteen to twenty years of teaching; fourteen percent resource persons having experience of twenty six to thirty years of teaching; eleven percent resource persons having experience of eleven to fifteen years of teaching; ten percent resource persons having experience of twenty one to twenty five years of teaching; eight percent resource persons having experience of thirty one to forty years of teaching. It can be said that sixty percent of resource persons have more than ten years experience.

NEED OF PRE-PREPARATION

TOTAL RESPONDENTS	YES	NO
90	89	01
Percent	99	1

From table no. 4.80, it can be seen that ninety nine percent resource persons opined that they needed to prepare themselves in advance for the in-service training programmes. Most of the resource persons responded that they used to read the subject related material and prepared written material for the in-service training programmes. They used teaching aids prepared by themselves for different topics. Twenty one percent resource persons responded further that they prepared themselves for easy way to teach, to present extra information and to get mastery over content. It can be concluded that resource persons were very conscious about their duty and therefore they prepared themselves in advance thoroughly.

TABLE NO. 4.81

AVAILABILITY OF TEACHING AIDS

TOTAL RESPONDENTS	YES	NO
90	78	12
Percent	87	13

From table no. 4.81, it can be seen that eighty seven percent resource persons opined that wherever they participated in training enough effective teaching aids easily available; while thirteen percent resource persons opined that they didn't get enough teaching aids. It can be concluded that teaching aids were available at different places of in-service training programmes and resource persons used those teaching aids for effective teaching learning process.

TABLE NO. 4.82
SCOPE FOR DISCUSSION

TOTAL RESPONDENTS	YES	NO
90	87	03
Percent	97	03

From table no. 4.82, it can be seen that ninety seven percent resource persons opined that there was a scope for the discussion in the in-service training programmes; while three percent resource person opined that there was no scope for discussion because of the shortage of time. Thirteen percent resource persons added their views in favour of the statement that it was done through group discussion for solving the difficult task in the content. From the above result it can be concluded that there was a scope for the discussion in in-service training programmes.

TABLE NO. 4.83
TIME DURATION FOR CONTENT

TOTAL RESPONDENTS	YES	NO
90	63	27
Percent	70	30

From table no. 4.83, it can be seen that seventy percent resource persons opined that time allotted to them for the presentation of content was enough; while thirty percent resource person opined that there was a shortage of time for the presentation of content, so the content was not covered. Eleven percent resource persons responded further that time allotted to them was not sufficient and they needed more time for fruitful discussion, activities and experiment. It can be concluded that most of resource persons felt that enough time was given to them.

TABLE NO. 4.84

SELECTION OF THE TOPIC

TOTAL RESPONDENTS	YES	NO
90	72	18
Percent	80	20

From table no. 4.84, it can be seen that eighty percent resource persons opined that the topic of their interest was given to them, as a result they could deal with the group with more zeal and enthusiasm. While twenty percent resource persons opined that the topic of their interest was not given. It can be concluded that the topic of their interest was not given to resource persons.

TABLE NO. 4.85

CO-OPERATION FROM THE DIETs

TOTAL RESPONDENTS	YES	NO
90	82	08
Percent	91	09

From table no. 4.85, it can be seen that ninety one percent resource persons opined that cooperation was given by the DIETs for the in-service programmes; while nine percent resource persons opined that they did not get enough co-operations from DIETs. It can be said that DIETs were providing enough co-operations to the resource persons in in-service training programmes.

TABLE NO. 4.86

RESOURCE PERSONS' REMUNERATION

TOTAL RESPONDENTS	YES	NO
90	65	25
Percent	72	28

From table no. 4.86, it can be seen that seventy two percent resource persons responded that they were given remuneration for their service; while twenty eight percent resource persons responded that they did not get remuneration on the basis of their designation. Twenty one percent resource persons responded further that remuneration was 100 rupees per lecture which was less in compare to their service, while it should be 200 rupees per lecture. From the above result it can be inferred that remuneration was given to the resource persons, but it should be given on the basis of their basic salary.

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TABLE NO. 4.87

PARTICIPATION IN THE PROGRAMMES

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TOTAL RESPONDENTS	YES	NO
90	24	66
Percent	27	73

From table no. 4.87, it can be seen that twenty seven percent resource persons opined that they were not able to attend the in-service training programmes, as they were holding post of principal in school and had to look other administrative as well as teaching work; while seventy three percent resource persons opined that they were invited by the DIET and they were able to attend in the in-service programmes. Sixteen percent resource persons responded further that they were not able to attend in-service training programmes because of their illness, social problem, principals' unwillingness and invitation was not received on the time. It can be concluded that resource persons were able to attended the in-service training programmes except some cases.

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TABLE NO. 4.88

USEFULNESS OF IN-SERVICE TRAINING PROGRAMMES

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TOTAL RESPONDENTS	YES	NO
90	90	00
Percent	100	00

From table no. 4.88, it can be seen that hundred percent resource persons opined that the in-service training programmes were very much useful for the primary teachers during classroom teaching. In-service training programmes were helpful in understanding new trends prevailing in education, to make teacher efficient and to improve the teaching techniques of teacher and able to make education more qualitative. From the above result it can be concluded that in-service programmes were of immense value to primary teachers for their growth and development.

TABLE NO. 4.89
AVAILABILITY OF MODULES

TOTAL RESPONDENTS	YES	NO
90	83	07
Percent	92	08

From table no. 4.89, it can be seen that ninety two percent resource persons opined that modules for in-service training programmes were received by them; while eight percent resource persons opined that modules for in-service training programmes were not received by them. From above result it can be concluded that modules were given to resource persons for better teaching learning programme.

TABLE NO. 4.90
INSPIRATION TO TEACHERS

TOTAL RESPONDENTS	YES	NO
90	83	07
Percent	92	08

From table no. 4.90, it can be seen that ninety two percent resource persons opined that teachers were inspired for attending different kinds of in-service training programmes; while eight percent resource persons opined that there was no need for inspiration because teachers were attending in-service training programmes by order of DIETs. It can be concluded that most of the resource

persons encourage teachers for in-service training programmes even though they knew that teachers were attending in-service training programmes due to order from DIETs.

TABLE NO. 4.91

MATERIALS FOR IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
90	79	11
Percent	88	12

From table no. 4.91, it can be seen that eighty eight percent resource persons opined that DIETs were provided materials for the in-service training programmes; while twelve percent resource persons opined that DIETs did not provide any kind of materials for the in-service training programmes. From this result it can be concluded that DIETs were provided materials for the in-service training programmes.

TABLE NO. 4.92

ORGANIZATION OF OTHER IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
90	85	05
Percent	94	06

From table no. 4.92, it can be seen that ninety four percent resource persons responded that this kind of other in-service training programmes should be organized by the DIETs; while six percent resource persons felt that there was no need of such in-service training programmes. It can be concluded that resource persons have some ideas regarding the new theme of in-service training programmes and they were of the opinion that more in-service training programmes should be organized for the improvement of primary education. Sixty three percent resource persons responded further that in-service training programmes should be organized on role of principals, role of teachers, TLM, qualitative education, value education, population education, content matter of

English, Science and Mathematics, computer education, personality development, yoga etc.

Suggestions given by the resource persons about attitude of teachers attending the in-service training programmes were as follows **(Question. No.14, Appendix-XVI).** Sixty seven percent resource persons opined that teachers were enthusiastic, eager to know new things, active and always ready to do work. It can be inferred that teachers were attending the in-service training programmes with great amount of attention. Seven percent resource persons replied that teachers' attention depended upon teaching methods of resource persons, while seven percent resource persons had seen that teachers were attending the in-service training programmes as a part of their duty.

Reason given by the resource persons about their selection as a resource persons were as follows **(Question. No.15, Appendix-XVI).** Twenty nine percent resource persons replied that selection of resource persons was based on their merit. Twenty five percent resource persons opined that they were selected because of their knowledge and interest in the subject. Twenty three percent opined that their selection was done because of their qualification and their efficiency. Eleven percent opined that they were selected because of their experience. This shows that mix opinions prevailed about their selection as resource persons, but it can be concluded that resource person were selected on the basis of their knowledge, qualification and efficiency.

Suggestions given by resource persons for improving in-service training programmes were as follows **(Question. No.16, Appendix-XVI).** Twenty five percent resource persons opined that different resource persons should be invited having positive attitude towards the in-service training programmes. Nine percent responded that resource persons should have knowledgeable and training or brief orientation be provided to resource persons. Twenty eight percent opined that in in-service training programmes new methods of teaching should be used by resource persons., so teachers might become attentive and be encouraged by new methods like discussion method, demonstration method etc. in in-service training programmes. Because of more discussion teachers

became active. Sixteen percent opined that the duration of in-service training programmes was not enough, it should be of more days. Fifteen percent opined that in-service training programmes should be organized with prior planning and of each standard. Fourteen percent opined that monitoring should be done after in-service training programmes and more TLM should be used in in-service training programmes.

4.5 ANALYSIS AND INTERPRETATION OF LECTURERS' OF DIETs RESPONSES

In the questionnaire for lecturers, there were thirty seven items, out of these, twenty nine were open ended as well as closed ended, while eight were fully open ended. For the purpose of data collection, the questionnaire was administered to the thirty six lecturers. The details of the analysis and interpretation of data has been presented as follows:-

TABLE NO. 4.93

USEFULNESS OF IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
36	36	O
Percent	100	0

From table no. 4.93, it can be seen that hundred percent lecturers opined that in-service training programmes were very much useful in primary education. Due to in-service training programmes, teachers received new knowledge prevailing in the field of education and therefore they could prepare themselves according to the need of the present era.

TABLE NO. 4.94

ADVANTAGE OF IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.94, it can be seen that hundred percent lecturers opined that in-service training programmes are beneficial to primary education. Teachers can present the topic with more confidence and using new methods.

TABLE NO. 4.95
ABILITY TO COPE WITH EMERGING TRENDS

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.95, it can be seen that hundred percent lecturers opined that in-service training programmes were able to cope with new trends emerging in the field of education. In-service training programmes were organized with a view to providing latest knowledge to the teachers.

TABLE NO. 4.96
EFFORTS FOR INNOVATION IN TRAINING

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.96 it can be seen that hundred percent lecturers opined that lecturers were trying to make innovation in in-service training programmes and due to this teachers were motivated and their concentration was increased. Teachers actively participated in discussion and in-service training programmes became lively.

TABLE NO. 4.97
USE OF ICT

TOTAL RESPONDENTS	YES	NO
36	25	11
Percent	69	31

From table no. 4.97, it can be seen that sixty nine percent lecturers opined that information and communication technology were used by them for imparting knowledge in in-service training programmes; while thirty one percent lecturers opined that information and communication technology were not used by them in in-service training programmes. It can be concluded that lecturers were very much aware about the ICT and its use in education. Lecturers used Compact Discs, Audio Cassettes, Transparency, power point presentation and computer.

TABLE NO. 4.98

EDUCATION AND LIFE SKILLS

TOTAL RESPONDENTS	YES	NO
36	33	3
Percent	92	8

From table no. 4.98, it can be seen that ninety two percent lecturers opined that importance was given to life skills in in-service training programmes; while eight percent lecturers opined negatively. It can be concluded that lecturers interwove education and life skills in their lectures and imparted such knowledge in in-service training programmes. Opinions showed that lecturers talked about Acquired Immuno Deficiency Syndrome (AIDS), adolescence education, Yoga and life skills.

TABLE NO. 4.99

IMPORTANCE TO UEE

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.99, it can be seen that hundred percent lecturers opined that importance was provided to UEE in in-service training programmes. This indicated that lecturers were well aware about the importance of UEE in primary

TABLE NO. 4.104

NEED OF PRIOR-PREPARATION

TOTAL RESPONDENTS	YES	NO
36	25	11
Percent	69	31

From table no. 4.104, it can be seen that sixty nine percent lecturers opined that preparation about content and programmes was needed in advance; while thirty one percent lecturers opined negatively. From the result it can be concluded that most of the lecturers prepared themselves in advance. Lecturers prepared themselves in content of in-service training programmes, arrangement of resource persons, preparation for activities, for sending orders to teachers and for referential materials.

TABLE NO. 4.105

TIME FOR ADVANCED PREPARATION

TOTAL RESPONDENTS	YES	NO
36	32	4
Percent	89	11

From table no. 4.105, it can be seen that eighty nine percent lecturers opined that enough time for advanced preparation was available, while eleven percent lecturers opined otherwise. It can be concluded that most of the lecturers prepared themselves in advance and enough time for advanced preparation was available.

TABLE NO. 4.106

CO-OPERATION FROM DIETs

TOTAL RESPONDENTS	YES	NO
36	35	1
Percent	97	3

From table no. 4.106, it can be seen that ninety seven percent lecturers opined that co-operation was available from DIET; while three percent lecturers opined otherwise. It can be concluded that co-operation was available up to greater extent form DIET in organizing in-service training programmes.

TABLE NO. 4.107

TEACHING AIDS AT DIETs

TOTAL RESPONDENTS	YES	NO
36	34	2
Percent	94	6

From table no. 4.107, it can be seen that ninety four percent lecturers opined that teaching aids were available at DIETs for in-service training programmes; while six percent lecturers opined that teaching aids were not available at DIETs. It can be concluded that DIETs have enough teaching aids for in-service training programmes.

TABLE NO. 4.108

TEACHING METHOD

TOTAL RESPONDENTS	YES	NO
36	29	7
Percent	81	19

From table no. 4.108, it can be seen that eighty one percent lecturers opined that different teaching methods in their lecture was used; while nineteen percent lecturers opined did not. It can be concluded that most of the lecturers used different teaching methods for teaching learning process. Forty two percent (20) lecturers used group discussion and discussion method for their teaching, while twenty five percent (12) lecturers used demonstration method; while others used lecture method, project method and experimental method.

TABLE NO. 4.109
PROBLEM IN IN-SERVICE TRAINING PROGRAMMES

TOTAL RESPONDENTS	YES	NO
36	8	28
Percent	22	78

From table no. 4.109, it can be seen that seventy eight percent lecturers opined that no difficulties was encountered by them in in-service training programmes; while twenty two percent lecturers opined otherwise. These difficulties were regarding the arrangement of resource persons, venue of in-service training programmes and facilities provided to teachers in residential in-service training programmes.

TABLE NO. 4.110
CO-OPERATION FROM TEACHERS

TOTAL RESPONDENTS	YES	NO
36	32	4
Percent	89	11

From table no. 4.110, it can be seen that eighty nine percent lecturers opined that co-operation from teachers in in-service training programmes was received; while eleven percent lecturers opined negatively. It can be concluded that teachers were well aware of discipline and importance of in-service training programmes and because of these co-operated well with lecturers in all possible ways. Lecturers further responded that, teachers co-operated them by making climate lively and maintaining peace, by helping in organization of activities and arrangement of facilities.

TABLE NO. 4.111

PARTICIPATION OF TEACHERS

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.111, it can be seen that hundred percent lecturers were of the opinion that teachers participated in in-service training programmes with the enthusiasm. It can be concluded that teachers were enthusiastic to participate in in-service training programmes.

TABLE NO. 4.112

EXCHANGE OF IDEAS WITH TEACHERS

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.112, it can be seen that hundred percent lecturers opined that the basic ideas of education were shared with the teachers. It can be concluded that all the lecturers were interested in exchanging ideas with teachers in in-service training programmes.

TABLE NO. 4.113

KNOWLEDGE FROM TEACHERS

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.113, it can be seen that hundred percent lecturers opined that knowledge was acquired from the teachers. It can be concluded that teachers attending the in-service training programmes with prior preparation and they have some ideas in their minds, which might be of immense help to lecturers.

TABLE NO. 4.114

OPPORTUNITIES TO PRESENT QUESTIONS

TOTAL RESPONDENTS	YES	NO
36	34	2
Percent	94	6

From table no. 4.114, it can be seen that ninety four percent lecturers opined that opportunities were given to ask questions; while six percent lecturers opined that otherwise. It can be concluded that majority of the lecturers provided opportunities to teachers for asking questions regarding the difficulties in the content of the in-service training programmes.

TABLE NO. 4.115

PROBLEMS IN SELECTION OF RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
36	7	29
Percent	19	81

From table no. 4.115, it can be seen that eighty one percent lecturers opined that there were problems in selecting resource persons for in-service training programmes; while nineteen lecturers opined that no such problems were faced. Those who faced problems further replied that resource persons were not prepared themselves properly and getting resource persons on subjects was a major problem.

TABLE NO. 4.116

PREPARATION ON THE PART OF RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
36	31	5
Percent	86	14

From table no. 4.116, it can be seen that eighty six percent lecturers opined that resource persons were attending in-service training programmes with prior preparation; while fourteen percent lecturers did not think so. It can be concluded that most of the resource persons prepared themselves in advance for better performance in their teaching in in-service training programmes.

TABLE NO. 4.117
TRAINING TO RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.117, it can be seen that hundred percent lecturers opined that training was given to resource persons by the Key Resource Persons (KRP) and in this training resource persons were informed how to teach particular topic/subject to the teachers. It can be concluded that resource persons also received training to perform their task as a resource person in in-service training programmes.

TABLE NO. 4.118
METHODS USED BY RESOURCE PERSONS

TOTAL RESPONDENTS	YES	NO
36	36	0
Percent	100	0

From table no. 4.118, it can be seen that hundred percent lecturers opined that resource persons used different teaching methods for presenting their topic. It can be concluded that resource persons were well aware about the different teaching methods and same were used in in-service training programmes.

TABLE NO. 4.119
FULFILLMENT OF OBJECTIVES

TOTAL RESPONDENTS	YES	NO
36	31	5
Percent	86	14

From table no. 4.119, it can be seen that eighty six percent lecturers opined that objectives of in-service training programmes were fulfilled by resource persons; while fourteen percent lecturers opined that it was not so. It can be concluded that majority of resource persons were capable of fulfilling the objectives of in-service training programmes.

TABLE NO. 4.120
TEACHER'S SATISFACTION WITH KNOWLEDGE

TOTAL RESPONDENTS	YES	NO
36	33	3
Percent	92	8

From table no. 4.120, it can be seen that ninety two percent lecturers opined that teachers were satisfied with the knowledge imparted by resource persons; while eight percent lecturers opined that teachers were not satisfied. It can be concluded that resource persons prepared themselves to teach teachers and satisfied their hunger for knowledge.

TABLE NO. 4.121
INNOVATION IN CONTENT

TOTAL RESPONDENTS	YES	NO
36	18	18
Percent	50	50

From table no. 4.121, it can be seen that fifty percent lecturers opined that there was a need for innovation in content of in-service training programmes; while fifty percent lecturers opined that there was no need for innovation. This shows that

mixed opinions prevailed in the lecturers regarding innovation in content of in-service training programmes.

Efforts made by lecturers to fulfill the objectives of UEE were asked from the lecturers of DIETs **(Question. No.30, Appendix-XIX)** in response to this sixty five percent lecturers opined that different programmes like girls education, shala pravetotshav, joyful learning, learning without burden, M.T.A, P.T.A, meeting were organised. Seventeen percent lecturers opined that proper guidance was provided to the teachers for the fulfillment of UEE; while other seventeen percent lecturers opined that new methods of teaching and provided knowledge regarding the new trends in education. It can be summed up that lecturers used different techniques to fulfill the objectives of UEE.

Regarding the behaviour of the resource persons with teachers opinions were asked to the lecturers **(Question. No.31, Appendix-XIX)**. In response to behaviour of resource persons with teachers, ninety nine percent responses showed that resource persons' behaviour was polite, positive, and friendly with teachers, while only two percent lecturers opined that resource persons behaviour was strict with them. It can be concluded that resource persons were polite and behave properly in in-service training programmes.

Question regarding the use of teaching aids was asked to lecturers **(Question. No.32, Appendix-XIX)**. The responses were categorized in following table:

TABLE NO. 4.122

USE OF TEACHING AIDS

Name of the Teaching Aids	Frequency	Percent
T.L.M	14	19
O.H.P	14	19
Content Related to Teaching Aids	14	19
A. V. Aids	12	16
Computer	12	16
Slide Projector	09	12

From table no. 4.122, it can be seen that most of all teaching aids were equally used by lecturers in in-service training programmes.

Opinions regarding questions asked by the lecturers were asked to the lecturers **(Question. No.33, Appendix-XIX)**. In response to this, fifty three percent lecturers opined that teachers asked questions related to administrative matter; while forty four percent lecturers opined that teachers asked question related to educational matter. It can be concluded that mix types of questions were asked by teachers in in-service training programmes.

In response to the role of lecturers in solving teachers' problem **(Question. No.34, Appendix-XIX)**, fifty seven percent lecturers responded that their role was like a guide and they provided proper guidance to the teacher for making them a good teacher; while thirty seven percent lecturers responded that they performed a role of problem solver and solved the teacher's problem and answered the questions asked by them. It can be summed up that lecturers played dual roles as a guide and problem solver.

Views regarding how resource persons were selected asked to lecturers **(Question. No.35, Appendix-XIX)**. In response to this, fifty one percent lecturers responded that resource persons were selected on the basis of their knowledge and content mastery of the subjects; while sixteen percent, seventeen percent and nine percent lecturers responded that they selected resource persons on the basis of their experience, qualification and skill of presenting ideas respectively. From above result it can be concluded that most of the lecturers selected resource persons on the basis of knowledge and content mastery.

Opinions regarding the frequency of in-service training programmes in one year and time of in-service training **(Question. No.36, Appendix-XIX)**. forty four percent lecturers responded that arrangement should be made so that each teacher gets chance to attend minimum one programme per year, while fifteen percent lecturers responded that subject wise in-service training programmes

should be organized. In addition the time of in-service training programmes hundred percent lecturers responded that programme should be organized in vacation, so that education of children did not suffer.

For improvement of the in-service training programmes suggestions were asked from the lecturers **(Question. No.37, Appendix-XIX)**. In response to this thirty one percent lecturers replied that in-service training programmes should be organized according to need. Twenty four percent lecturers replied that enthusiastic teachers should be invited for training. Some other suggestions were (1) More discussion and activities should be carried out. (2)ICT based teaching aids and reference material should be used. (3) Proper selection of resource persons should be done (4) Monitoring should be done. (5) Proper guidance should be given to the teachers and (6) In-service training programmes should be organized in such a way that interest of teachers is maintained.

4.6   ANALYSIS AND INTERPRETATION OF INTERVIEW SCHEDULE

The investigator conducted interview of teachers to study the views of teachers regarding the in-service training programmes, its usefulness, problems experienced by teachers, its effectiveness and their suggestion for improvement. The questions were on different aspects such as training, implementation of training, its effectiveness, time duration, and economic matter, problems related to in-service training programmes, its usefulness and teachers' suggestions. The interview schedule was structured in the form and there were fifteen questions **(Appendix- XX)**. The analysis and interpretation of data has been presented as follows.

1.   Forty seven percent teachers responded that opportunities were given to them for presenting questions in in-service training programmes however in some cases opportunities were given but the resource persons failed to satisfy them. Teachers also responded that opportunities were given at the end of in-service training programmes, and it was also observed by

the teachers that only few teachers asked questions while others did not, though opportunity was given. Twenty seven percent teachers responded that opportunity was not given to them for presenting their questions. It can be concluded that opportunities were given to the teachers for presenting their questions.

2. Seventy six percent teachers responded that enough time was available for study in residential in-service training programmes; while twenty percent teachers were not gone through residential in-service training programmes. It can be concluded that in residential in-service training programmes provided adequate time for study.

3. Sixty five percent teachers replied that duration of in-service training programmes was proper and a few teachers observed that some resource persons were able to present their ideas in stipulated time, while for others it was extremely difficult; while thirty five percent teachers suggested for more time. It was also felt that in-service training programmes should be organized in vacation and it should be non-residential type. It can be concluded that enough time duration was selected by the organizers. It can be inferred that teachers were happy with duration of in-service training programmes. However a very few teachers felt that training programmes should be non-residential and be organized in vacation.

4. Fifty one percent teachers replied that quality of primary education has improved due to in-service training programmes. While twenty four percent teachers felt that quality of primary education has been adversely affected; while Twenty four percent teachers replied that quality of primary education depends on how knowledge gained and its use in real classroom situation. Thus, it can be concluded that in-service training programmes were helpful in improving the quality of primary education by and large.

5. Seventy three percent teachers replied that in-service training programmes were capable to cope with new trends in education and knowledge gained helped to become effective teacher. It also helped to become aware about the new trends prevailing in the field of education;

while eleven percent teachers replied negatively, while nine sixteen percent teachers reacted that it depended on teachers how they imparted training. It can be concluded that in-service training programmes were capable of coping with new trends in education.

6. Forty eight percent teachers replied that resource persons used lecture method for teaching in in-service training programmes; while thirty nine percent teachers replied that discussion method was used by resource persons; while a very few responses showed that project method, group discussion method, seminar method, assignment method and demonstration method was used by resource persons in in-service training programmes. It can be concluded that lecture and discussion method were generally used in in-service training programmes.

7. Hundred percent teachers responded that T.A/D.A was given to them according to the rules and regulation. It can be concluded that government rules and regulation were followed by DIETs and T.A/D.A was provided to the teachers accordingly.

8. Sixty six percent teachers replied that no economic loss was faced due to in-service training programmes; while thirty four percent teachers replied that economic loss was faced due to these in-service training programmes. The reasons as to how economic loss was faced were: (1) T.A/D.A was not sufficient; more money used because more expenses was done by them in attending in-service training programmes. (2) More money was needed for preparing T.L.M. (3) More money was spent on reaching the venue of in-service training programmes.

9. Eighty two percent teachers faced no problems from school principal regarding in-service training programmes; while eighteen percent teachers had problems. It was felt that sometimes there were problems arose because of inadequate number of teachers or money matters regarding T.L.M. It can be concluded that in most of cases teachers did not face any problems from school principals.

10. Seventy one percent teachers responded that monitoring was done about the things learnt in in-service training programmes and its implication in class and it was done by school principal, C.R.C/B.R.C co-ordinators and

educational inspector of taluka; while twenty nine percent teachers responded that monitoring was absent. It can be concluded that monitoring was done by different higher authorities about the implementation of knowledge gained in in-service training programmes in most of school.

11. Ninety four percent teachers replied that matter suggested in in-service training programmes was discussed with other co-teachers. This discussion took place in staff-room during the recess time and in C.R.C meeting; while six percent teachers replied that it was not done. It can be concluded that knowledge gained by in-service training programmes was spread over to many teachers by different ways.

12. Ninety six percent teachers felt that in-service training programmes were needed for professional development of teachers. In addition, it was felt that due to in-service training programmes and knowledge gained in in-service training programmes helped to know about the new trends in education. This in turn affects quality of education; while four percent teachers replied otherwise. It can be concluded that teachers were interested in taking part in in-service training programmes and due to this there was professional development.

13. Fifty percent teachers felt that in-service training programmes were the infallible way to make teacher successful and capable and added further that due to new trends in education could solve their educational problems. In-service training programmes helped them to understand the difficult task and showed how effectively teaching can be done; while other fifty percent did not agree and reacted that teachers were capable to cope with new trends and knowledge, there was no need of in-service training programmes, but for this, teachers should have always remained in touch with field of education through their vast reading. It can be concluded that mix opinions prevailed in teachers regarding the in-service training programmes as a infallible way.

14. Thirty seven percent teachers responded that some limitations were found on the part of resource persons. It was also felt that knowledge was not available from resource persons. Resource persons did not give proper

scope to discuss the content matter of in-service training programmes; while thirty two percent teachers said that time management was the weakest point of in-service training programmes. Resource persons were not able to manage the time given to them for their topic. The other limitation of in-service training programmes were interruption in teaching at school, continuity was not maintained and sometimes new trends were not taken into consideration. It can be concluded that teachers found limitations in resource persons and in time management.

15.   Twenty eight percent teachers expected more knowledge from resource persons. Thirteen percent teachers needed subject-wise modules in in-service training programmes, Thirteen percent teachers felt that different teaching methods were used in in-service training programmes by resource person. Eleven percent teachers opined that a record should be maintained about the opinions, suggestions and questions.

4.7   DATA ANALYSIS AND INTERPRETATION OF OBSERVATION SCHEDULE:-

Observation schedule was prepared to cross check the data gathered by questionnaires, interview and opinionnaire from different personnel in touch with in-service training programmes. In observation schedule, there were total twenty points, those were categorized as follows. Seven informative points about the in-service training programmes, four points were related to content of in-service training programmes; four were related to mode of presentation by resource persons in in-service training programmes; while five points were related to process of in-service training programmes. For the purpose of data collection, the six on going in-service training programmes were observed by the investigator. The details about analysis and interpretation of the data are presented here as under.

1) Information related to resource persons:-
Resource persons who were invited by the DIETs for in-service training programmes, were generally serving in primary schools of relevant district, most

of them were assistant teachers in school. Most of the resource persons were graduate or post-graduate while some have passed P.T.C. course.

2) Teaching Method:-

It was observed that most of resource persons used lecture method for their teaching in in-service training programmes, while discussion method was also used by resource persons up to some extent; while a very few times it was observed that project method, group discussion method, seminar method and demonstration method used by resource persons in in-service training programmes. So, it can be concluded that lecture and discussion method were generally prevalent in in-service training programmes by resource persons.

3) Presentation of subject matter:-

In in-service training programmes resource persons generally used lecture method for presentation of their teaching points, but their presentation was good and looked realistic and variety of teaching learning material was used. It was also observed that resource persons prepared well in advance and due to this their presentation was interesting and with variety of illustrations.

4) Use of Teaching aids:-

T.L.M, models, O.H.P, slide projector, pictures, and charts were used by resource persons. Computer, film strips and other latest technological aids were never used in in-service training programmes. From above observation, it can be concluded that resource persons did not switch over to latest teaching aids and. ICT.

5) Justification of the Subject matter:-

In observation, it was seen that most of resource persons gave proper justification to the subject-matter; while it was also realized that in this in-service training programmes the resource persons, who were invited for teaching of mathematics, science and English were not able to give proper justification to their subjects. Sometime, it also happened that, teachers have asked questions seeking guidance and solution to their problems but resource persons were not able to answer them. So, it can be concluded that English, Mathematics and

science subjects were difficult for some resource persons; while others explained their topics very well.

6) Scope for Discussion:-

It was observed that very less time was available for discussion in in-service training programmes. Discussion took place in in-service training programmes, but the time for discussion was very less, it was hardly one hour per day. This indicated that very less discussion was taking place during in-service training programmes. It was also observed that the content matter of the in-service training programmes was so lengthy, so resource persons devoted most of their time in completing it with lecture method and hence, in spite of their worthiness to discuss, they could not.

7) Information on Modules:-

Modules were given to the teachers and were informative. Content of modules was well organized and well presented. The language of the module was simple and easy, so that teacher could understand it. Activity was explained and difficult terms were given at the end of each chapter. It was seen that opinions were sought from different scholars in the field of education for preparing module.

8) Materials related to in-service training programmes:-

It was observed that note-pad, pen and modules were given in in-service training programmes.

9) Responses about in-service training programmes from teachers:-

It was observed that in the end of in-service training programmes responses were taken from teachers in written forms, while in valedictory function opportunities were given to three or four teachers to express their views about the in-service training programmes. It was seen that the teachers who expressed their views were selected by lecturers of DIETs or resource persons to present their responses. So, equal opportunities were not given to each and every teacher.

10) Presentation of confusing questions and its solution:-

It was seen that only few teachers presented their problematic questions to the resource persons during the discussion; while other teachers were simply passive listeners, did not actively participated in in-service training programmes and especially discussion. Questions asked by the teachers were generally from Mathematics, Science and English. It was also observed that most of the resource persons tried to answer the questions asked by the teachers. Further more, difficulties were realized in answering questions related to Mathematics, Science and English.

11) Evaluation of in-service training programmes:-

It was observed that evaluation was done in the end of in-service training programmes. Most of resource persons evaluated in-service training programmes with the help of evaluation sheet; while others asked questions orally to the teachers at the end of in-service training programmes. It was seen that a few resource persons did not evaluate in-service training programmes by above methods but it was observed that questions were asked in middle of lecture. So it can be concluded that different methods of evaluation were used by resource persons for evaluating in-service training programmes.

12) Time spent in Inaugural and valedictory function

It was seen that in one day in-service training programmes a few minutes were devoted to inaugural and valedictory sessions, while in three or more days in-service training programmes half-an- hour was taken for each functions. In these functions guests were invited from outside, who were either educationalist or principals of schools. Thus, It indicates that time utilized meaningfully which provided the teachers new ideas related to emerging educational context, trends prevailing in education and new knowledge from invited guests.

4.8   ANALYSIS AND INTERPRETATION OF CHECK LIST

Checklist was prepared to check the present status of the infrastructure available in DIETs. The following table showed the present infrastructure available in Panchmahal, Narmada and Vadodara DIETs.

TABLE NO. 4.123

CHECKLIST

No.	Physical Facilities	Available at DIET		
		Panchmahal	Narmada	Vadodara
1.	Institute Campus (acres)	3.4	4.2	3.8
2.	Institute Building(sq. ft)	3,682	3,878	7,773
3.	Hostel- For men	100	-	202
4.	Hostel- For women	-	-	-
5.	Hostel- Total seat capacity	100	-	202
6.	Staff Quarter for Principal	Yes	Yes	Yes
7.	Staff Quarters for Faculty Member	Yes	Yes	Yes
8.	Staff Quarters for Class IV Employees	Yes	Yes	Yes
9.	Library	4,000	2,545	3,000
10.	Reading Room	Yes	Yes	Yes
11.	Method Laboratory for Physical & Life Science.	Yes	Yes	Yes
12.	Equipment for Psychological experiments, Social Studies, Language teaching.	Yes	Yes	Yes
13.	Equipment for Education in Visual & Performing art.	No	No	Yes
14.	Work shed & Garden farm for work experience activities	Yes	Yes	Yes
15.	Playground & equipment for Physical Education/Sports.	Yes	Yes	Yes
16.	Colour TV (B & W)	2	1	2
17.	V.C.R	1	1	1
18.	Projector with Screen	1	1	1
19.	Manual Slide Projector	No	No	1
20.	Audio Cassette Player	1	2	1
21.	Computer Room	1	1	1
22.	PC XT	5	4	15
23.	PC	10	10	10
24.	Dot Matrix Printer	2	2	3

From table no. 4.123, it can be seen that the area of the institute campus and the building are not as per the DIET guideline, but were sufficient for the present activities of DIETs, while in Narmada district civil work is in progress for institute and hostel. The hostels were available for men only in Panchmahal and Vadodara district. Facilities were not available for hostels for women in all the three DIETs for residential in-service training programmes. Staff quarters were also available in Panchmahal and Vadodara district; while in Narmada district, with the help of DIETs guideline hostel building for women, staff quarters for principal, faculty members and class IV employees are being constructed.

Library facilities were not upto the mark in all three DIETs. Books were less in number than as shown in DIET guideline. Laboratory for physical and life science and equipment for psychology experiment, social studies, language teaching, were available in all three DIETs. Equipments for education in visual and performing arts were not available in Narmada and Panchmahal DIETs. Playground and equipment for physical education, sports were available in all three DIETs. Colour television, V.C.R, projector with screen were available in selected DIETs; while manual slide projector was not available in Narmada and Panchmahal district and only one audio cassette player was available in selected DIETs.

Regarding the computer room, it was observed that computer room was there in all the three DIETs but it was not properly maintained. A good number of computer and printers were available in all the three DIETs. Along with this laser and ink-jet printers, scanner, web camera and other devices related to the computer available seen in the DIETs.

From this, it can be concluded that in all the three DIETs, hostel facilities for women are not there for residential in-service training programmes. Library has fewer books than recommended. Further more equipment for education in visual and performing arts are not available in two DIETs. However, other facilities are there as per the recommendation and guideline.