CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

4.0 INTRODUCTION

The present chapter deals with the analysis and interpretation of collected data. Raw data cannot provide any answer; it has to be analyzed and interpreted. For this, identification of appropriate analysis techniques is extremely important. Analysis helps the data to be converted into understandable and interpretable form. Thus, data analysis and interpretation become an important aspect of research.

The analysis and interpretation of the collected data has been presented under the following four sections which are the objectives of the Study.

1) To study the different components of the ongoing in-service training programmes conducted by DIETs of Gujarat.

2) To identify the problems faced by DIET Lecturers/Teacher Educators in organizing in-service training programmes.

3) To study the selection procedure of resource persons in the in-service training programmes under DIETs of Gujarat.

4) To study the views and reactions of the functionaries and beneficiaries of in-service training programmes in terms of:

- Training needs,
- Training materials and modules,
- Transactional modalities,
- Planning, organization and implementation

    The data collected from the South zone (Surat), North zone (Idar), Central zone (Vadodara), Saurashtra zone (Amreli and Rajkot) and Kutch Region (Bhuj), were analyzed using both quantitative and qualitative analysis techniques. The quantitative analysis was done with the help of frequency, percentage and Intensity Index; while content analysis was done for the qualitative data analysis.

For few of the items, the respondents were allowed to give multiple responses; percentages in the data have been rounded to the nearest whole number.

4.1 SECTION I: DIFFERENT COMPONENTS OF THE ONGOING IN-SERVICE TRAINING PROGRAMMES ORGANIZED BY DIETs OF GUJARAT

To study the Objective, I of the present Study i.e. To study the different components of the ongoing in-service training programmes conducted by DIETs of Gujarat, data were collected through the observation schedule for observation of the different components of the ongoing in-service training programmes Data were also collected from the primary school teachers through a questionnaire. The collected data were analyzed using frequency, percentage and content analysis which is analyzed and interpreted in the following section.

The term components, in this objective, refer to the modules, mechanisms (methods and techniques), working, facilities and the information has been received accordingly.

4.1.1 Observation of In-service Training Programmes

The observation of in-service training programmes was done by observing the in- service training programmes conducted by the DIETs of Gujarat, during the academic years 2018-2019 and 2019-2020.

Data analysis and interpretation of Observation schedule.

"Teacher training and professional development are seen as central mechanisms for theimprovement of teachers' content knowledge and their teaching skills and practices inorder to meet high educational standards" (Darling-Hammond & McLaughlin, 1995)

Observation of the training programs revealed the following –

a)   *Teaching methods used:*

The data from the observation of the training programs revealed that out of 25 in-servicetraining programmes observed, the method used most frequently in the in-service training programs was the lecture method (84%). The other methods used were group discussion (76%); demonstration (56%) and the Project method

(40%). Audio visual aids and videos were used frequently during the transactions. The data revealed that the least used methods in the training programs were the field visits (32%) and workshops(16%).

Knowledge of Seminar method was important for all teachers to share their ideas, bestpractices and also the outcomes of action research for the benefit of other teachers – butthis method too was not found to be practiced very often (16%).

While imparting knowledge via the different methods, the resource persons were also training the teachers in different skills required to make their classroom practices moreeffective, namely - introducing the lesson, posing appropriate questions, explanation of terms with examples, using teaching aids/resources, planning independent/group activities, demonstrating new concepts/apparatus, conducting evaluation.

b) *Facilities/Resources available:*

From the data it was seen that out of 25 in-service training programmes observed, the facility of black/green/white board was available in all the in-service training programmes. The other facilities available during the In-service training programmes were LCD projector with speaker (96%), video player (96%), smart board (72%) furniture/equipment (72%) and flip charts (64%).

However, what was found lacking was the space for group activities and other additional facilities required in the training programmes (32%).

With respect to the frequency of usage of these activities, it was observed that - the facility used most of the times were the black/green/white board (100%) followed by the usage of LCD projector with speaker (88%) and the video player (72%).

For facilities like the Smart Board, only 40% of the Programs used it most of the timeswhile Flip chart, was used in 48% of the Programs.

Observation revealed that with respect to furniture and space requirements, while the use of required furniture/equipment were found to be satisfactory in 56% of the programs, the availability of space for the conducting of group activities was found to be deficient.

c)   *Transaction strategies:*

With respect to the above, it was observed that in almost all the training programs, discussion, group activities, use of teaching-learning aids, exchange of classroom experiences, opportunities for teachers to ask questions and raise their difficulties, sharing reactions about training, opportunity for practical work were carried out.

While most of these activities were carried out in all the training programs, the frequency of their occurrence (i.e. practiced most of the times) was observed to be as follows - discussion (68%), group activities (84%), use of teaching-learning aids (84%),exchange of classroom experiences (68%), teachers posing questions (64%), sharing of teachers' reactions/responses (72%), solution of teachers' difficulties (72%), conducting pre and post-test (76%), opportunity for practical work (72%).

With respect to the time spent in inaugural and valedictory session, few Observers werenot satisfied with the time taken up due to the inaugural and valedictory sessions.

Interpretation

From the above analysis, it can be inferred that teachers were given exposure and training to different methods of teaching; primarily the lecture method which plays an important role in ensuring that facts, information and knowledge about the content canbe shared; there were also interactive methods like group discussions and demonstrations; methods which emphasized hands on training like workshops, field visits, and project methods and finally methods which emphasized independent study. Thus, teachers were being sensitized to different methods of teaching which could thenbe used effectively in their classroom instruction.

However, the least used methods (seminar, field visits, and workshop) need to be given attention – these methods are important in view of the practical experiences that can begot via these methods.

From the above data it could also be inferred that the training programs were giving the teachers Training to improve their skills required to make their classroom practices more effective, namely - Posing appropriate questions; Explaining the content; Planning group activities to promote collaborative work; Planning independent study methods to promote self-directed learning ; Teaching how to demonstrate new techniques/apparatus; conducting demonstrations effectively; Giving feedback for improving student performance in individual/group activities ; Use of digital tools to promote technology skills. From this it could be interpreted that the teachers were beinggiven training not only in the different methods, but also in the use of the required skills and resources that would help their students learn better.

Teachers were also being given opportunity to share their experiences and challenges which were duly addressed during the training – thus, exchange of views, solution of felt difficulties, opportunity to pose questions and involving all teachers in the trainingprogram activities were important components of the training programs.

This also ensured greater participation of teachers and made the programs more relevantto them. But, there was need to have more training in the methods that would allow practical experiences and application of knowledge.

The Seminar method was especially useful to share best practices and outcomes of action research and this area could have been focused on to greater extent.

4.1.2 Primary School Teachers' Views On DifferentComponents Of In-Service Training Programmes.

Data related to the primary school teachers' views on the different components i.e. modules, mechanisms (methods and techniques), working, facilities of in-servicetraining programmes were collected from the 650 teachers of primary schools located in the six districts (Vadodara, Surat, Amreli, Rajkot, Kutch, and Idar) through the questionnaire. The analysis and interpretation of the collected data is presented in the **table 4.1 to 4.5**

Table - 4.1

Summary of the responses of participant teachers in terms of focus areas during

Training

Sr. No.	Focus area	N	O	S	F	A	NR	Total
1	Content/subject areas	0	13 (2)	65 (10)	195 (30)	338 (52)	39 (6)	650 (100)
2	Transactional strategies	26 (4)	26 (4)	179 (26)	117 (18)	250 (38)	52 (8)	650 (100)
3	ICT skills	52 (8)	26 (4)	143 (22)	117 (18)	195 (30)	117 (18)	650 (100)
4	Inclusive education	26 (4)	39 (6)	143 (22)	156 (24)	221 (34)	65 (10)	650 (100)
5	Life skills	13 (2)	0	143 (22)	182 (28)	260 (40)	52 (8)	650 (100)
6	Educational management and Leadership	13 (2)	13 (2)	143 (22)	182 (28)	247 (38)	52 (8)	650 (100)
7	Evaluation techniques	13 (2)	13 (2)	143 (22)	189 (29)	273 (42)	39 (6)	650 (100)
8	Guidelines for writingmeasurable Learning outcomes	13 (2)	13 (2)	156 (24)	169 (26)	234 (36)	65 (10)	650 (94)
9	Teaching-learning process/ pedagogy	26 (4)	26 (4)	169 (26)	169 (26)	195 (30)	65 (10)	650 (100)
10	New trends in education	0	26 (4)	130 (20)	221 (34)	208 (32)	65 (10)	650 (100)

N=Never, O=Occasionally, S=Sometimes, F = Frequently; A=Always Figure in the parenthesis indicates percentage (%)

- From the table above, it can be seen that in terms of the focus area of content/subjectareas, 52% of the primary school teachers responded that the training related to content / subject matter were conducted always; 30% responded that it was done frequently; sometimes (10%) and occasionally (2%). The remaining 39 (6%) of theteachers did not attempt the question.

- In terms of the focus area of transaction strategies, 38% primary school teachers mentioned that knowledge of different transactional strategies were given always; 18% mentioned that this was done frequently; 26% mentioned sometimes; occasionally (4%) and never (4%). The remaining 52(8%) of the teachers did not attempt the question.

- With respect to the focus area of ICT skills, 30% of the primary school teachers mentioned that the training related to ICT skills were conducted always; 18% responded that it was conducted frequently; 22% responded that training related to ICT skills was conducted sometimes; while 4% teachers responded occasionally and never (8%). The remaining 117 (18%) of the teachers did not attempt the question.

- In terms of the focus area of inclusive education, the primary school teachers mentioned that the training related to inclusive education were conducted always (34%), frequently (24%), sometimes (22%), occasionally (6%) and never (4%). Theremaining 65 (10%) of the teachers did not attempt the question.

- In terms of the focus area of life skills, the primary school teachers mentioned thatthe training related to life skills were conducted always (40%), frequently (28%), sometimes (22%), and never (2%) given to them. The remaining 52 (8%) of the teachers did not attempt the question.

- Regarding the focus area of educational management and leadership, the primary school teachers mentioned that the training related to educational management and leadership were conducted always (38%), frequently (28%), sometimes (22%), occasionally (2%) and never (2%). The remaining 52 (8%) of the teachers did not attempt the question.

- In terms of the focus area of evaluation techniques, the primary school teachers mentioned that the training related to evaluation techniques were conducted always(42%), frequently (29%), sometimes (22%), occasionally (2%) and never (2%) given to them. The remaining 39 (6%) of the teachers did not attempt the question.

- In terms of the focus area of Guidelines for writing measurable Learning outcomes,the primary school teachers mentioned that the training related to this area were conducted always (36%), frequently (20%), sometimes (24%), occasionally (2%) and never (2%) given to them. The remaining 65 (10%) of the teachers did not attempt the question.

- For the focus area of learning new pedagogies, the primary school teachers responded that the training related to teaching-learning process/pedagogy were conducted always (30%), frequently (26%), sometimes (26%), occasionally (4%) and never (4%). The remaining 65 (10%) of the teachers did not attempt the question.

- Regarding the focus area of New trends in education, the primary school teachers mentioned that the training related to this area was conducted always (32%), frequently (34%), sometimes (20%), and occasionally (4%) given to them. The remaining 65 (10%) of the teachers did not attempt the question.

Interpretation

From the analysis of the responses given by the participant teachers regarding the focusareas covered during the training programs, it could be inferred that the knowledge of different aspects/focus areas was being given in the training programs which would make the teachers aware of how to enrich their classroom instruction.

With respect to the focus area of transactional strategies it was found that not all teachers responded that knowledge of different transactional strategies were given always. This area needs attention in view of the large number of new pedagogies now available for making the instructional process more effective.

Training related to ICT skills is considered important but only 48% teachers respondedthat training in ICT skills were conducted always and frequently - thus, it can be inferredthat training imparted in this aspect of ICT skills should be given greater attention.

From the data it could be interpreted that training related to inclusive education practices was not conducted to a great extent; training related to life skills was conducted in majority of the programs but to this question too there was also a small percentage of teachers who disagreed. From this it can be inferred that these focus areastoo need greater attention in the future.

Some of the areas where more attention would have to be given are also very emergingconcerns in education like training for writing learning outcomes, learning about new trends in education and evaluation techniques – these would have to be conducted morefrequently in future programs.

Table -4.2

Summary of the response of primary school teachers in terms of methods used in training programmes

Sr. No.	Name of Method	N	O	S	F	A	NR	Total
1	Lecture Method	0	39 (6)	130 (20)	247 (38)	169 (26)	65 (10)	650 (100)
2	Demonstration Method	0	13 (2)	234 (36)	247 (38)	130 (20)	26 (4)	650 (100)
3	Project work	13 (2)	13 (2)	286 (44)	221 (34)	104 (16)	13 (2)	650 (100)
4	Practical work	0	26 (4)	156 (24)	260 (40)	182 (28)	26 (4)	650 (100)
5	Discussion method	0	13 (2)	169 (26)	221 (34)	221 (34)	26 (4)	650 (100)
6	Group work	0	13 (2)	182 (28)	299 (46)	130 (20)	26 (4)	650 (100)
7	Blended Learning	39 (6)	143 (22)	221 (34)	143 (22)	65 (10)	39 (6)	650 (100)
8	Seminar	13 (2)	104 (16)	260 (40)	117 (18)	117 (18)	39 (6)	650 (100)

N=Never, O=Occasionally, S=Sometimes, F=Frequently, A=Always

- From the **table-4.2,** it can be seen that in terms of the use of different methods in the training programmes, the primary school teachers (26%), mentioned that the lecture method was used always; 38% teachers responded that it was used frequently; 20% responded that it was used sometimes; while 6% responded that itwas used occasionally in the training programmes. The remaining 65 (10%) of theteachers did not attempt the item.

- With respect to use of demonstration method in training programmes, 20% teachersresponded that the demonstration method was used always; 38% teachers respondedthat it was used frequently; 36% responded that this method was used sometimes; very few teachers responded that it was used occasionally (2%) in the training programmes. The remaining 26 (4%) of the teachers did not attempt the item.

- In terms of the use of project method in training programmes, 16% of the primary school teachers mentioned that the project method was always used; 34% teachersresponded that it was used frequently; 44% teachers responded that this method wasused sometimes; while only 2% mentioned that it was used occasionally; very fewteachers responded that it was never used (2%) used in the training programmes. The remaining 13 (2%) of the teachers did not attempt the item. Project method canbe used only in certain specific circumstances – the data above showed that this method was also used in the training programs to show teachers when and how themethod can be used.

- In terms of the use of practical work in training programmes, 28% of the primary school teachers mentioned that the practical method was used always; 40% mentioned that this method was used frequently; 24% responded sometimes while only 4% teachers responded that it was used occasionally in the training programmes. The remaining 26 (4%) of the teachers did not attempt the item.

- In terms of the use of discussion method in training programmes,34% of the primaryschool teachers mentioned that the discussion method was always used; 34% responded that this method was used frequently; 26% teachers responded that it wasused sometimes; while 2% mentioned that it was used occasionally in the training programmes. The remaining 26 (4%) of the teachers did not attempt the item.

- In terms of the use of group work method in training programmes, 20% of the primary school teachers mentioned that the group work method was always used; 46% teachers responded that it was used frequently; 28% teachers responded it wasused sometimes while only 2% teachers responded that it was used occasionally, inthe training programmes. The remaining 26 (4%) of the teachers did not attempt theitem.

- In terms of the use of ICT enabled T-L methods it was found that only 10% primaryschool teachers mentioned that this method was always used; 22% responded that it was frequently used; 34% teachers responded that it was used only sometimes; while 22% teachers responded that this method was used occasionally; only 6% teachers responded that this method was never used in the training programmes. The remaining 39 (6%) of the teachers did not attempt the item.

- In terms of the use of seminar method in training programmes,18% of the primary school teachers mentioned that the seminar method was always used; 18% responded that it was frequently used; 40% responded that this method was used only sometimes; while it was used occasionally (16%) and never (2%) in the training programmes. The remaining 39 (6%) of the teachers did not attempt the item.

Interpretation

The above data implies that the lecture method was used quite frequently in the training programs. This can also be interpreted that other methods apart from lecturemethod too were used in the training programs. This would have been verybeneficial to the teachers and knowledge of all these methods would help them in implementation in their own instructional settings.

From the data analysis, it could be interpreted that a large percentage of teachers responded that demonstration method was used always and frequently thereby teaching teachers a very important teaching method.

Project method was used rarely; but the data above showed that this method was used in the training programs to show teachers when and how the method can be used. The data shows that teachers were being given training in practical work – animportant way of teaching to give students better understanding of concepts via practical experiences.

This finding indicated different methods were practiced in the training programs depending upon the content areas being taught. Some of the methods like ICT enabled methods, seminars and project methods should be implemented more frequently in the training programs.

Table -4.3

Summary of the response of primary school teachers in terms of usage of assistive teaching materials/aids during in-service training

.Sr. No.	Assistive teaching materials/aids	Frequency of Usage			
		Frequently	Sometimes	Rarely	NR
1	Blackboard	169 (26)	338 (52)	117 (18)	26 (4)
2	White board	117 (18)	299 (46)	195 (30)	39 (6)
3	LCD projector	390 (60)	208 (32)	13 (2)	39 (6)
4	Flash cards	156 (24)	299 (46)	156 (24)	39 (6)
5	Narrative figures (pictorial stories, comics etc.)	208 (32)	325 (50)	78 (12)	39 (6)
6	Internet/computer	351 (54)	234 (36)	39 (6)	26 (4)

Figure in the parenthesis indicate percentage (%)

- From the table above it can be observed that in terms of the use of blackboard during the in-service training, 26% of the primary school teachers mentioned that the blackboard was used frequently; 52% responded that it was used sometimes; 18% responded that it was used rarely during the in-service training programmes. The remaining 26 (4%) teachers did not attempt the item.

- In terms of the use of white board during the in-service training, 18% of the primary school teachers mentioned that the white board was used frequently; 46% responded that it was used sometimes; while 30% responded that it was used rarely during the in-service training programmes. The remaining 39 (6%) teachers did not attempt the item.

- In terms of the use of LCD projector during the in-service training, 60% of the primary school teachers mentioned that the LCD projector was used frequently; 32% responded that it was used sometimes while 2% responded that it was used rarely during the in-service training programmes. The remaining 39 (6%) teachers did not attempt the item.

- In terms of the use of flash cards during the in-service training, (24%) of the primaryschool teachers mentioned that the flash cards were used frequently; (46%) responded sometimes and 24% responded that it was used rarely during the in- service training programmes. The remaining 39 (6%) teachers did not attempt the item implying that this aid was not used to a great extent.

- In terms of the use of narrative figures during the in-service training, the primary school teachers mentioned that the narrative figures were used frequently (32%), sometimes (50%) and rarely (12%) during the in-service training programmes. The remaining 39 (6%) teachers did not attempt the item implying less usage of this teaching aid.

- In terms of the use of internet/computer during the in-service training, the primary school teachers mentioned that the internet/computer was used frequently (54%), sometimes (36%) and rarely (6%) during the in-service training programmes. The remaining 26 (4%) teachers did not attempt the item.

Interpretation

From this data it could be inferred that, facilities other than the blackboard too werebeing used as could be inferred from the responses of a large section of the teachers.The LCD Projector was one of the most frequently used supportive teaching aid.

The supportive teaching aids used rarely were the white board, flash cards and narrative figures as could be inferred from the data analysis.

However, ICT enabled aids – computer/internet were being used frequently as wasindicated by majority of the teachers.

Given the fact that technology has come to play such an important role – the frequent use of these aids would be very good in terms of training the teachers whocan use the same in their classrooms.

Table -4.4

Summary of the responses of primary school teachers in terms of type ofresource support from DIETs to schools

Sr. No.	Resource support from DIETs	Frequency	Percentage
1	Teachers handbook	481	74
2	Workbook for students	377	58
3	Lesson plan formats	273	42
4	Video cassettes	312	48
5	Audio cassettes	247	38
6	Question banks	247	38
7	Low cost teaching aids	364	56
8	Newsletter	130	20
9	Journals	130	20
10	Other resources (worksheet, task paper etc.)	78	12

From the table above it can be seen that out of the total 650 (100%) respondent primaryschool teachers, majority of them i.e. 481 (74%) mentioned that they were receiving teachers' hand book as resource support from the DIETs; more than half of them mentioned that they were receiving workbook for students (58%) and low cost teachingaids (56%). The other resource supports received by them from DIETs were lesson planformats (42%), video cassettes (48%), audio cassettes (38%), question banks (38%), newsletter (20%), journals (20%) and other resources.

Interpretation

DIETs were providing the necessary resource support for meaningful participation of the teachers. The resource support material provided gave inputs in terms of rules and regulations as also academic support to plan and implement their teaching effectively.From the data above it could be inferred that majority of the teachers had received teachers' handbooks, workbooks for students and low cost teaching aids as resource support from the DIETs.

Many teachers had received Questions banks, lesson plan formats and video cassettes but there was a fairly large section of teachers who had not received these.

Also, very few teachers had received newsletters, journals, worksheets and task papers.Thus, resource support should be made available for all teachers to carry out their instructional activities effectively.

Table-4.5

Summary of the ratings of primary school teachers' response towards different aspects of training

Sr. No.	Aspects of training	SD	D	N	A	SA	NR	Total
1	Training related Instruction	13 (2)	26 (4)	221 (34)	234 (36)	130 (20)	26 (4)	650 (100)
2	Timeline regarding reciprocation	13 (2)	0	156 (24)	351 (54)	104 (16)	26 (4)	650 (100)
3	Training Venue	13 (2)	104 (16)	208 (32)	143 (22)	143 (22)	26 (4)	650 (100)
4	Accommodation	26 (4)	78 (12)	221 (34)	169 (26)	91 (14)	65 (10)	650 (100)
5	Meals and Refreshment	13 (2)	117 (18)	169 (26)	182 (28)	130 (20)	39 (6)	650 (100)
6	Seating arrangements	0	26 (4)	143 (22)	286 (44)	169 (26)	26 (4)	650 (100)
7	Audio-visual aids	0	0	117 (18)	260 (40)	234 (36)	39 (6)	650 (100)
8	Distribution of TA/DA costs	0	0	26 (4)	286 (44)	299 (46)	39 (6)	650 (100)
9	Timely Planning of Training	0	13 (2)	104 (16)	299 (46)	208 (32)	13 (2)	650 (100)

SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

Figure in the parenthesis indicate percentage (%)

- From the table above, it could be seen that in terms of the instructions about training, majority of the primary school teachers agreed (36%) and strongly agreed (20%) that instructions about the training programme were provided during the training; only 26 (4%) of them disagreed.

- In terms of the timeline regarding reciprocation, majority of the primary school teachers (54% and 16%) agreed and strongly agreed that timeline regarding reciprocation was well managed whereas only 13 (2%) of them disagreed.

- With respect to the training venue, majority of the teachers (286) agreed and strongly agreed respectively that they were satisfied whereas 117 (18%) did not agree to the statement. It can be interpreted that the training venue was largely viewed as satisfactory in terms of the venue.

- In terms of the lodging facility during the training programmes, 260 (40%) primary school teachers agreed that they were satisfied with the loading facility provided during the training programmes whereas 104 (16%) of them disagreed to the statement.

- With respect to the meals and refreshments during the training programmes, 312 (48%) primary school teachers agreed that they were satisfied with the food and refreshment facility provided during the training programmes whereas 104 (16%) of them disagreed to the statement.

- In terms of the seating arrangement during the training programmes, 455 (70%) primary school teachers agreed that proper seating arrangements are being done during the training programmes whereas 26 (4%) of them disagreed to the statement.

- In terms of the use of audio-visual aids during the training programmes, majority of them i.e. 494 (76%) primary school teachers agreed that audio-visual aids were being used during the training programmes. There was no teacher who disagreed thereby indicating that audio-visual aids were used in the training programs which was a very positive feature since all teachers should be aware of how to use these aids in their teaching.

141

- In terms of the distribution of TA/DA costs during the training programmes, most of them i.e. 585 (90%) primary school teachers agreed that they were satisfied with the distribution of the TA/DA costs during the training programmes. From this is can be inferred that the administrative issues were taken care of satisfactorily.

- In terms of the organization of training programmes as per schedule, 507 (78%) primary school teachers agreed that training programmes were being organized as per the schedule whereas only 13 (2%) of them disagreed to the statement.

Interpretation

From the data analysis, it could be inferred that a very large percentage of teachers agreed that training related instructions were shared with the teachers; also, for majorityof the teachers the lodging facility was found satisfactory.

With respect to the meals and refreshments during the training programmes, a large percentage of the primary school teachers agreed that they were satisfied with the food and refreshment. The data also revealed that the seating arrangements were viewed positively by the participating teachers.

Majority of the teachers agreed that audio-visual aids were being used during the training programmes. From the above data it could be inferred that the organization wasdone as per the schedule so that school teachers would be able to attend the programs while also taking care and planning their teaching responsibilities while they were attending the in-service training programs.

4.2 SECTION-II: PROBLEMS IN ORGANIZING TRAINING PROGRAMMES

To study Objective II of the Study i.e. 'To identify the problems faced by DIET Lecturers/Teacher Educators in organizing in-service training programmes data were collected from 50 DIET Lecturers (teacher educators) via the questionnaire. Theidentified problems have been presented in this section in the form of following figures 4.1 to 4.8

The DIET Lecturers (teacher educators) were asked about the problems in selecting resource persons for in-service training programmes, problems in organizing in-service training programmes, academic related problems while organizing in-service training programmes, stress of organizing training programmes, convenience in organizing training programmes, etc. Their responses received have been presented in the following sections.

Figure -4.1

Distribution of the Teacher educators in terms of their responses regarding difficulties in selecting resource persons
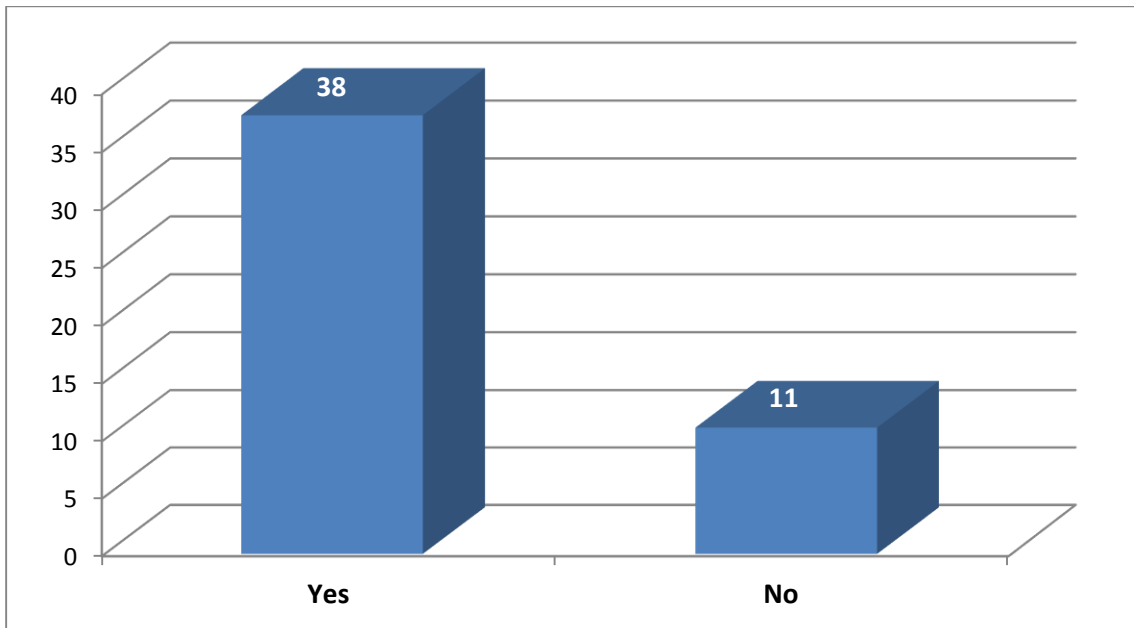
From the figure-4.1, it can be seen that majority (76%) of the teacher educators were not facing any difficulty in selecting resource persons whereas 22% of them were facing difficulties in selecting resource persons. When they were further asked about the difficulties they faced in selecting the resource persons, it was found that the teacher educators were facing difficulties in selecting resource persons due to training venue being located far away (12%), less honorarium (12%), unavailability of experts for some topics (6%) and refusal from the resource persons due to lack of time (6%).

Figure-4.2

Distribution of the teacher educators in terms of their responses aboutdifficulties in planning training programmes
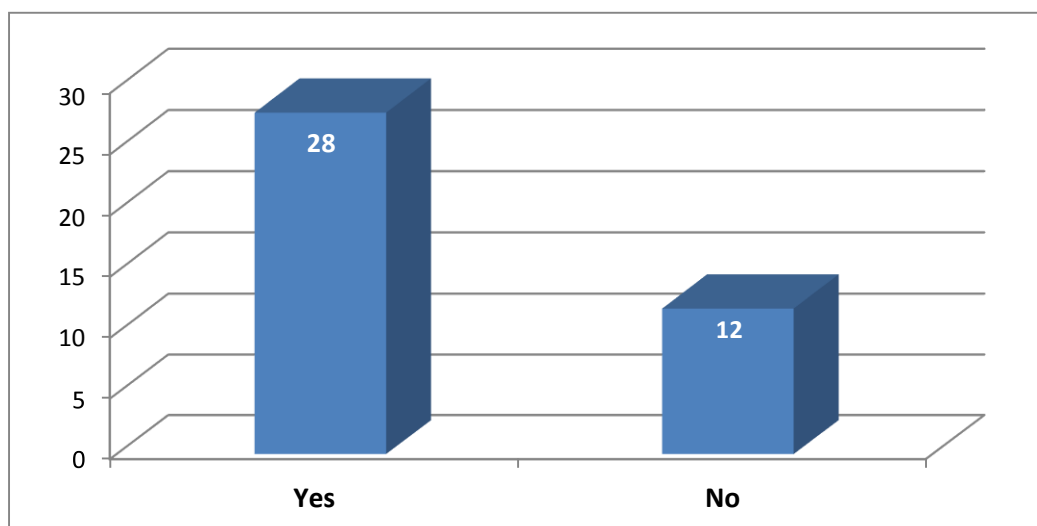
From the **figure -4.2**, it can be seen that 56% of the respondent teacher educators werenot facing any difficulties in planning training programmes whereas 44% of them werefacing difficulties in planning training programmes.

These teacher educators (44%) were further asked about the types of difficulties they were facing in planning training programmes both with respect to administrative as wellas academic problems.

From their responses it was observed that they were facing difficulties due to insufficient fund (22%), less cooperation from Principal (12%), less cooperation from other teacher educators (22%), less cooperation from DEO (22%), less participation ofteachers (22%) and lack of proper space at DIET (28%). The other difficulties they faced were less time for training programme (12%), distant/far venue (12%) and cashless payments (12%).

With respect to academic related problems, it was found that the teacher educators werefacing academic related problems namely lack of availability of suitable resource persons (18%), lack of availability of training literature (12%), lack of library facility (12%), lack of laboratory facility (22%), and lack of academic freedom (22%).

The remaining 14% of teacher educators were not having any academic related problems.

Figure -4.3

Distribution of the teacher educators in terms of their responses on convenience in organizing training programme at venues other than DIETs
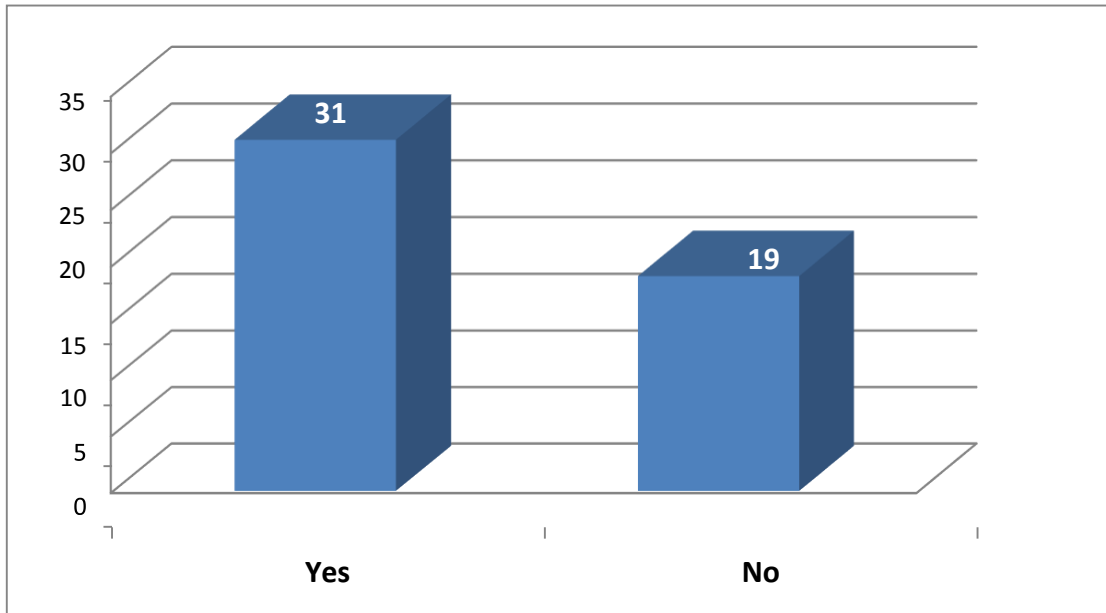
From the **figure-4.3,** it can be observed that majority (88%) of the respondent teacher educators mentioned that they found it convenient in organizing the training programmes at venues other than the DIETs whereas 38% of them were not convenientin organizing training programmes at venues other than DIETs.

Interpretation

This section relates to the problems faced by DIET Lecturers/Teacher Educators in organizing in-service training programmes. From the analysis, it could be inferred thatthe difficulty faced was mainly due to administrative reasons; very few teacher educators indicated that the training areas/topics were the reason for difficulty in selecting resource persons.

With respect to academic related problems, it was found that the teacher educators werefacing academic related problems namely lack of availability of suitable resource persons; lack of availability of training literature; lack of library and laboratory facility.From the above data it can be interpreted that majority of the teacher educators were not facing any difficulties in planning the training programs.

However, there were certain administrative and academic problems which were indicated namely non-availability of suitable resource persons; non-availability of training literature; lack of library and laboratory facility which should be taken care offor better planning of the training programs in future. Also, from the data it could be inferred that conducting training programs at venues other than DIETs were favored bya very large percentage of the teacher educators.

4.3 SECTION III: SELECTION OF RESOURCE PERSONS FOR THE IN-SERVICE TRAINING PROGRAMMES.

Objective III, of the present Study was "To study the selection procedure of resource persons in the in-service training programmes under DIETs of Gujarat".

For this objective, data were collected from the available literature regarding selectionprocedures as also the guidelines laid down by GCERT, DIET.

The same data was also collected from 110 resource persons from six districts (Vadodara, Surat, Amreli, Rajkot, Kutch, and Idar) regarding their selection as a resource person for the in-service training programmes, through a questionnaire.

The analysis and interpretation of the collected data is presented in the followingsection.

The **rules and regulations** for the selection of Resource persons were identified aftergoing through number of documents.

1) Subject specific Resource Persons should have Post Graduate degree in the concerned subject with minimum 55% marks from a recognized University.

2) Candidates must possess degree in Education – B.Ed. to qualify as subject specificResource Person.

3) The candidate applying for Resource Person must have specified number of yearsof teaching experience.

4) Those who possess Post graduate degree in Education – M.Ed. could be exemptedfrom the requirement of teaching experience.

5) Candidates should also have working knowledge of MS Office and be familiarworking with Internet.

6) Resource persons are often selected from the eligible teachers themselves.

7) As per the policy of the State, resource persons are selected on the basis of the educational qualifications, teaching experiences and have to undergo a written testas well as interview.

8) The advertisement for the appointment of the resource person is published throughcircular by the GCERT and Directorate of education for the selection of State Resource Persons (SRGs).

9) BRCC, CRC, and other faculty members of DIET act as Resource Persons.

10) Government provides two or three resource persons for each training programme.

11) Internal resource persons are selected from DIET faculties and External resource persons from department of education, CTE, IASE, members of state resource group from various fields; experts from reputed NGOs, subject experts (retired faculties).

12) In few training programmes, sometimes lecturers from the DIET and some from theoffice of the DEO, DPEO, and department of health education, ICDS, and experts from Information Communication Technology (ICT) are also invited.

13) Once selected as Resource Persons, they are given the required training to performtheir duties efficiently.

14) The cluster level resource persons are called CRG (Cluster Resource Group) members. They are selected on the basis of their competence and interest.

15) DIETs select the CRGs for subjects like Mathematics, Gujarati, Hindi, Science, Social Science, English, EVS, etc.

16) The CRGs are provided training by DIET every year. The CRG accordingly providetraining to teachers at cluster level training.

17) Prior to conducting the In Service Training Programs, the KRP's train the district resource persons (DRG) members. The District Resource Persons train the block level master trainers (MTs) and the block level master trainers again train the clusterlevel resource persons (CRG) members.

18) Resource Persons are trained by KRP (key resource persons) and KRP are trained by MRP (master resource persons).

19) Some teachers who have delivered their lesson/presentation on BISAG (through distance mode), are also selected as resource persons

20) Teachers associated with the development of textbooks, workbooks and aware of the pedagogical inputs needed for activity based teaching, project based teaching, etc are also selected as resource persons.

Interpretation

From this data it can be inferred that a systematic approach was taken towards selectionof the Resource Persons. It was ensured that the resource persons were experienced teachers from the respective subjects – this would help them to understand and cater tothe needs of the participant teacher.

Not only that, the Resource Persons was themselves trained prior to imparting trainingto the participant teachers. In this way, the selection and training given prepared them to train the participant teachers.

In addition to the information got from document analysis, data regarding the selectionwas taken from the Resource Persons themselves. Analysis of the data has been presented in the following section; respondents were given the option of multiple responses.

SECTION III: Objective Iii: Questionnaire For Resource Persons (RPs)

With respect to the open ended question 1 on the basis of selection as Resource Personsto conduct the in-service training programs, it could be seen that out of 110 (100%) respondent resource persons, majority of them responded that resource persons were being selected on the basis of their qualifications. About fifty percent of the RPs responded that resource persons were being selected on the basis of subject mastery. The other basis of selection, as per few respondents were performance and experience;innovations used in past; teaching quality and interest and ability.

Figure-4.4

Distribution of the resource persons in terms of their responses on allotment of training topics according to expertise
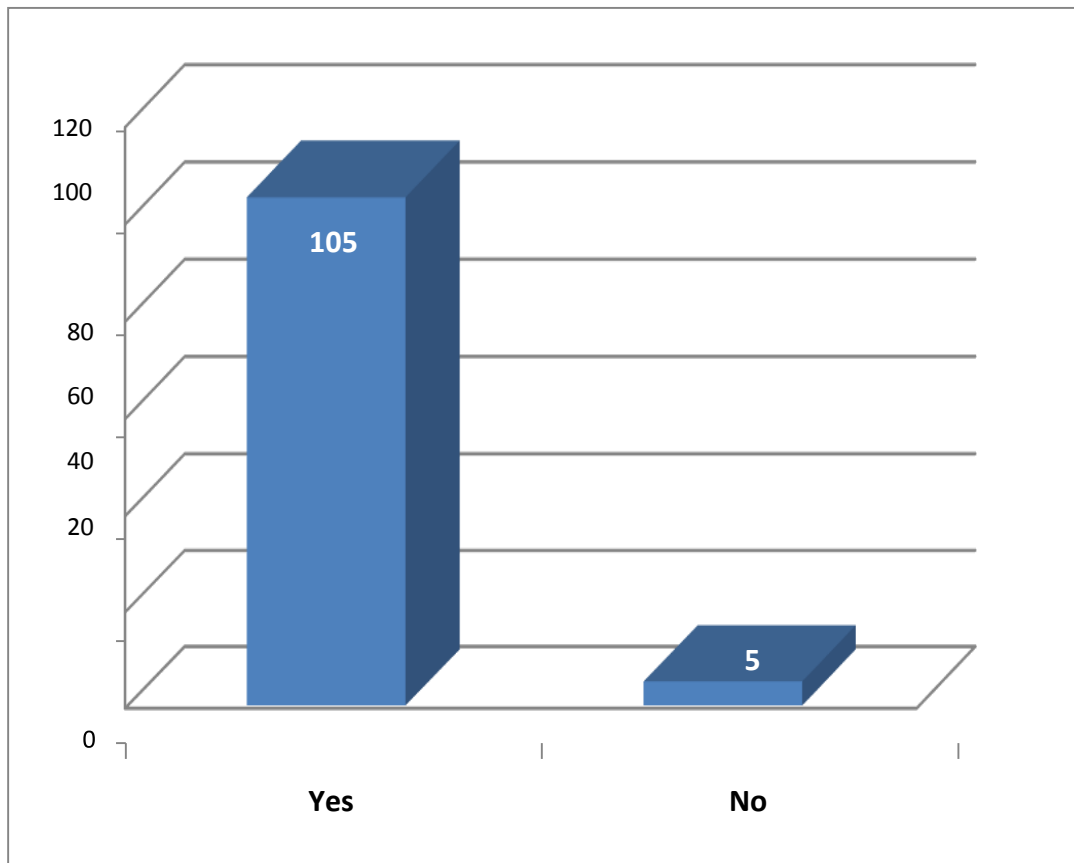
From the **figure-4.4,** it can be observed that out of the 110 (100%) resource persons who responded, most (95%) of them mentioned that they were getting training topics based on their expertise in the area whereas only 5% of them were of no such view.

Table-4.6

Distribution of the resource persons in terms of the details about training programmes they participated as a resource person

Sr. No	Training programmes participated	Number of resourcepersons	
		Frequency	Percentage
1	Language readiness	14	13
2	Master Trainers (English)	17	15
3	Head teacher readiness	14	13
4	Pragya (activity based learning)	24	22
5	Environmental education	22	20
6	Gujarat English Language Development Programme for teachers.(GELDP)	7	6
7	New textbook and curriculum	40	36
8	Life skills	12	11
9	Capacity building for teachers (NISTHA)	48	44
10	Leadership	7	6
11	Disaster management	5	5
12	SMC	7	6
13	SSA	7	6
14	KRP	7	6
15	CRC/BRC	4	4
16	Samarth	2	2
17	ICT and innovations	4	4
18	Population education	2	2
19	Adult education and adolescence	4	4
20	SCE/CCE evaluation	2	2

From the table above it can be seen that 44% of the resource persons had rendered theirservices as a resource person in NISTHA training and 36% of them had served in the training programmes related to new textbooks and curriculums on the subjects of Mathematics, Social Sciences and Science. 23 resource persons

had conducted trainingsessions on English language through MTS (15%) and GELDP (6%). Some of the teachers were engaged as a resource person in the training programmes conducted by the BRC/CRC on SSA (6%), SMC (6%), KRP (6%), Samarth (2%) and SCE evaluation(2%) whereas, some them had taken sessions on ICT and innovations (4%), populationeducation (2%), adult education and adolescence (4%).

Figure-4.5

Distribution of the resource persons in terms to their responses on training of trainers
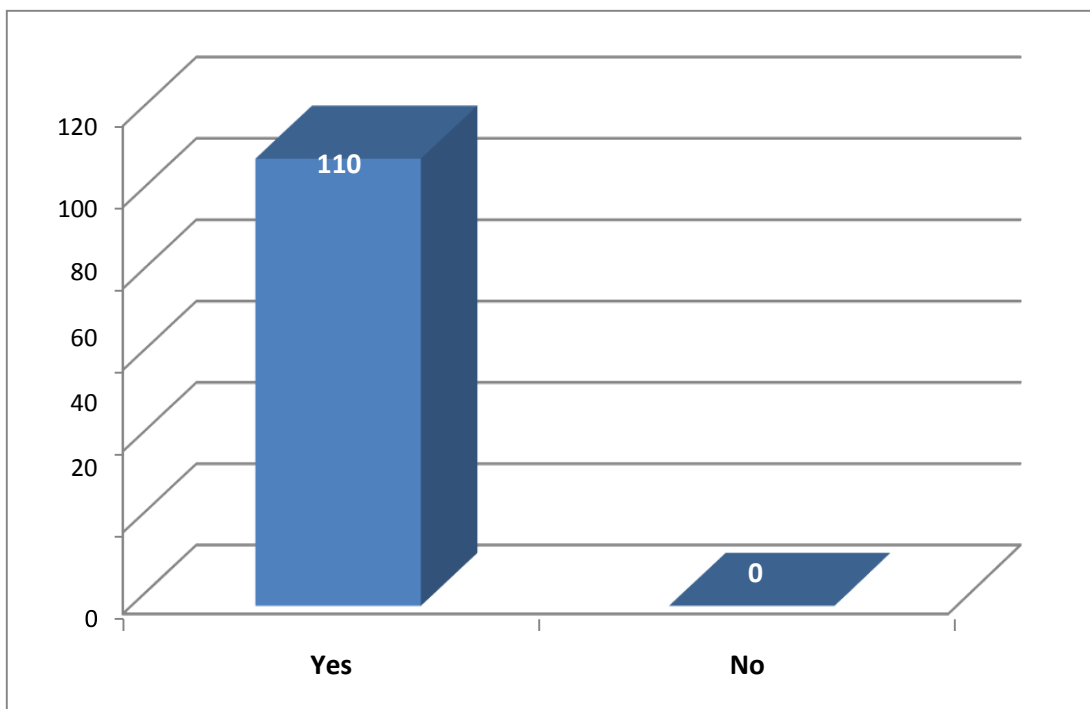
From the **figure 4.5** it can be observed that all (100%) the resource persons mentionedthat they had received training of trainers for giving training to school teachers at DIETs. This implies that the Resource Persons were duly trained before they were allowed to train the teachers in the In Service Training Programs.

Responses regarding basis of selection as Expert:

With respect to the question on the basis of selection as Expert, majority of the RPs responded that their selection as Expert was decided by their educational qualifications,years of experience in the field and also by the number of training programs they had attended and conducted.

Interpretation

From the Data analysis of this section it could be inferred that qualifications and subject mastery were the main criteria for selection as Resource Person. Experience in teachingtoo was considered as important as responded by a large section of the Resource Persons. The data analysis showed that Resource Persons had participated in a number of Training Programs related to curriculum, textbooks, evaluation and ICT and innovations. From this it could be inferred that the Resource Persons had gained experience by participating in a number of Training Programs which was also a reason for selection as Resource Person. In addition to this, from their responses it could be inferred that the Resource Persons were duly trained before they were allowed to train the teachers in the In Service Training Programs.

Thus, qualified and experienced persons were being selected to conduct the Training Programs.

4.4 SECTION IV: VIEWS AND REACTIONS OF FUNCTIONARIES AND BENEFICIARIES

For Objective IV, i.e. "To study the views of and reactions of functionaries and beneficiaries in terms of in-service training programmes" of the present Study, data were collected from the DIET principals, DIET teacher educators, school head teachers, Resource Persons and primary school teachers through questionnaires and Opinionnaires to know their views and reactions on the in-service training programmes.

The analysis and interpretation of the collected data has been presented under thefollowing four sections:

1.   Views and reactions of DIET Principals about the in-service training programmes

2.   Views and reactions of DIET teacher educators about the in-service training programmes

3.   Views and reactions of head teachers about the in-service training programmes

4.   Views and reactions of primary school teachers about the in-service training programmes

4.4.1 SECTION IV:

Views and reactions of DIET principals about the in-service training programmes

To study the views and reactions of DIET principals about the in-service training programmes, data were collected from the six DIET principals from Vadodara, Surat, Amreli, Rajkot, Kutch, and Idar, through a questionnaire. The analysis and interpretation of the collected data from the six DIET principals from Vadodara, Surat, Amreli, Rajkot, Kachchh and Idar through the questionnaire. The analysis and interpretation of the collected data from the six DIET principals is presented in the formof the following figures 4.6 to 4.12 and tables 4.8 to 4.9

Figure -4.6

Distribution of the DIET principals in terms of their responses on benefit of training to primary education
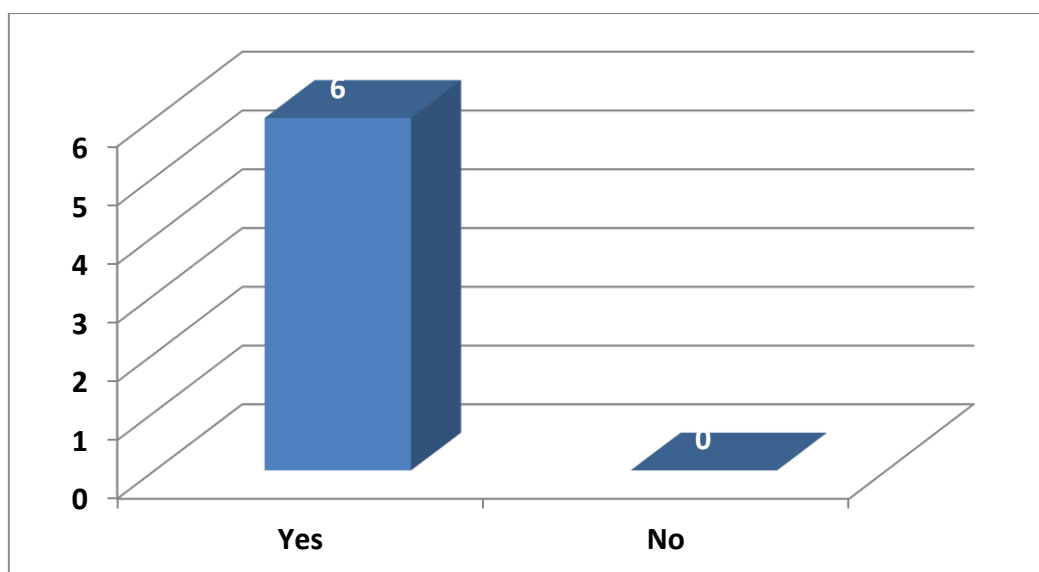
From the **figure -4.6** it can be observed that when they were asked their views about benefit of training programmes to primary education, all 6 (100%) Principals responded that primary education would be benefited from the training programmes.

From this data it can be inferred that the DIET Principals were satisfied that the in - service training programs had been designed with a view to benefit Primary educationand was training the teachers accordingly.

Figure-4.7

Distribution of the DIET principals in terms of their responses whether the training programmes could address new trends in education
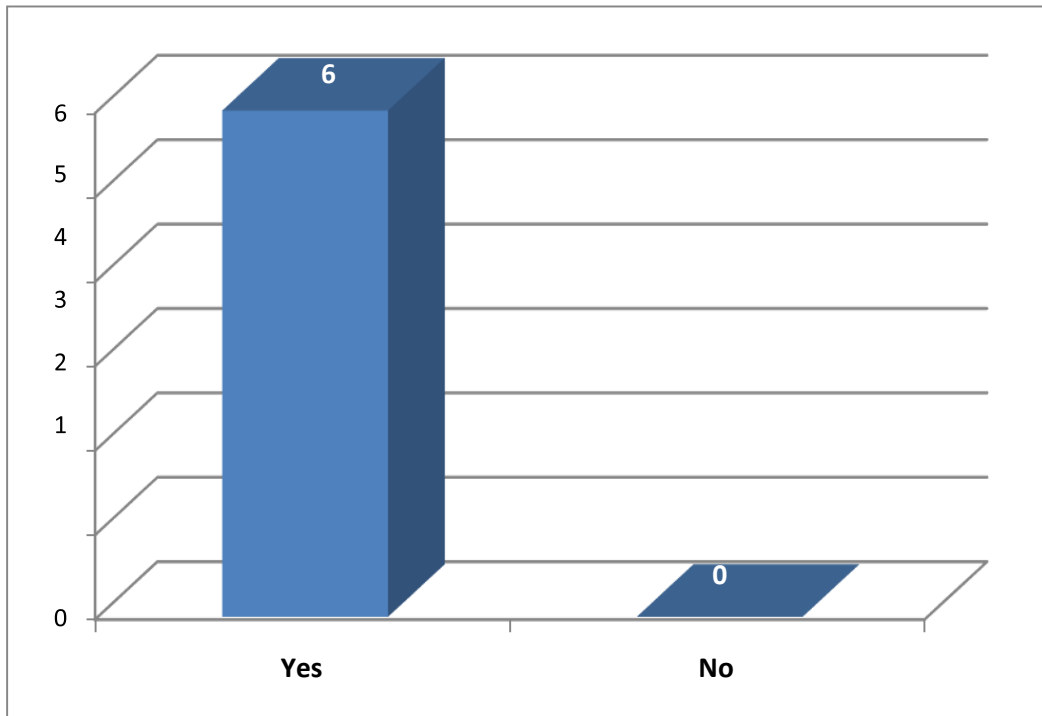
From the **figure - 4.7,** it can be observed that all 6 (100%) DIET principals were of theview that the training programmes did address new trends of education.

From this it could be inferred that according to the DIET Principals, the training programs were designed to update the teachers with current instructional practices overthe traditional teaching methodologies.

Figure-4.8

Distribution of the DIET principals in terms of their responses on training imparted for action research by DIETs
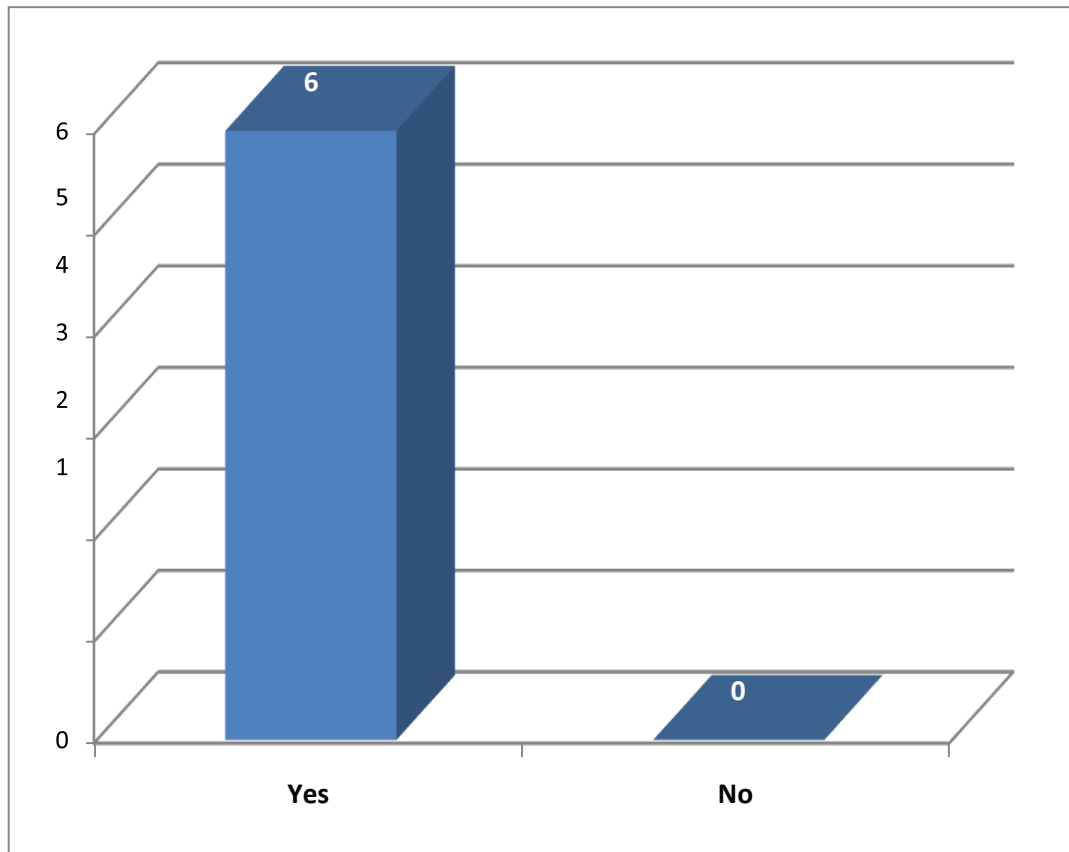
From the **figure-4.8** it can be observed that out of 6 (100%) respondent DIET principals, all of them responded that training for action research was conducted. Fromthis it could be inferred that teachers were trained on how to conduct action research sothat they would be able to solve local and urgent issues which they were facing.

Figure-4.9

Distribution of the DIET principals in terms of their responses about administrative freedom to conduct training programmes
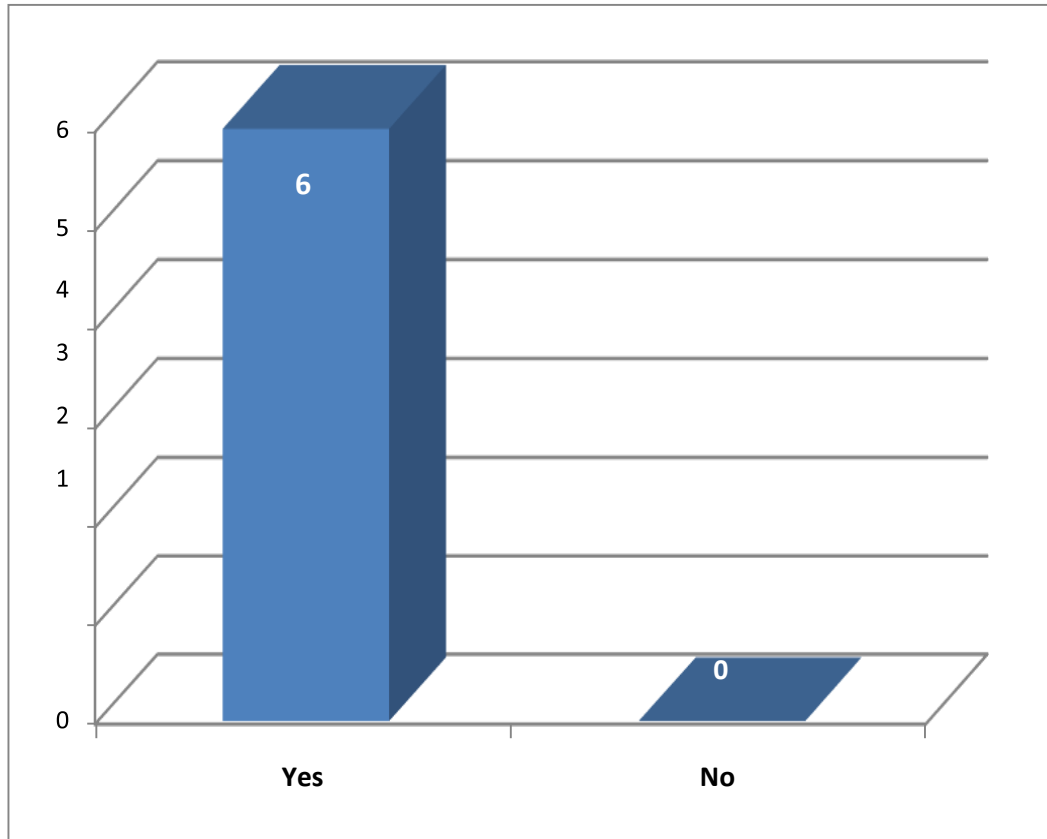
From the above figure it was observed that all 6 (100%) DIET principals mentioned that they did have administrative freedom to organize training programmes.

This implies that DIETs organized in service training programs based on the training needs of the teachers and for this they were given administrative freedom.

Figure-4.10

Distribution of the DIET principals in terms of their responses to the centralized organization of in-service training
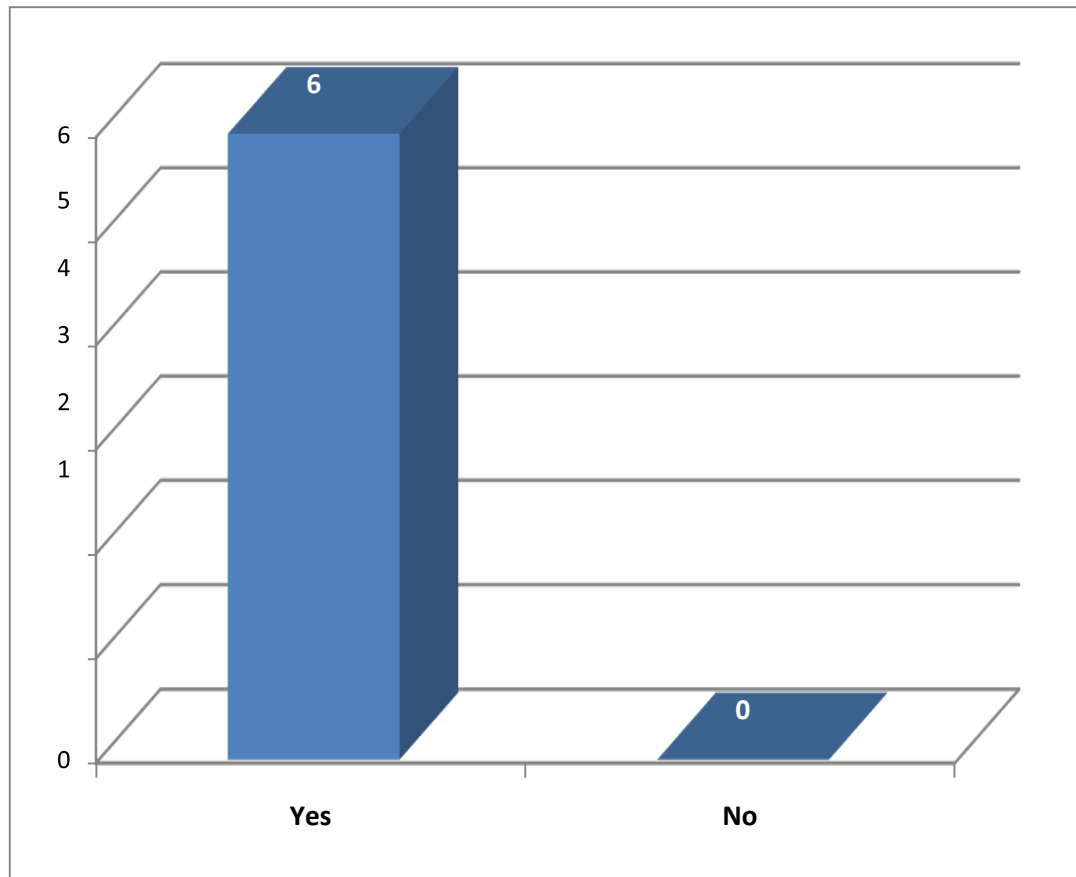
From the **figure-4.10,** it can be observed that out of 6 (100%) respondents, DIET principals, all 6 (100%) principals responded that centralized organization of in-servicetraining should be based on the local needs. This indicated that the DIET Principals were in favor of a need analysis to be done prior to the organization of the training programs done via a central organization. Thus, though centrally organized, the trainingimparted was based on local needs and requirements.

Figure -4.11

Distribution of the DIET principals in terms of their responses about coordination with different departments for in-service training programmes
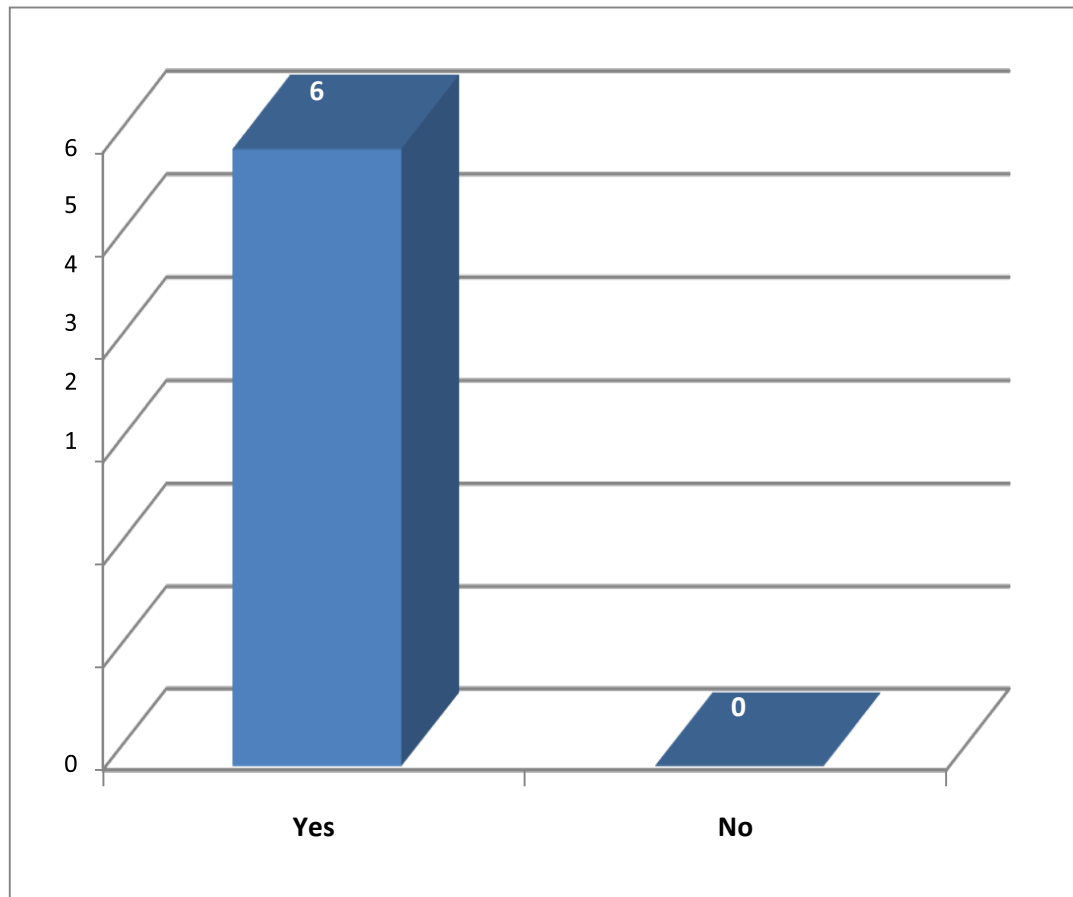
From the **figure- 4.11,** it can be observed that all 6 (100%) principals mentioned that coordination was being done with different departments for in-service training programmes. When they were asked about the number of coordination meeting in a year, their responses received are presented in the following section.

Table -4.7

Distribution of the DIET principals in terms of number of coordination meeting held in a year

Sr. No	Number of coordination meeting in a year	Number of DIET principals	
		Frequency	Percentage
1	2	1	17
2	4	3	50
3	5	1	17
4	6	1	17
Total		6	100

Percentages have been rounded

About the number of coordination meeting in a year, the data presented in the table above shows that half (50%) of the principals responded that the coordination meetingswere being held for four times in a year whereas as per 17% principals, the meetings were being held for six times in a year. The remaining principals responded that coordination meetings were being held for two times (17%) and five times (17%) in a year. Thus, coordination meetings were conducted for a proper planning of the programs and DIET Principals scheduled these meetings for better planning andorganization of the Programs for which there was no fixed number.

Figure - 4.12

Distribution of the DIET Principals in terms of their responses aboutdeliberation with teachers
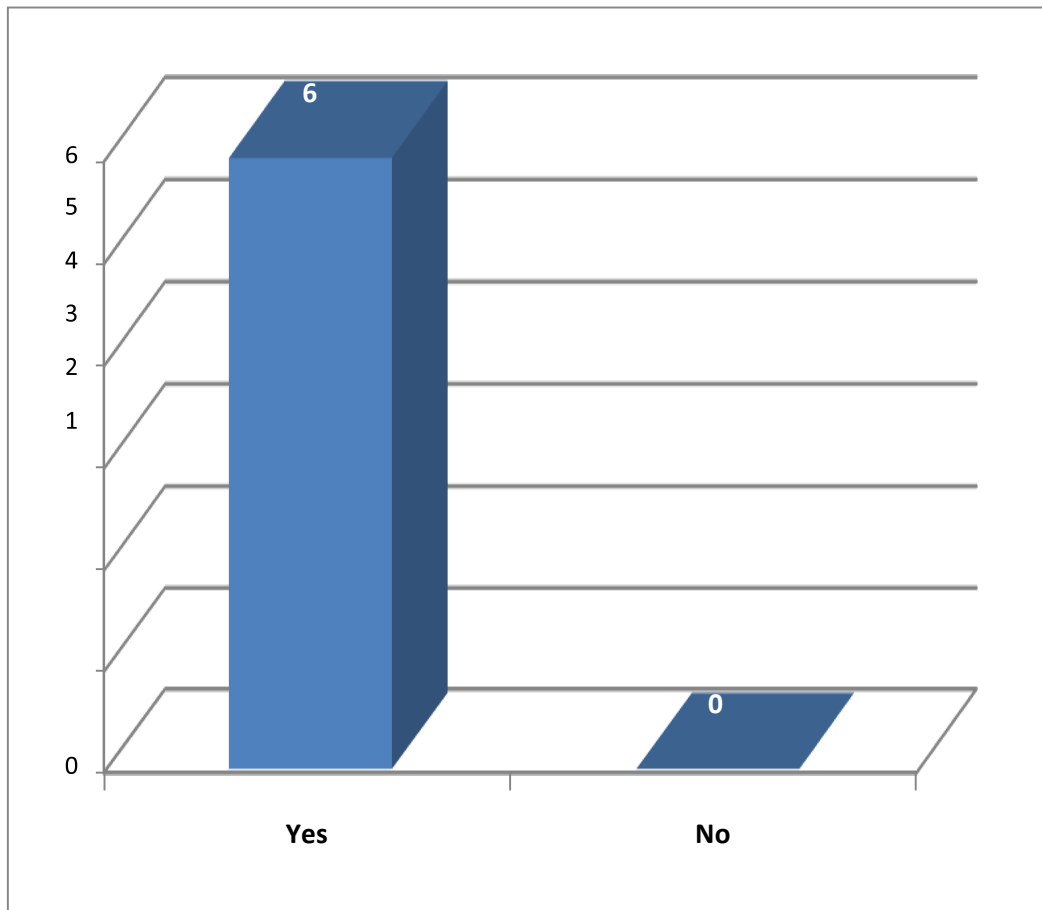
From the **figure-4.12,** it can be observed that out of 6 (100%) respondent DIET principals, all of them were deliberating with teachers before planning the training Programs. Thus, the Principals consulted the teachers regarding different aspects of thetraining programs that were being planned for them and the views of the teachers weretaken into account prior to planning the training programs.

Figure - 4.13

Distribution of the DIET principals in terms of their responses on guidance to lecturers for in-service training
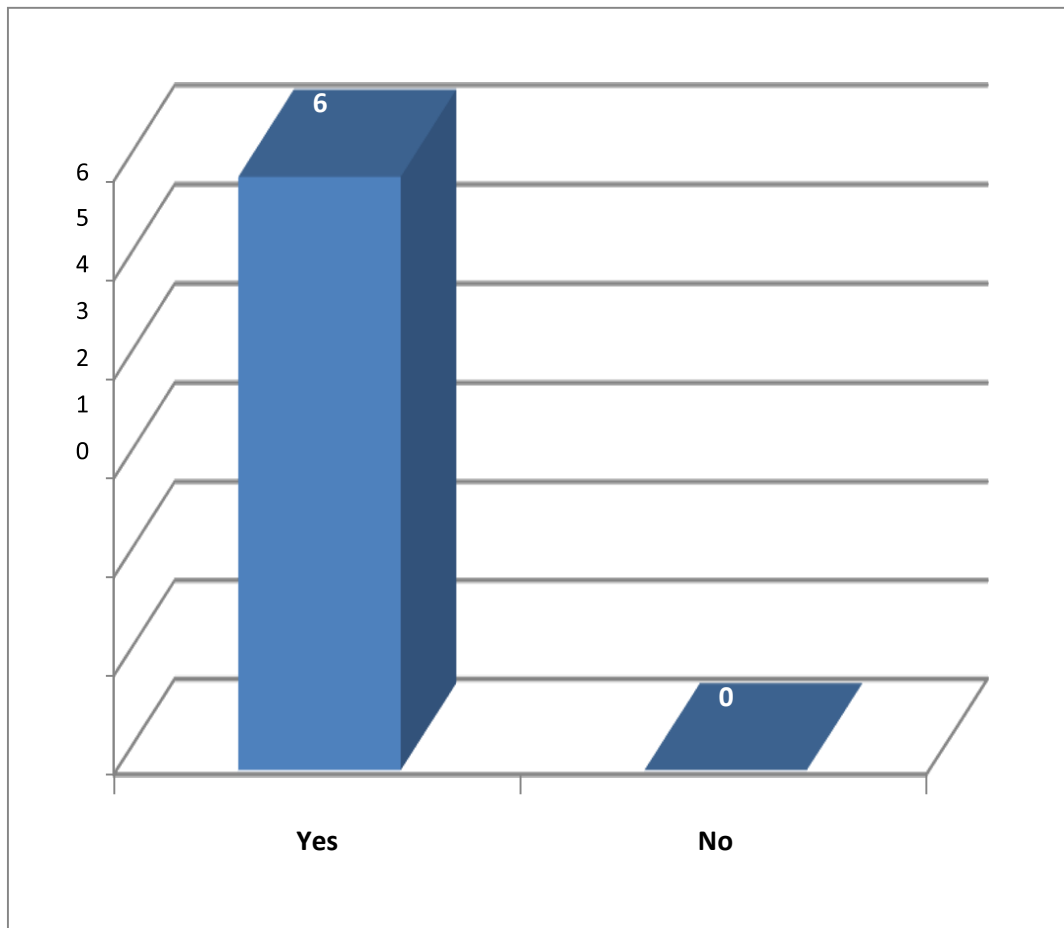
From the figure above it can be observed that all of 6 (100%) respondent DIET principals were providing guidance to lecturers for in-service training…Thus, DIET Principals were actively involved during the organization and planning of the in servicetraining programs.

Figure - 4.14

Distribution of the DIET principals in terms of their responses about giving freedom to lecturers for in-service training
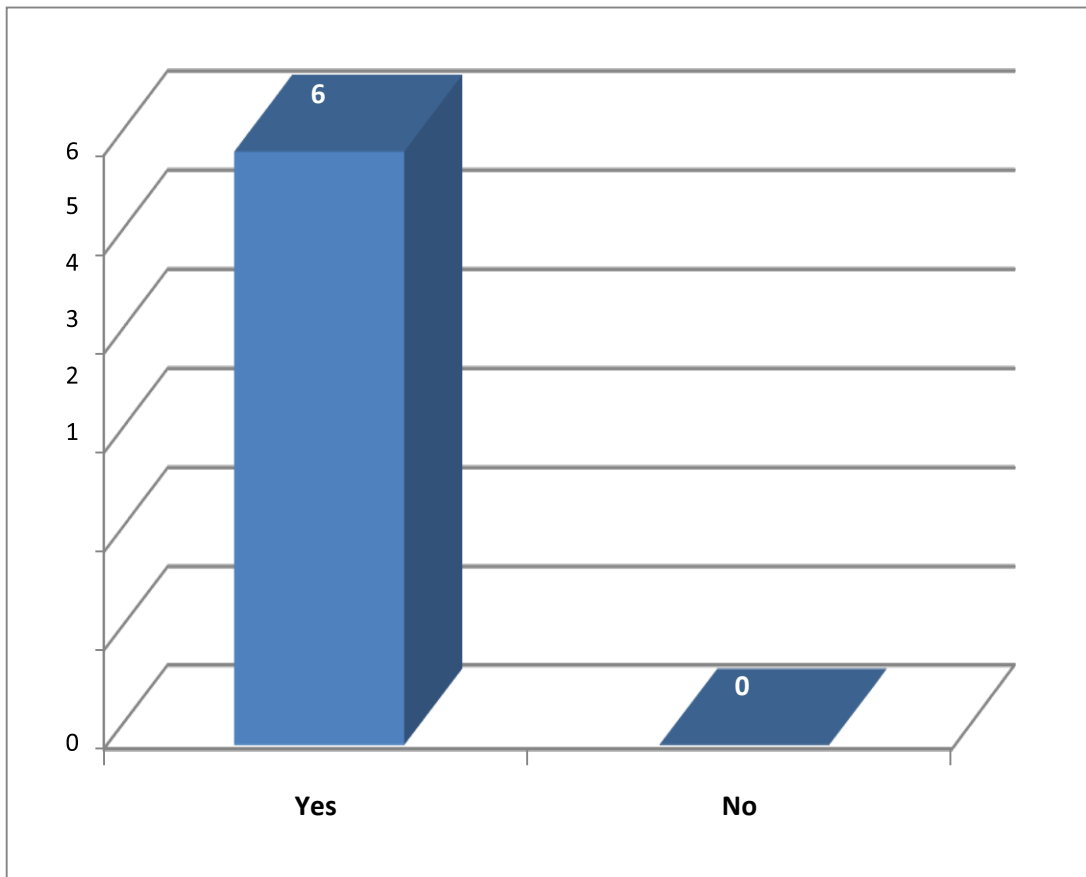
From the **figure -4.14,** it can be observed that out of 6 (100%) respondent DIET principals, all of them were giving freedom to lecturers for in-service training. Since the planning stage involved a need analysis, the DIET Lecturers were then given the freedom to plan keeping in mind these specific inputs and were given freedom by the Principals to plan the program accordingly.

Figure 4.15

Distribution of the DIET principals in terms of their responses about monitoring the in-service training
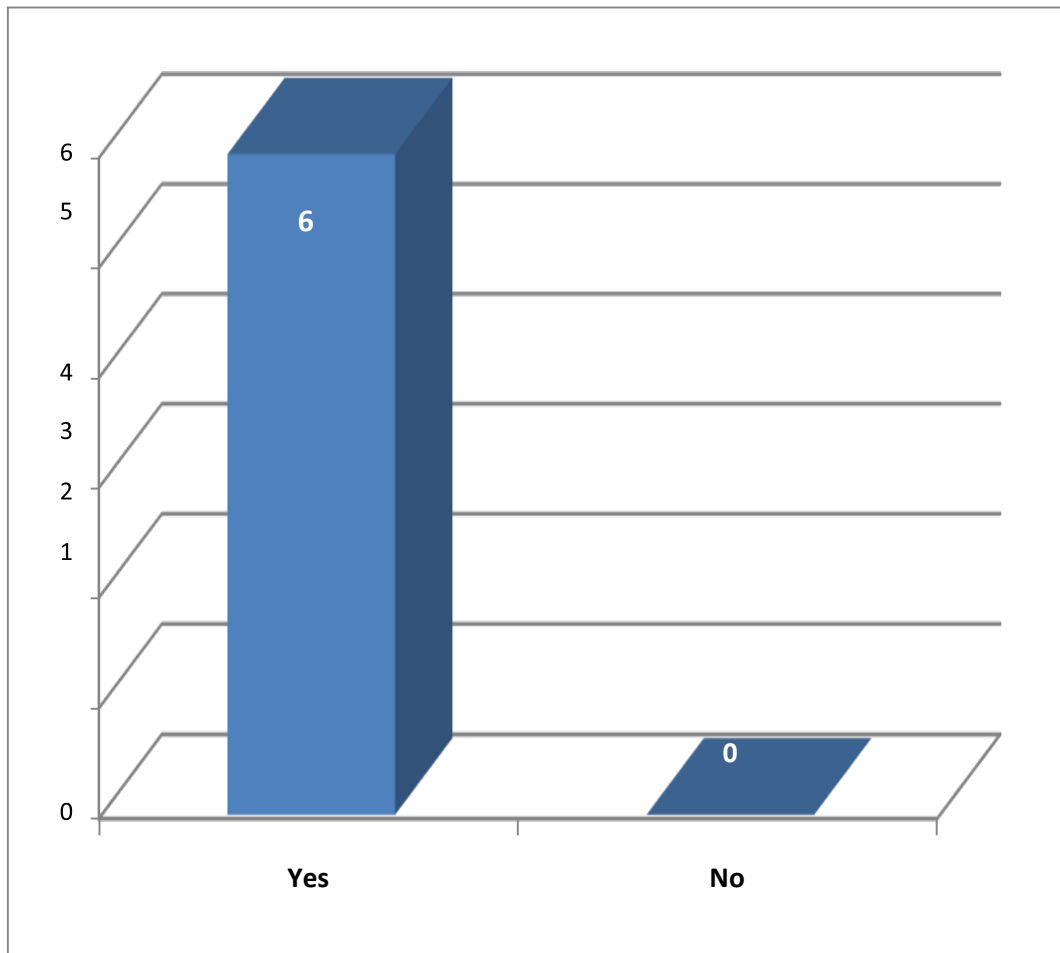
From the figure above it can be observed that all 6 (100%) DIET principals were monitoring the in-service training. All the Principals did monitor the program and sessions to ensure that it was being implemented according to that which was planned.

Figure-4.16

Distribution of the DIET principals in terms of their responses on guidance to teachers during in-service training
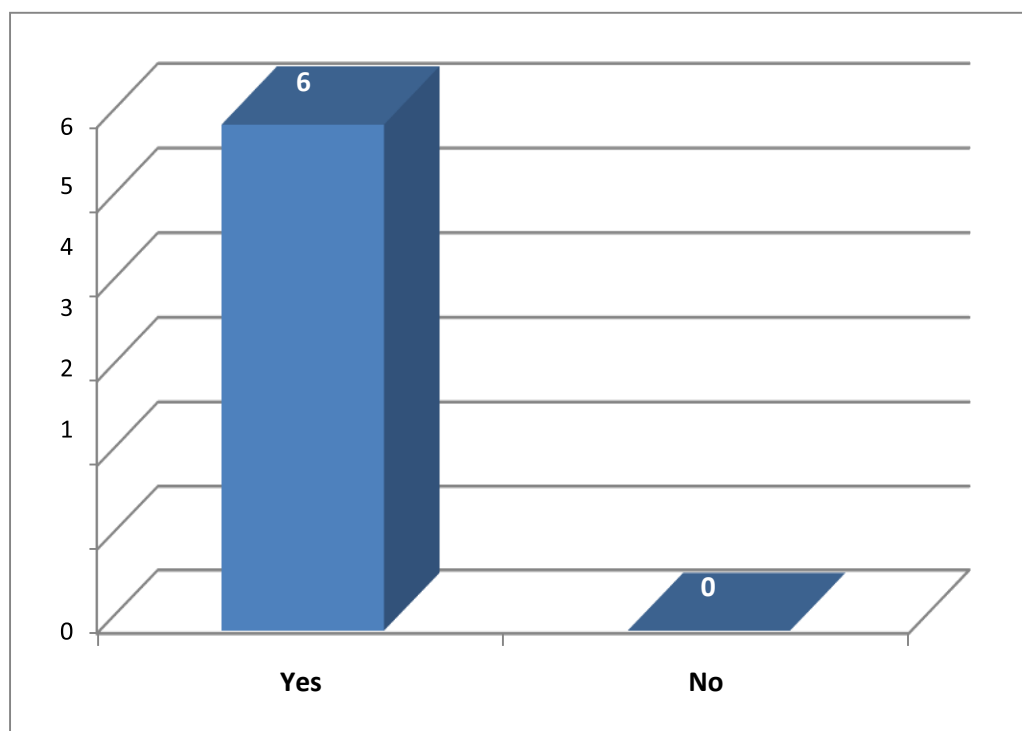
From the **figure 4.16**, it can be observed that all 6 (100%) respondent DIET principals were providing guidance to teachers during in-service training. Thus, the Principals were actively engaged in both the organization as well as during the implementation of the in service training programs.

Responses regarding impact of in-service training programmes at grass root level.

With respect to this question it was observed that all (100%) principals responded that there was impact of in-service training programmes at grass root level.

When they were asked about the specific areas of impact of in-service training at grassroot level, their responses received indicated that fifty percent of the principals responded that the effect of training was seen in the implementation of training components in the classroom. Few DIET Principals mentioned that

students' learning level had increased post training and few others responded that training programmes had increased enrolment of students; new trends in teaching-learning were practiced and group/collaborative activities were assigned by the teachers.

Thus, as per the DIET Principals, the effect of training was seen in its implementationin the form of classroom practices and its impact on students' learning.

Responses regarding suggestions for improvement of training programmes. When asked for suggestions regarding improvement of training programmes, about onethird of the Principals suggested that training should be provided according to needs ofteachers; few of them suggested preparation of modules before the training. Theremaining suggestions from them were monitoring mechanisms should be there toassess implementation of training in classrooms, action research training and trainingon innovations should be included in the training programmes.

Thus, the DIET Principals were keen to see the impact of the training via a monitoringsystem and also wanted to train teachers in the recent innovations in the teaching- learning process.

Interpretation

From the data it could be inferred that the DIET Principals were satisfied that the in - service training programs had been designed with a view to benefit Primary educationand was training the teachers accordingly. Their views for better training in the future included need based programs and coordination meetings conducted for a proper planning of the programs. DIET Principals were actively involved during the planning,

organization and implementation of the in service training programs. The Principals also responded that the effect of training was seen in its implementation, in the form ofchange in classroom practices and its impact on students' learning.

4.4.2 SECTION IV:

Views and Reactions of Teacher Educators about the In-service Training Programmes The views and reactions of DIET teacher educators have been measured through the data collected from the 50 Teacher Educators from the DIETs of six districts (Vadodara, Surat, Amreli, Rajkot, Kutch, and Idar) through the questionnaire. The analysis and interpretation of the collected data is presented in the form of the following section.

Figure-4.17

Distribution of the teacher educators in terms of their views on usefulness of in-service training programmes for primary school teachers
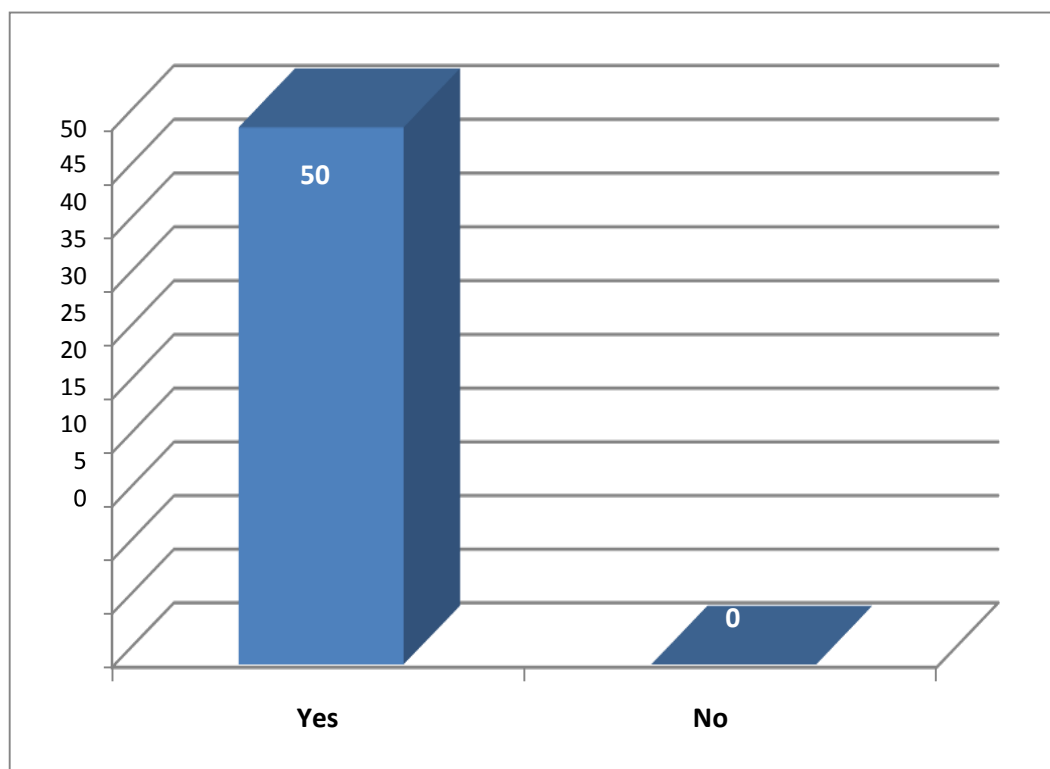
From the figure above it can be observed that all (100%) the DIET Lecturers / TeacherEducators mentioned that in-service training programmes were useful for increasing primary school teachers' proficiency. Thus, DIET Lecturers were satisfied with the in- service training programs and their contribution to developing teacher proficiency.

Figure-4.18

Distribution of the teacher educators in terms of their responses with respect to addressing newtrends in education
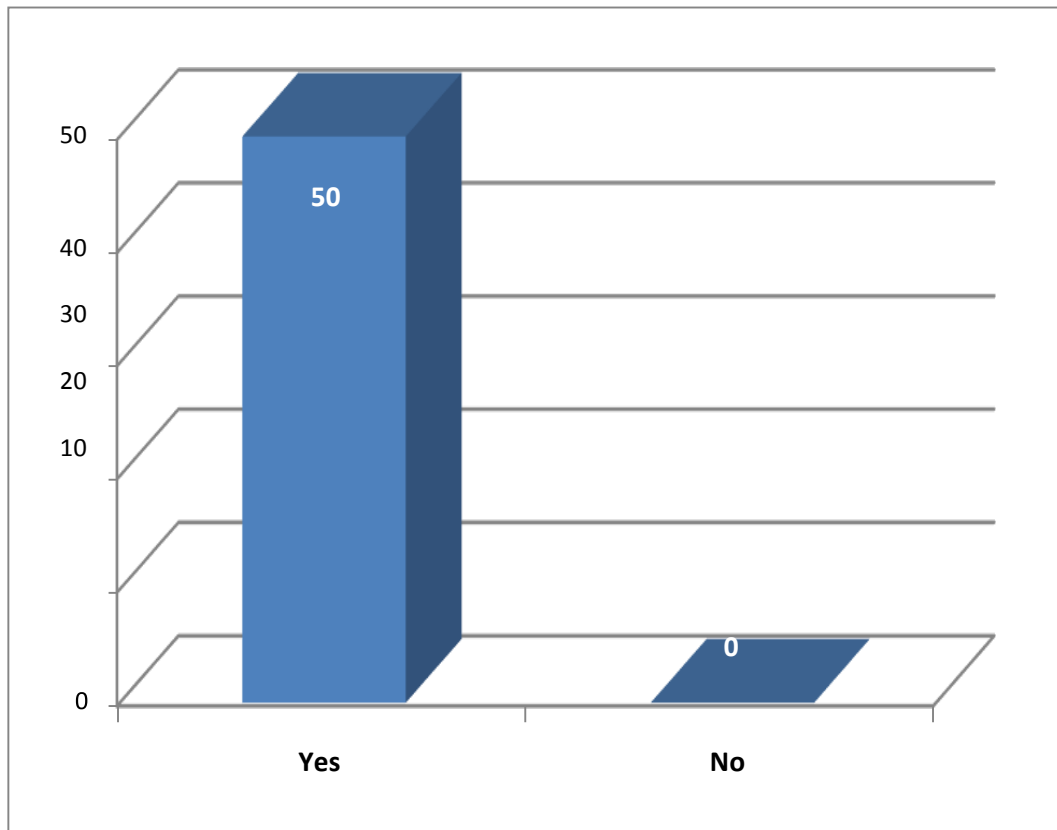
From the figure above it can be seen that all (100%) the teacher educators mentioned that in-service training programmes were capable of addressing the new trends of education. From this data it can be inferred that DIET Lecturers found the in-service programs did address new trends in education instead of the those which were traditional.

Figure -4.19

Distribution of the teacher educators in terms of their views on identification of teachers' training needs
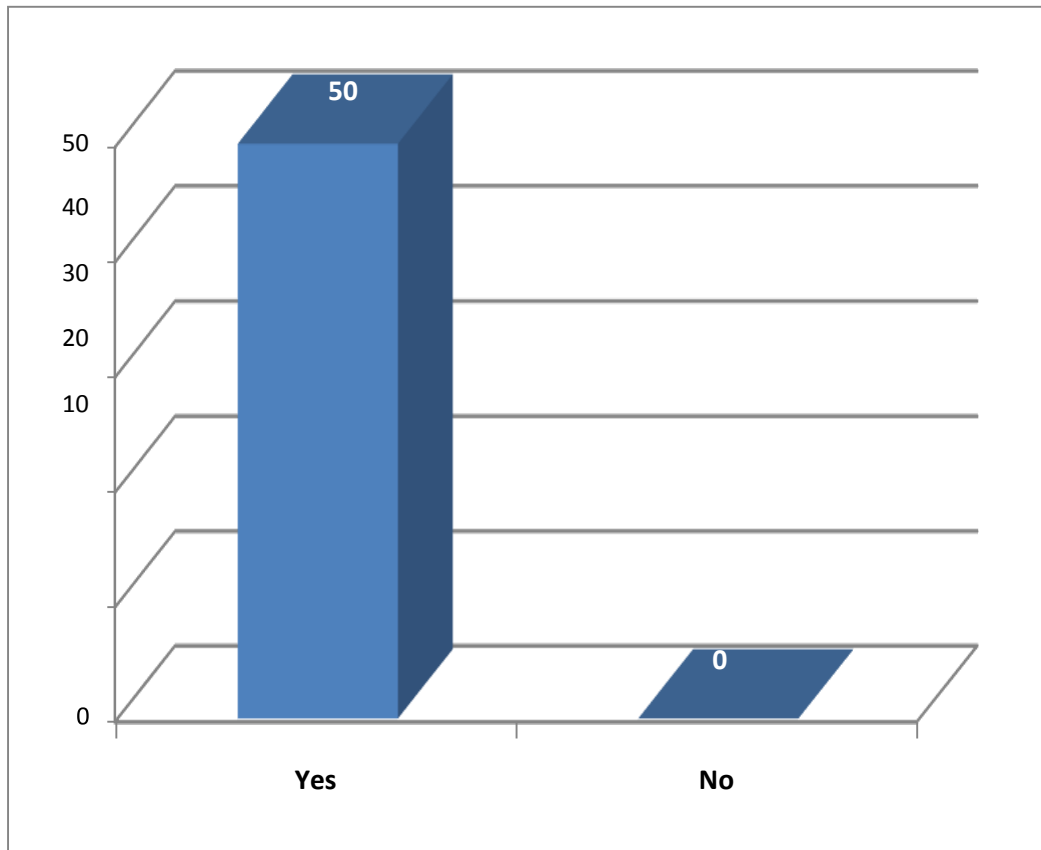
From the figure above it can be observed that all (100%) the teacher educators mentioned that teachers' training needs were being identified. When they were further asked about the how they had identified the training needs of teachers, their responsesreceived has been presented in the following section.

Table -4.8

Distribution of the teacher educators in terms of their response on identification of training needs of teachers

Sr. No.	Identification of training needs	Number of teacher educators	
		Frequency	Percentage
1	By sending questionnaires to teachers	24	48
2	On the basis of research	39	78
3	Based on list of training needs of 1st semester	36	72
4	On the basis of field study	22	44
5	Any other	9	18

From the table above it could be observed that majority of the teacher educators were identifying training needs of teachers on the basis of research (78%) and the list of training needs in first semester (72%). The other ways they used for identification of training needs of teachers were by sending questionnaire to teachers (48%), on the basisof field study (44%) and other ways like National Achievement Survey (6%), new textbooks (6%), reactions of teachers (6%). There were multiple responses to the question on how training needs were identified. Thus, there was no single strategy adopted. However, the highest percentage responded that identification was done on the basis of research which implied that prior to implementing the training program, aninvestigation was done to identify what should be the research based inputs in the training programs.

Figure -4.20

Distribution of the teacher educators in terms of their responses regarding content of training
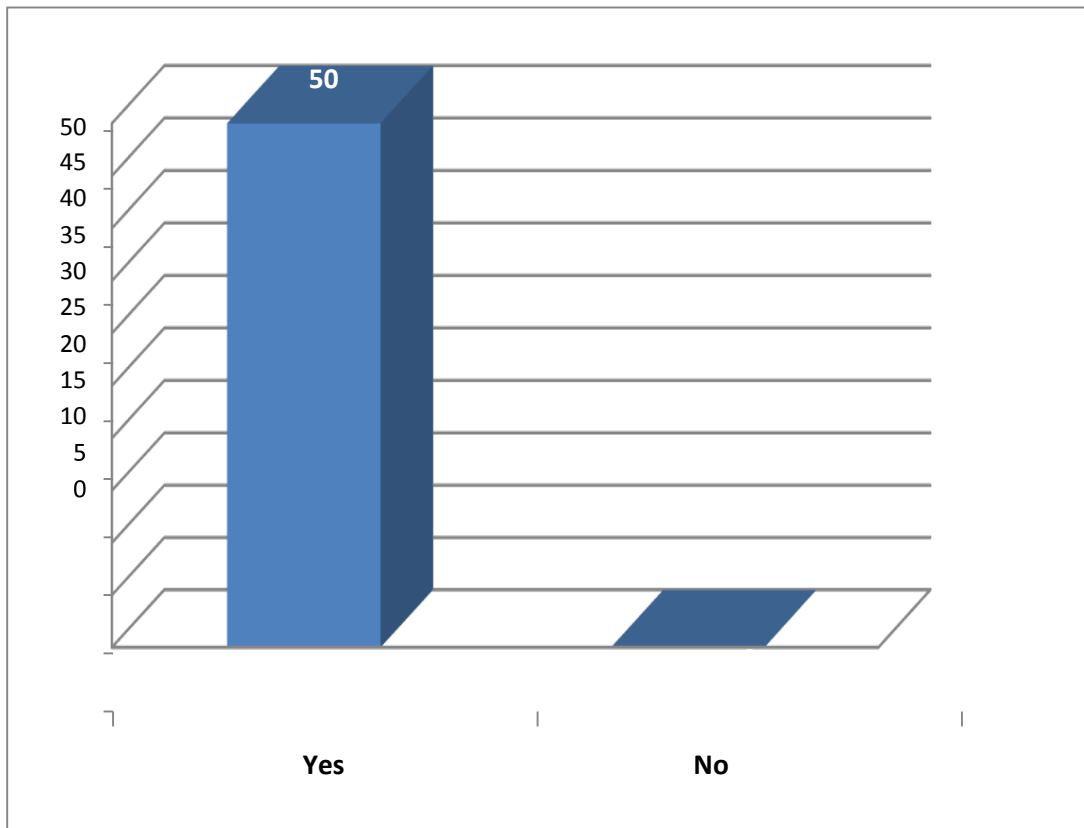
From the figure shown above it can be observed that all (100%) the teacher educators mentioned that they were deciding the contents of training well before the organizationof training. When they were further asked about the basis on which the contents of training were decided, their responses are as given below.

Table-4.9

Distribution of the teacher educators in terms of their response regarding the basis of deciding the contents for training

Sr.No	Basis of deciding contents of training	Number of teacher educators	
		Frequency	Percentage
1	On the basis of identified training needs	47	94
2	On the basis of government norms	31	62
3	On the basis of changes in curriculum	9	18
4	Better understanding of new methods & techniques	44	88
5	Related to the textbook content	42	84

From the data given above, it can be seen that most of the teacher educators were deciding the contents of the training on the basis of identified training needs (94%), implementing new methods and techniques (88%) and relating to the contents of textbooks (84%). A large section of the teacher educators (62%) were deciding the contents for training on the basis of government norms and the remaining teacher educators were considering the changes in curriculum for deciding the contents for training.

From this data it can be inferred that there were multiple ways in which the content wasbeing decided. However, the largest number of teacher educators responded that the content was decided on the basis of identification of training needs; thus the training programs seriously considered teachers' needs as important criteria for designing the training program content.

Table-4.10

Distribution of the teacher educators in terms of their response on priority of organizational activities

Sr. No	Priority of organizational activities	Number of teacher educators	
		Frequency	Percentage
1	Availability of grant.	33	66
2	Preparing training materials	31	62
3	Selection of resource persons	31	62
4	Discussion with resource persons	30	60
5	Preparation of training schedule	28	56
6	Arrangement of training venue	26	52

From the table above it can be seen that priority was given by the teachers to the following activities - majority of the teacher educators were giving priority to availability of grant (66%) for organizing training programme. After the grant available,they were giving priorities to preparation of training materials (62%), selection of resource persons (62%), discussion with resource persons (60%), preparation of training schedule (56%) and venue arrangement (52%).

From this data it can be interpreted that selection of resource persons and preparation of training material was the primary activity in the planning stages and this was based on the training needs identified.

Figure -4.21

Distribution of the teacher educators in terms of their responses about development of training module
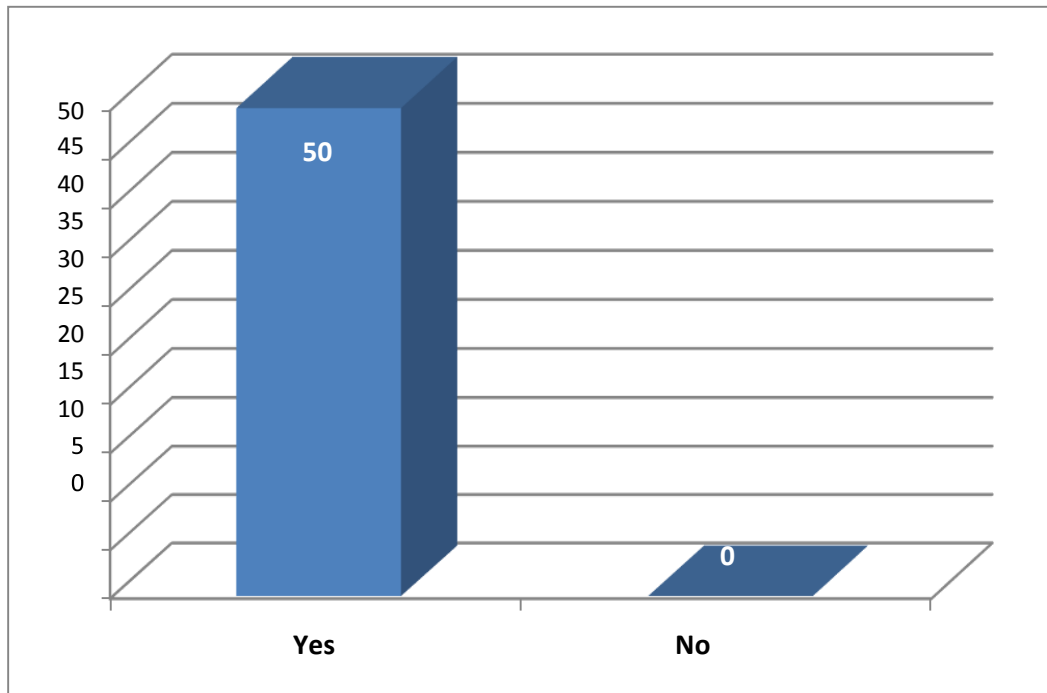
From the **figure-4.21,** it can be seen that all (100%) the respondent teacher educatorsmentioned that they were developing the training modules.

When they were further asked about methods used for developing training modules,their responses received has been presented in the following section.

Teacher educators' response on methods used for developing training modules. From the responses received, it was found that with respect to the development oftraining modules, most of the teacher educators said that this was being done by organizing workshops; there were many who responded that this was being done byconsulting experts and considering opinion of SRGs; few Teacher Educators respondedthat modules were being developed after analyzing training needs of teachers and bygoing through the government survey reports like National Achievement Surveys.

Thus, many inputs and aspects were being considered before designing the trainingmodules to make them contemporary and effective.

Figure-4.22

Distribution of the Teacher educators in terms of their responses about meeting with resource persons before the training
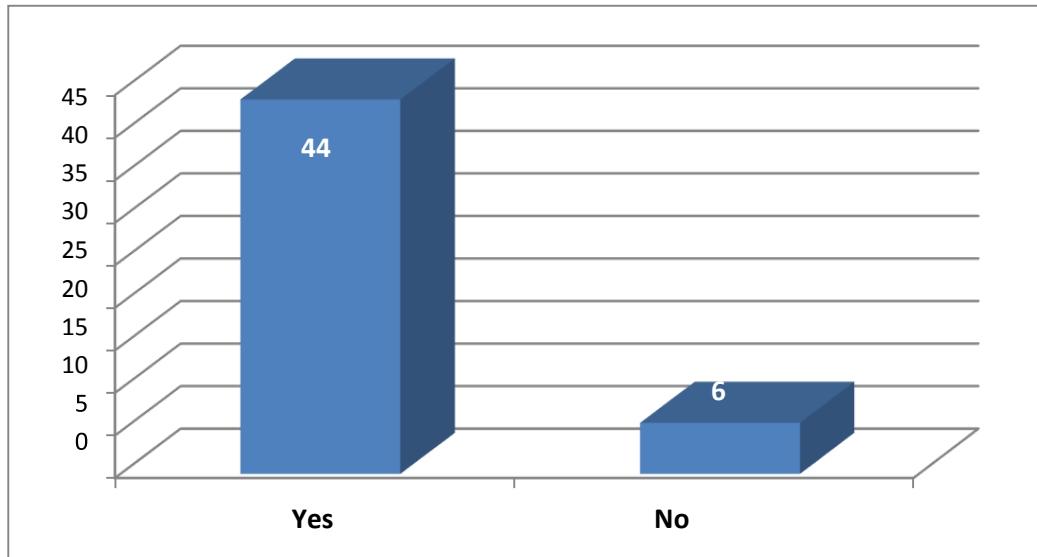
From the figure above it can be observed that most (88%) of the respondent teacher educators were organizing meeting with resource persons for discussing the objectivesof training whereas 12% of them were not organizing any meeting regarding the training.

When they were further asked about the benefit of meeting with resource persons beforethe training, their responses received has been presented below.

Teacher educators' responses regarding benefits of meeting with resource persons before the training.

Majority of the Teacher Educators responded that meeting with resource persons beforethe training was useful in pre-planning the entire training programmes.

A large section of the Teacher Educators was of the view that it was useful in achievingthe objectives of the training programmes.

However, out of those Teacher educators who were not meeting with the resourcepersons before the training, majority of them were sharing the required details orally. Few Teacher Educators mentioned that they were providing training schedules anddistributing training modules to the Resource Persons to convey relevant information.

Figure-4.23

Distribution of the teacher educators in terms of their views on use of ICT in training programmes
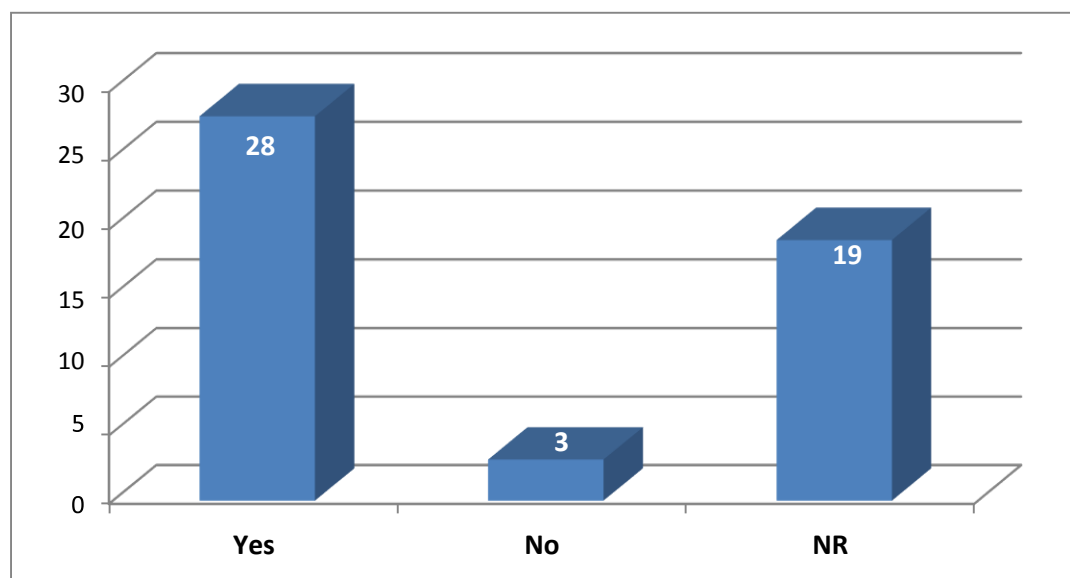
From the **figure-4.23,** it can be observed that more than half (56%) of the teacher educators mentioned that they were using ICT in training programme; only 6% of themresponded that they were not using ICT; remaining 38 % of them did not answer to thequestion.

Responses of Teacher Educators regarding the use of ICT.

From the above data it was seen that, when these 28 Teacher Educators were asked about the type of ICTs they used, their responses received were as follows - majority ofthe teacher educators responded that the use of PPTs was still the most prevalent ICT aid used; the other aid used was the Internet and online materials as responded by a large section of the Teacher Educators.

As per few Teacher Educators, the least used aids were audio visual aids, the LCD projector and mobiles. These were the teaching aids that the teachers were using since a long time in their teaching and were very comfortable with the same.

The teacher educators, a very small percentage, who were not using ICTs in providingtraining, were also of the view that ICTs should be used in the training looking to the vast benefits that could be derived from this medium.

Figure-4.24

Distribution of the teacher educators in terms of their responses on allotment of training topics to resource person
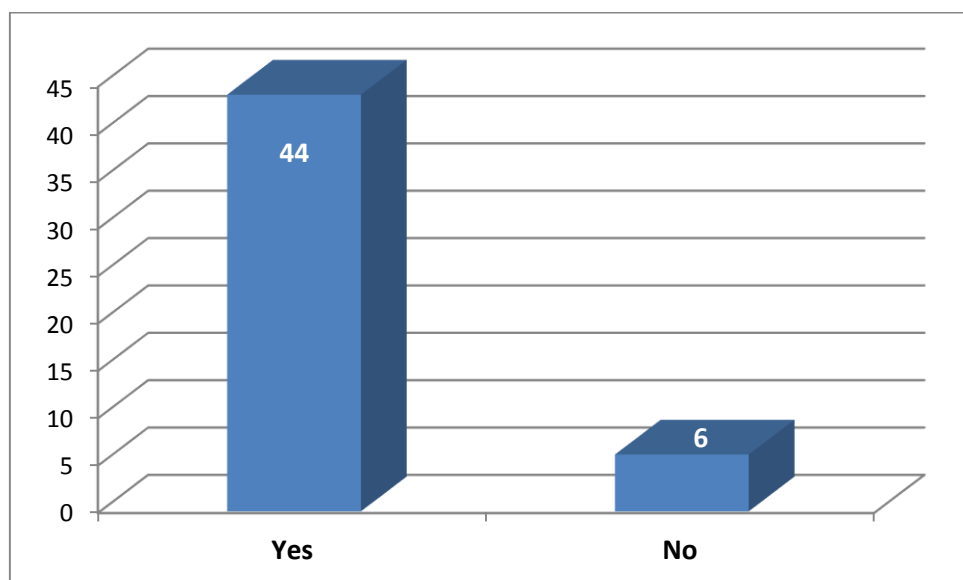
From the figure above it can be observed that majority teacher educators (88%) mentioned that the resource persons were getting training topics based on their expertisein the area whereas only 12% of them were of no such view.

Table-4.10

Distribution of the teacher educators in terms to their responses on ways of receiving feedback from teachers

Sr. No	Ways of receiving feedback from teachers	Number of teacher educators	
		Frequency	Percentage
1	Written feedback	28	56
2	Online feedback	17	34
3	Oral feedback	19	38
4	Reaction scale after training programme	28	56

From the table above it can be observed that a large percentage of the respondent teacher educators were receiving reactions of teachers via written feedback (56%) andby using reaction scale after the training programme (56%). The remaining teacher educators were getting oral feedback (38%) and feedback via online mode (34%).

Figure-4.25

Distribution of the teacher educators in terms of their responses about opportunity of evaluation of training programme
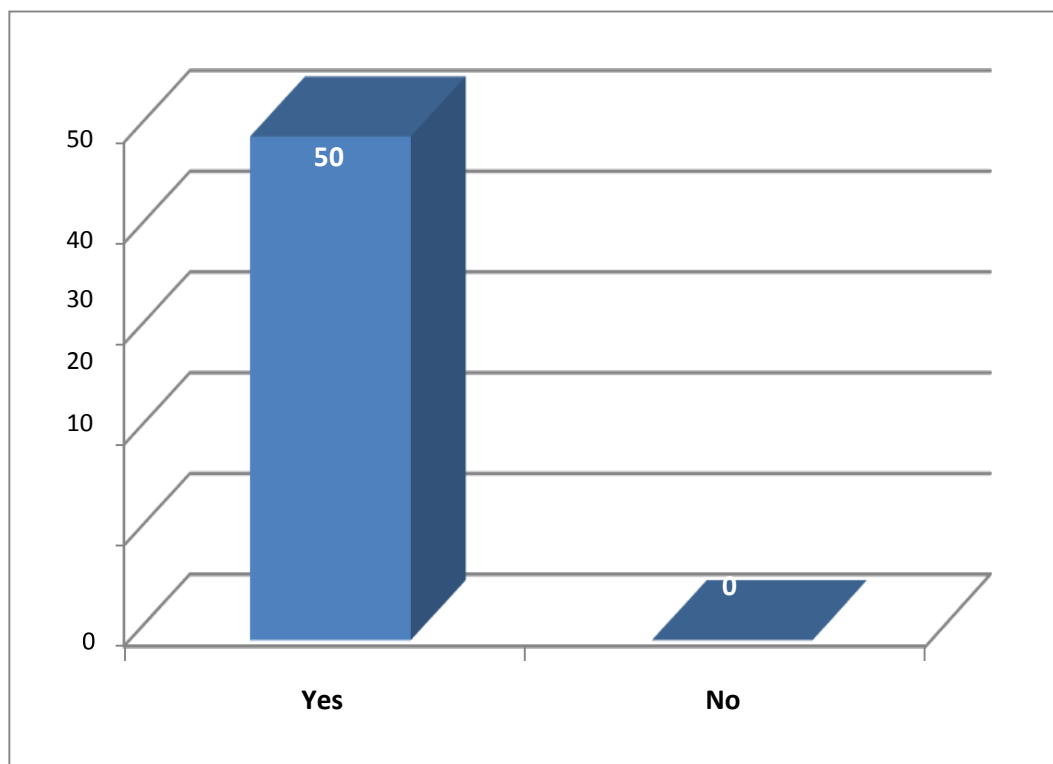
From the data above it can be seen that all (100%) the respondent teacher educators mentioned that they were getting an opportunity for evaluation of the training programmes.

When they asked about the techniques they were using for evaluation of training programmes, their responses received have been given in the **table-4.10**

Teacher educators were permitted to give multiple responses**.**

Table-4.11

Distribution of the teacher educators in terms of their responses on techniques used for evaluation of training programmes

Sr. No	Techniques used for evaluation oftraining programmes	Number of teacher educators	
		Frequency	Percentage
1	Daily reports	47	94
2	Written feedback after the training	42	84
3	Oral feedback after the training	36	72
4	Online feedback	3	6

From the data above it can be observed that most of the teacher educators were evaluating training programmes through the daily reports (94%), via written feedback after the training (84%). The other evaluation techniques used by the teacher educatorswere oral feedback (72%) and online feedback (6%).

Figure -4.26

Distribution of the teacher educators in terms of their responses on need of pre-preparation before the training programme
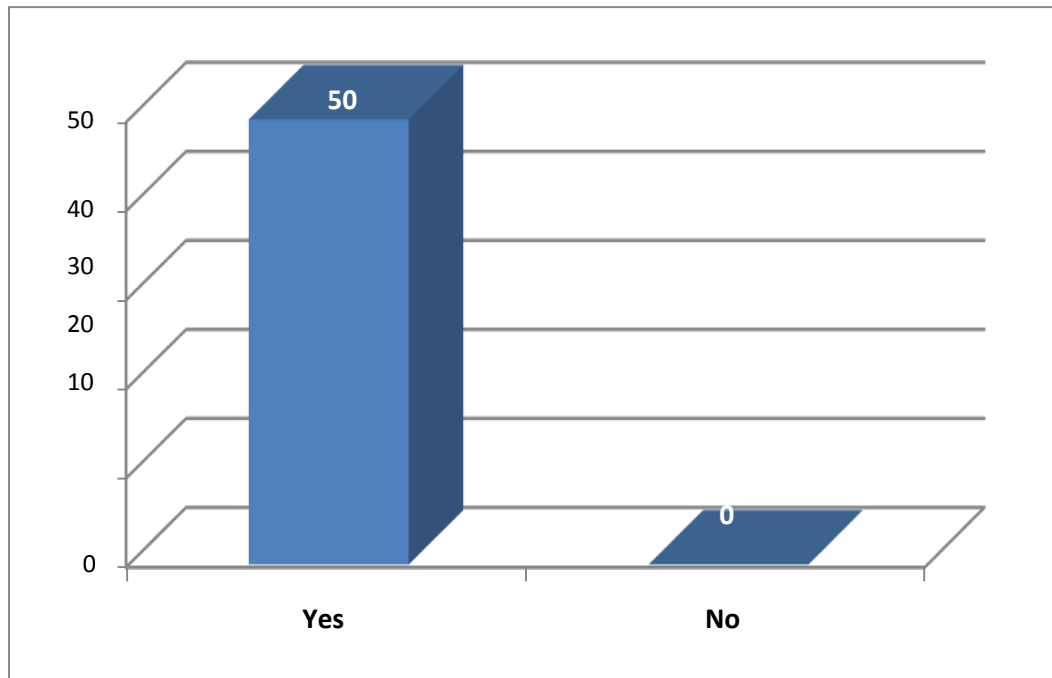
From the figure above it can be seen that all (100%) the respondent teacher educators mentioned that they were required to do pre-preparation before the training.

When they further asked about the type of pre-preparation required before the trainingprogrammes, their responses received were as follows:

Responses of the Teacher educators on types of preparation required Before the start of the training programmes.

On probing, it was found that majority of the teacher educators mentioned that selectionof training venue was an important preparation before the start of the training programmes whereas as per many of the respondents, schedule preparation was required before the training. The other requirements before the training programmes asper many of the Teacher Educators were selection of resource persons and preparationof training materials.

Few Teacher Educators mentioned that availability of grant and logistic related preparations were also needed.

Figure -4.27

Distribution of the teacher educators in terms of their responses on availabilityof enough time for pre-preparation
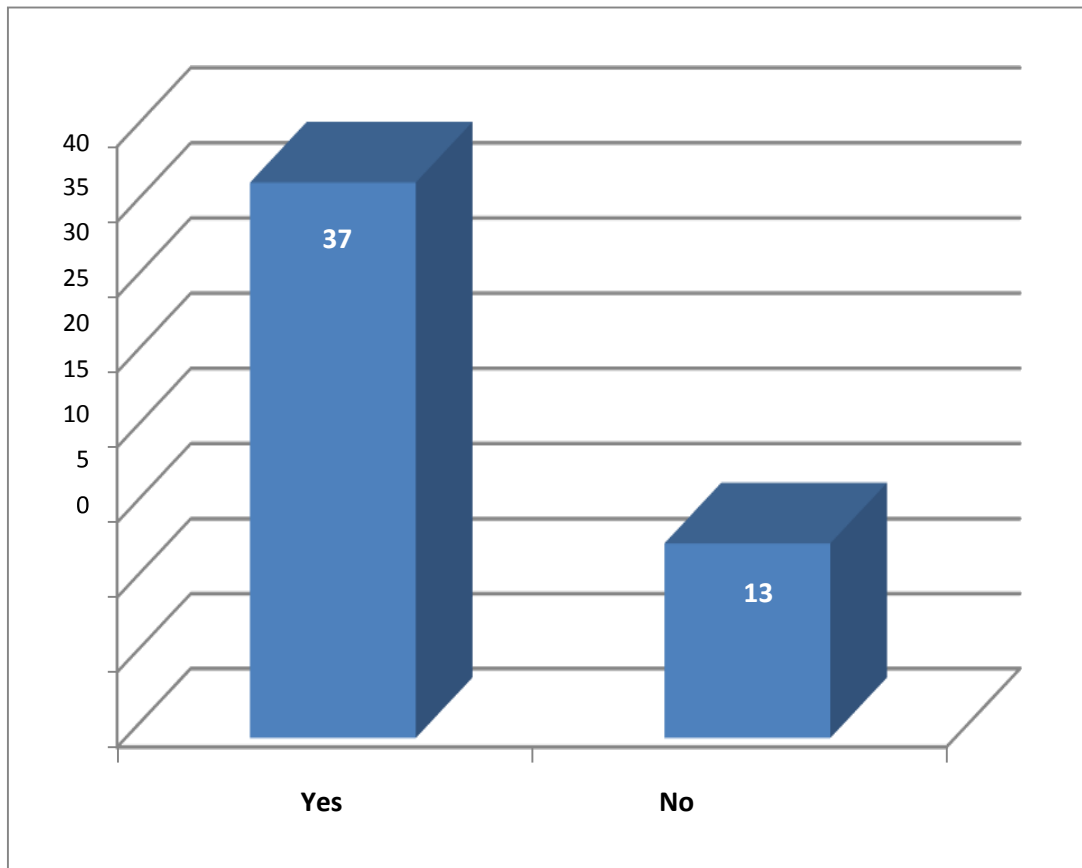
From the figure above it can be seen that out of 50 (100%) teacher educators, majority(74%) of them were getting enough time for pre-preparation before the training whereas26% of them were not getting enough time for pre-preparation.

Figure -4.28

Distribution of the teacher educators in terms of their responses on impact of training programmes at school level.
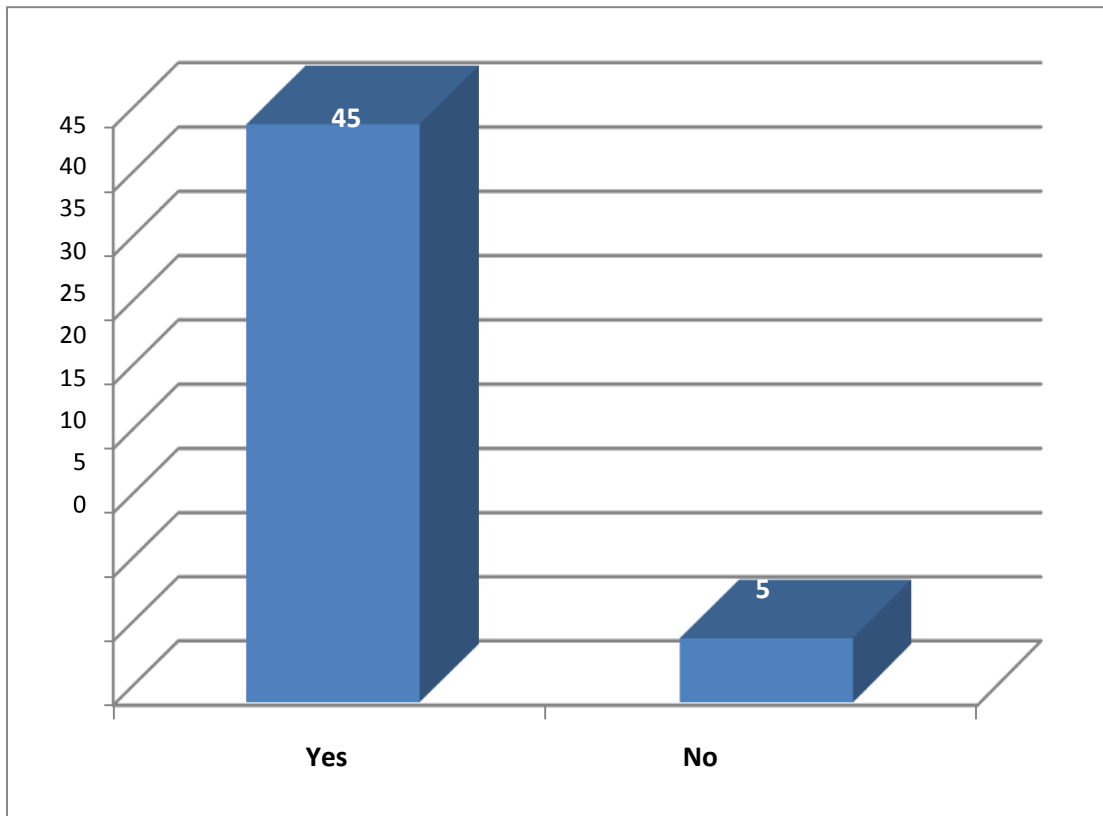
From the data it could be observed that most (90%) of the teacher educators mentioned that there seemed impact of training programmes at school level whereas, 10% of them were of opinion that there was no impact of training programmes at school level.

Figure -4.29

Distribution of the teacher educators in terms of their responses on formation of groups for continuous discussion with teachers
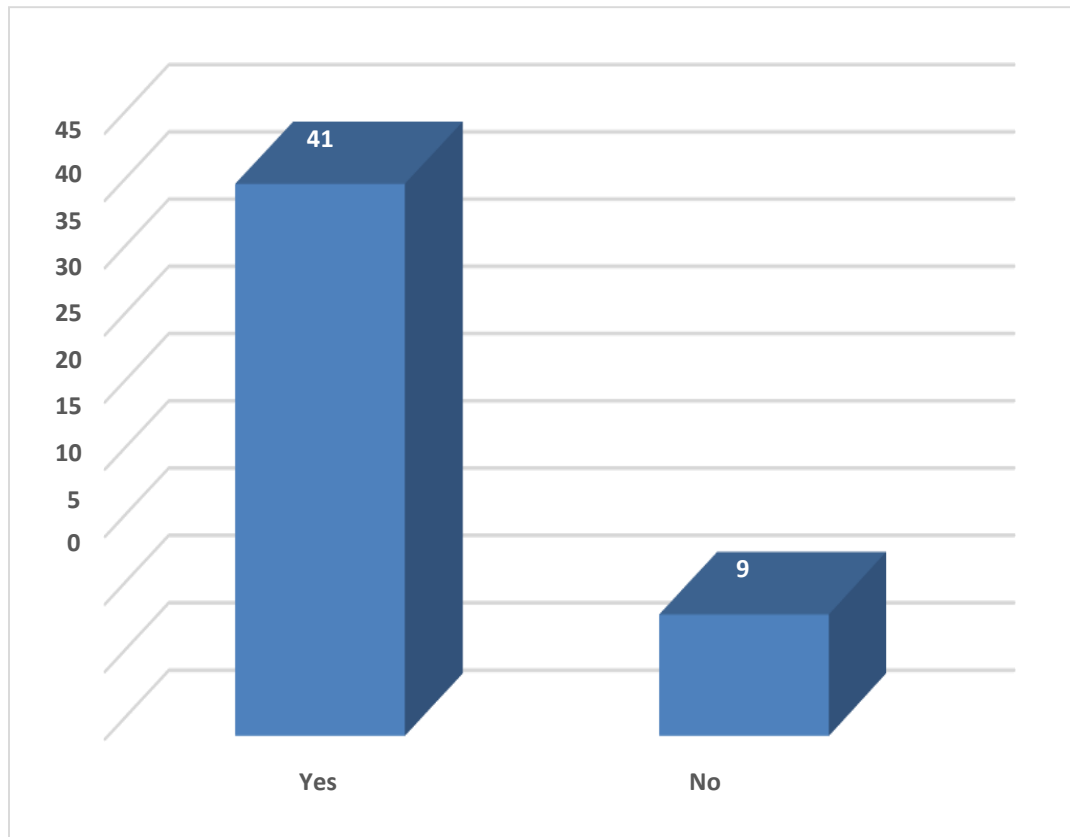
From the data it can be observed that most (82%) of the teacher educators mentioned that they formed Google, Yahoo, WhatsApp groups for continuous discussion with theteachers whereas, 18% of them did not form any group for continuous discussion withthe teachers.

Figure -4.30

Distribution of the teacher educators in terms of their satisfaction from different aspects of training programmes
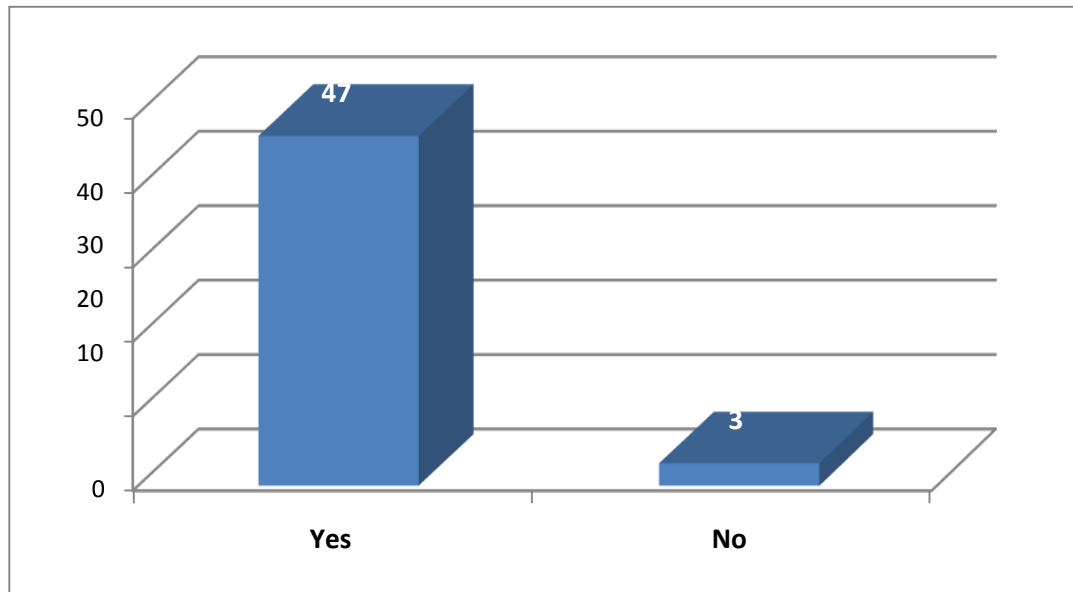
From the data it could be seen that most (94%) of the respondent teacher educators were satisfied with the different aspects of the training programmes whereas only 6% of them were not satisfied.

When they further asked about the positive points of the training programmes, their responses received have been given in the section below.

Responses of the teacher educators in terms of positive aspects of training programmes.

From the data it was found majority of the teacher educators were satisfied with aspects such as participation of teachers and subject expertise of resource persons; few teacher educators responded that they were satisfied with the available facilities, time of the training programme and the fact that it was need based.

The remaining few teacher educators who were not satisfied with the aspects of training programmes responded that this was due to organization of needless and repeated training programs.

Figure-4.31

Distribution of the teacher educators in terms of their responses on new knowledge received by the teachers
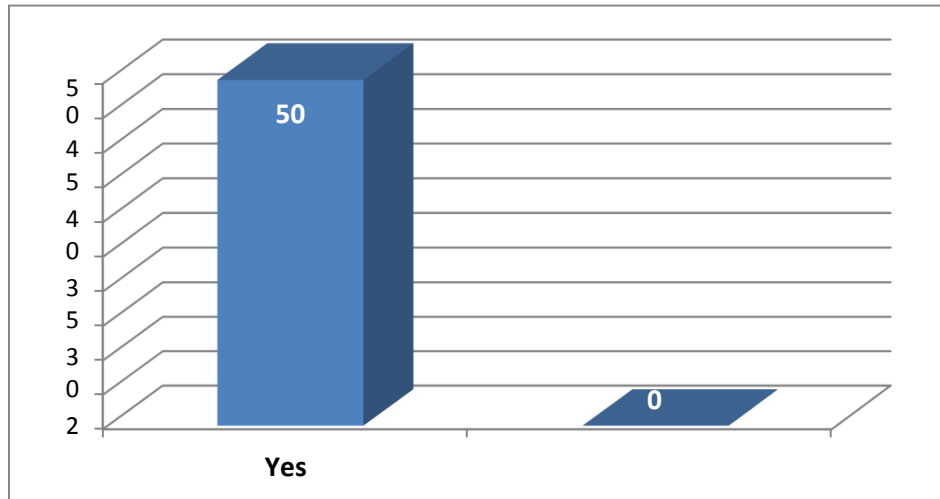
From the figure shown above, it can be observed that all (100%) respondent teachereducators mentioned that new knowledge was being received by the teachers.

Figure -4.32

Distribution of the teacher educators in terms of their responses on providing time to teachers for their questions
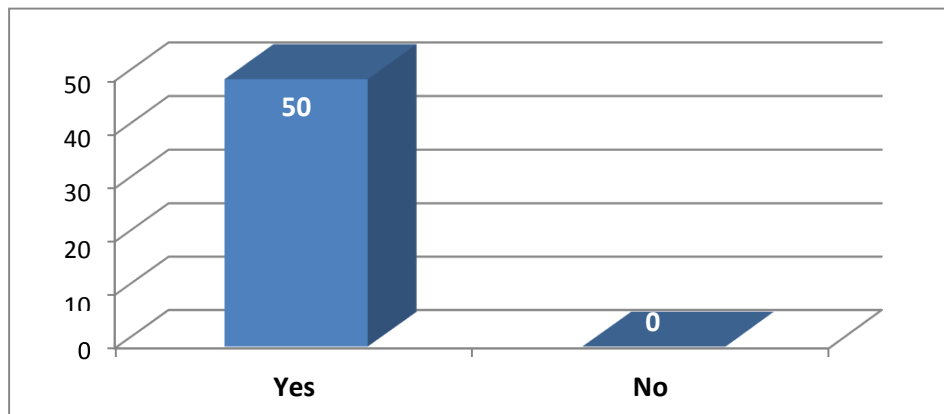
From the figure above it can be seen that all (100%) the respondent teacher educators mentioned that they were providing time to teachers for asking their questions during the training.

When they were further asked about the type of questions the teachers were asking during the training, their responses received have been presented in the following section.

Table -4.12

Distribution of the teacher educators in terms of their responses on type of questions from teachers

Sr. No.	Type of questions from teachers	Number of teacher educators	
		Frequency	Percentage
1	Administrative related	44	88
2	Academic related	33	66
3	Related to social issues	6	12

From the table above it can be observed that out of 50 (100%) respondent teacher educators, most of them (88%) mentioned that the teachers did ask administrative related questions during the training whereas 66% of them mentioned that the teachers asked academic related questions. The remaining teacher educators mentioned that theteachers asked questions related to social issues (12%).

Figure-4.33

Distribution of the teacher educators in terms of their responses on evaluation of classroom behavior of trained teachers
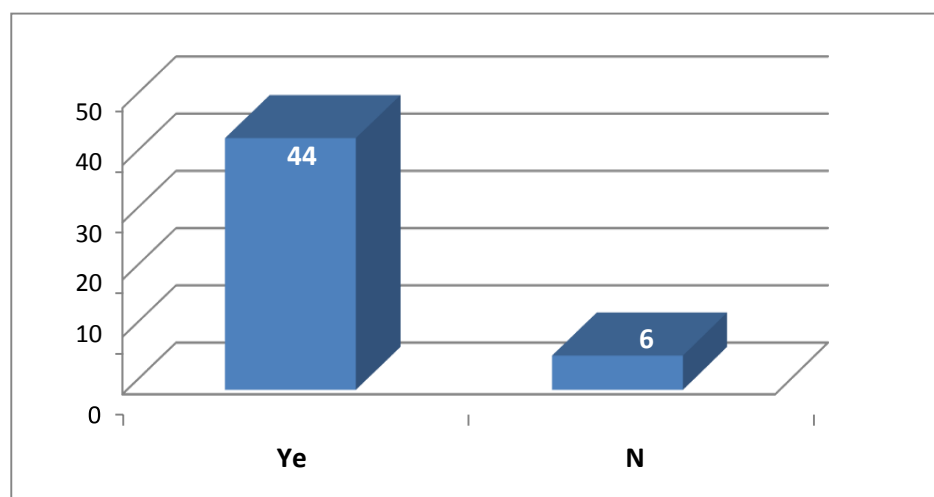
From the data, it was seen that most (88%) of the respondent teacher educators mentioned that the classroom behavior of trained teachers was being evaluated. Whenthey were further asked about the evaluation techniques for evaluation of classroom behavior of trained teachers, their responses received have been presented in the following section.

Table -4.13

Distribution of the teacher educators in terms of their responses on evaluationof classroom behavior of trained teachers

Sr. No	Evaluation done via	Number of teacher educators	
		Frequency	Percentage
1	Classroom observation during the school visit by DIET faculty	36	72
2	On the basis of Students' progress / achievement	33	66
3	Discussion with school Principals regarding student achievements	28	56
4	Other	9	18

From the data above it can be observed that out of 50 (100%) respondent teacher educators, majority of them (72%) mentioned that the classroom behavior of trained teachers was evaluated by classroom observation during the school visit of DIET faculty; based on students' achievement (66%) whereas, 56% of them were evaluatingthe classroom behavior of teachers through the discussion with school head teachers. The other ways of evaluating classroom behavior of teachers were through blogs (6%)and school visits (18%).

Figure -4.34

Distribution of the teacher educators in terms of their responses on training to experts
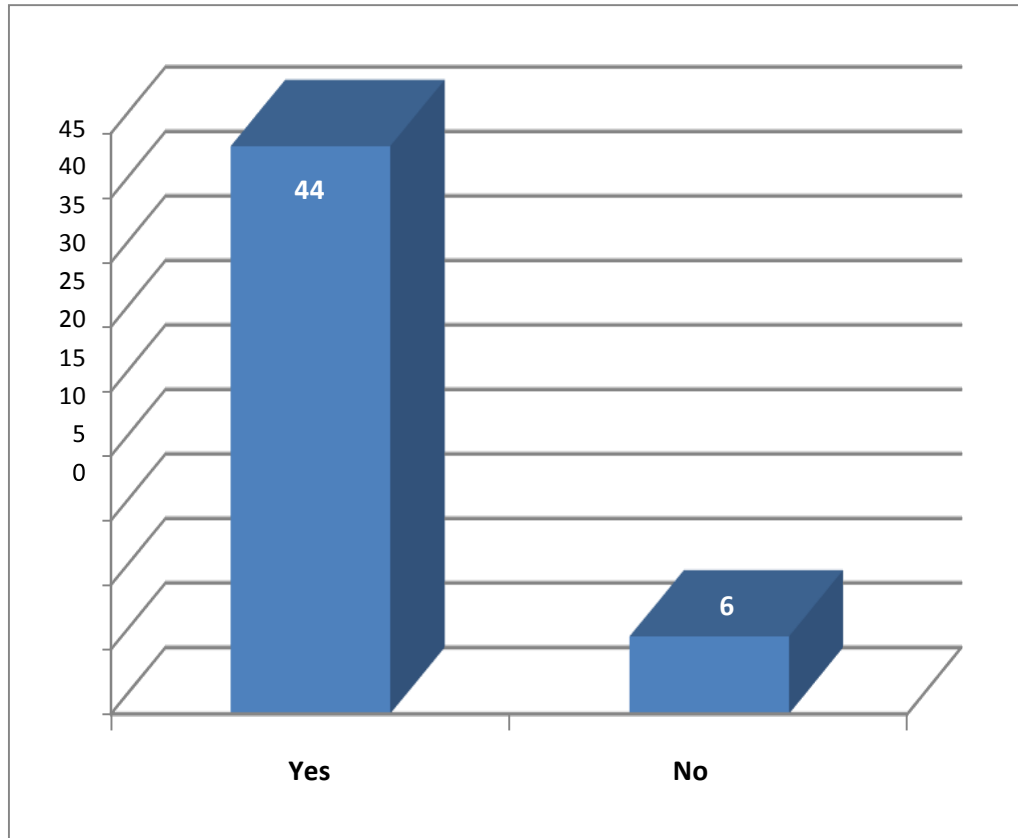
From the figure above it can be seen that most (88%) of the respondent teacher educators mentioned that training related to how to give training in training programmes was being given to experts whereas, 12% of them mentioned that no suchtraining was being given to experts.
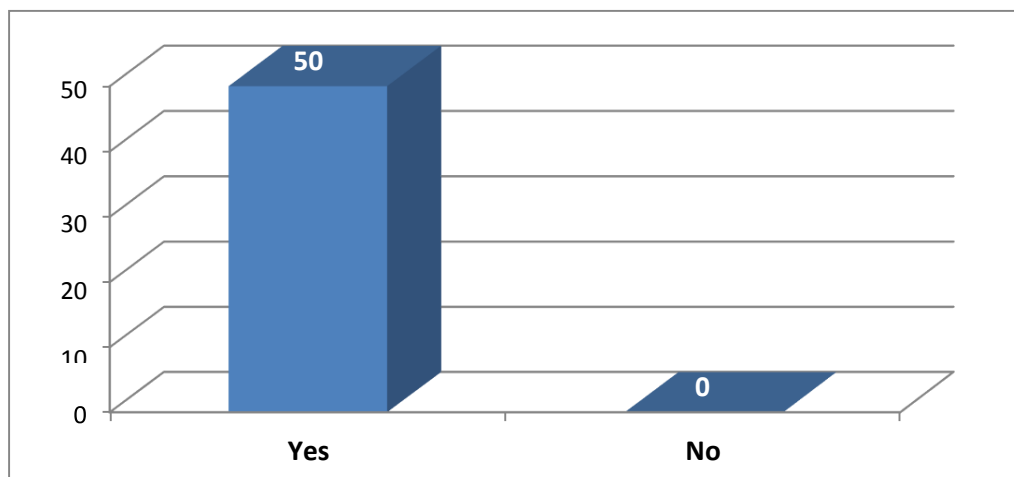
Figure - 4.35

Distribution of the teacher educators in terms of their responses on experts'
preparation for the training program
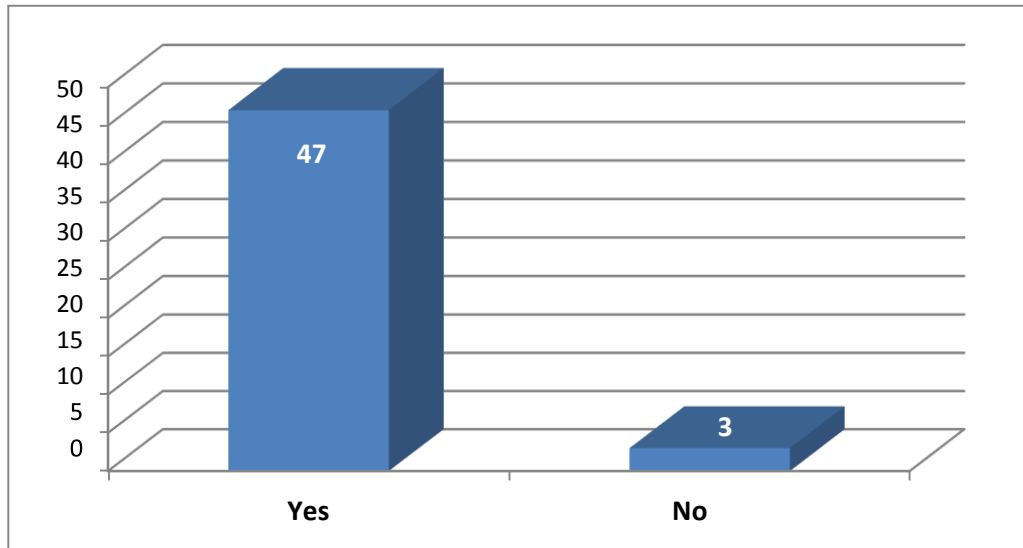
From the figure above it can be seen that most (94%) of the respondent teacher educators mentioned that the experts came for the training with full preparation whereasonly 6% of them were not of such opinion.

Figure -4.36

Distribution of the teacher educators in terms of their responses on use of varied
methods and techniques by the experts

From the figure above it can be observed that all (100%) the respondent teach educators mentioned that the experts used varied methods and techniques in training programmes.

Figure-4.37

Distribution of the teacher educators in terms of their responses on organizationof training programmes on annual planning and budget preparation
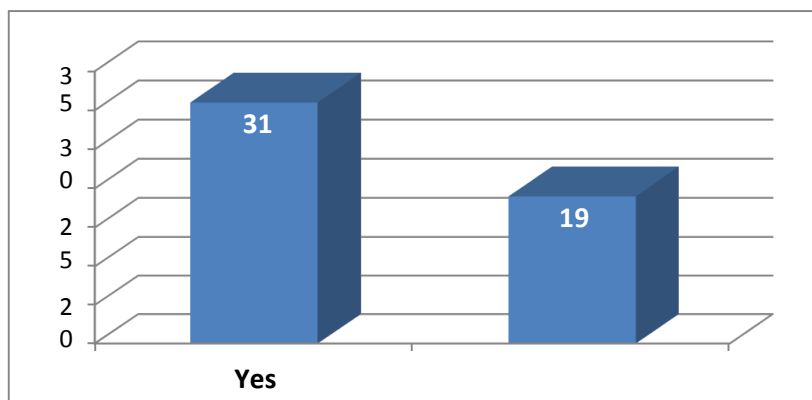
With respect to the question on organization of training programmes on annual planningand budget preparation, it could be seen that majority (62%) of the respondent teachereducators mentioned that the DIETs were organizing training programme on annual planning and budget preparation for the District Organization Team.

Figure -4.38

Distribution of the teacher educators in terms of their responses on cooperationfrom other staff of DIETs in training programmes and implementing training literature
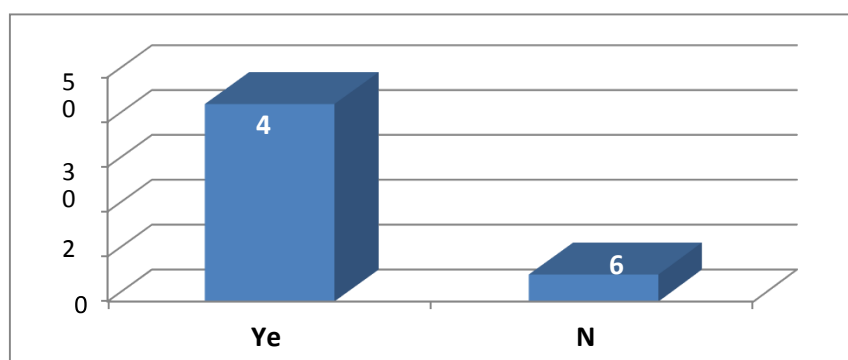
With respect to the question on cooperation from other staff of DIETs in training programmes and implementing training literature it was observed that most (88%) of the respondent teacher educators mentioned that they were receiving cooperation fromother staff of DIETs in organizing training programmes and implementing training literature

Figure -4.39

Distribution of the teacher educators in terms of their responses on developingany innovation for training to teachers
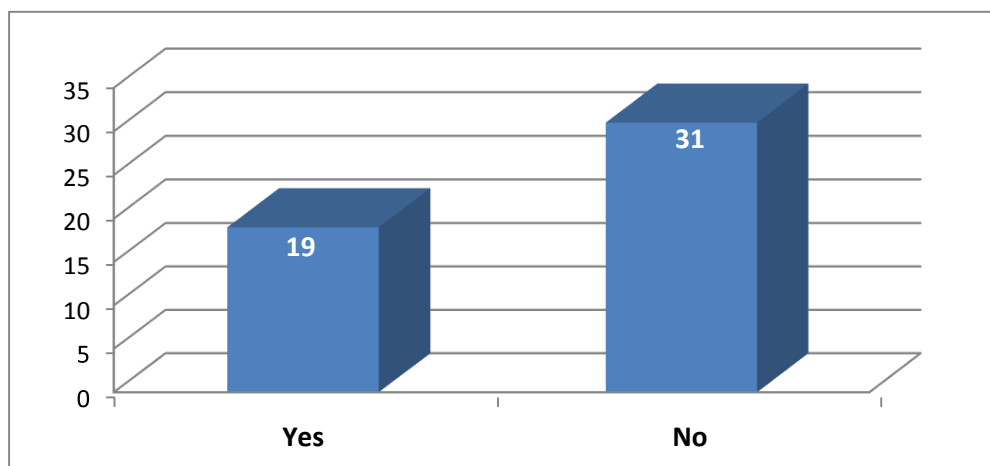
From the figure above it can be observed that majority (62%) of the respondent teachereducators mentioned that they have not developed any new innovations for imparting training to teachers whereas 38% of them mentioned that they have developed new innovations for imparting training to teachers.

When further asked about the innovations developed, their responses received have been presented as follows.

Responses of the teacher educators regarding new innovations developed.

Out of the 38% Teacher Educators who mentioned that they have developed new innovations for imparting training to teachers, few of them had developed online feedback mechanisms; data base of innovative practices online; Teaching Learning Material based on Learning Outcomes; Field visit formats/monitoring formats; and evaluation tools.

Responses of the teacher educators regarding weaknesses of the Training Programmes.

In response to this question, it was found that only few teacher educators responded that the negative points of the training programmes were needless or repeated training, lack of punctuality from teachers, problems of seating arrangement due to large number of participants, wastage of time in pre-preparation, organization of training programmes at inconvenient time, long

duration of training, less implementation of training in real classroom teaching, logistic related problems, no proper monitoring of received training and no follow-up work after the training.

Suggestions given by teacher educators for improving training programmes -

Out of 50 (100%) respondent teacher educators, majority of the teacher educators suggested organization of need based training programmes and compulsory attendanceof participants; whereas, nearly half of them suggested need of development of propermonitoring and feedback mechanisms.

The other suggestions received from few teacher educators were that training programmes should be conducted on teacher readiness; programmes should be in small groups for more meaningful participation; there should be more programmes on new trends in education and programmes that make classroom teaching lively.

Most of the Teacher Educators were in favor of more interaction among participants and a positive attitude; availability of relevant training materials and modules / resources and resource persons. They suggested shorter duration, a convenient venue and advanced annual planning for training programmes.

Some of the teacher educators suggested less number of training programmes with moreuse of audio-visual aids.

Interpretation

From the data analysis of the responses given by the Teacher Educators it could be inferred that they were satisfied with the Training programs in terms of their contribution to developing teacher proficiency. The data analysis revealed that TrainingPrograms were designed after a need analysis had been conducted – the training programs seriously considered teachers' needs as important criteria for designing the training program content.

The data also revealed that training related to how to give training in training programmes was being given to Resource persons and thus the resource persons came for the training with full preparation. From the Teacher Educators' responses, it could be inferred that there was scope for improvement and some of the major recommendations were training programs in smaller groups; more

programmes on newtrends in education, availability of proper resources and resource persons; advanced annual planning for training programmes and better use of available resources.

While the use of ICT was found satisfactory, it should not be limited to only acquiring knowledge to make good pptx. ICT enabled methods give ample opportunity to teachersto design self-learning modules which should be the goal of the programs.

A feedback from few Teacher educators who were not satisfied with the different aspects of training programmes was due to organization of needless and repeated training programs.

Thus, it could be inferred that overall efforts were made for planning and organization of the in-service training program and there was also active participation of the Teachereducators in all the phases of the programs. Areas that needed improvement was expressed by the Functionaries and could well be used as feedback

4.4.3 SECTION IV:

Views and Reactions of Head Teachers about the In-service Training Programmes Regarding the views and reactions of head teachers about the in-service trainingprogrammes, data were collected from the seventy-five head teachers of primaryschools from six districts (Vadodara, Surat, Amreli, Rajkot, Kutch, and Idar) through the questionnaire. The analysis and interpretation of the collected data is presented inthe following section.
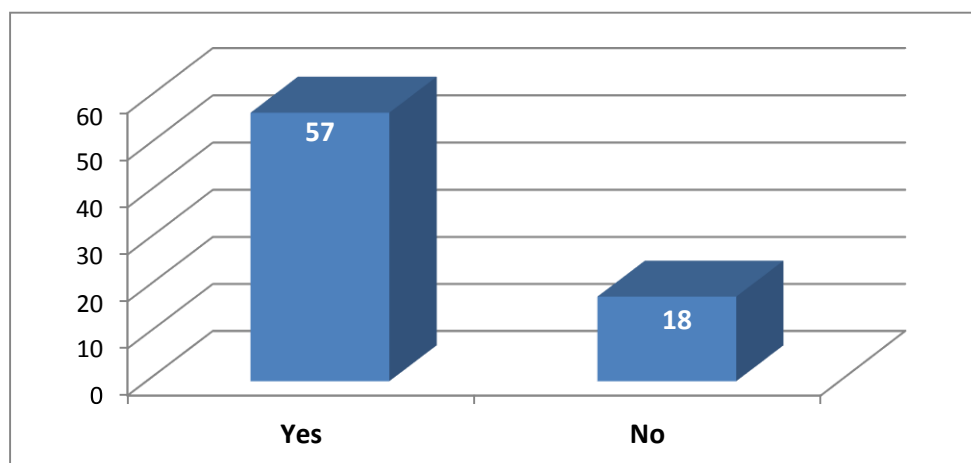
Figure -4.40

Distribution of the head teachers in terms of their responses on benefit of training to primary education
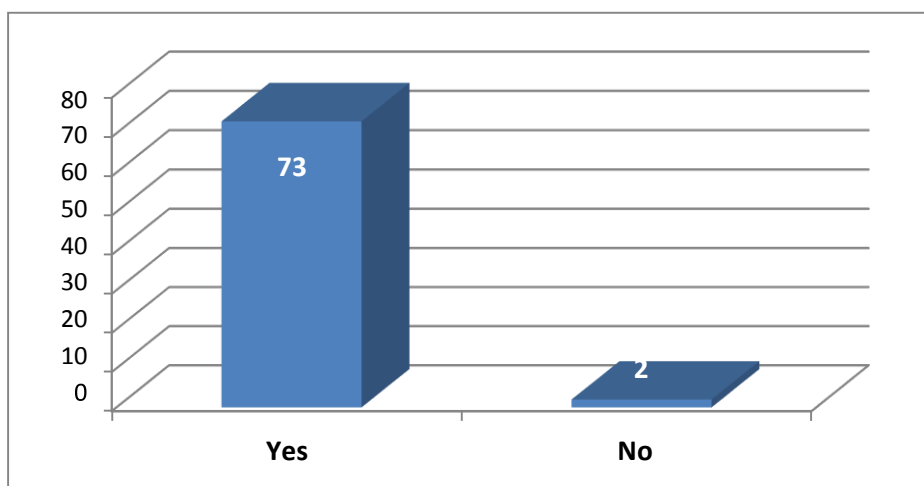
From the figure above it can be seen that most (97%) of the head teachers mentioned that the primary education will benefit from the in-service training programmes whereas only 3% of the head teachers were not of such kind of view.

Figure -4.41

Distribution of the head teachers in terms of their responses on teacher's sharingtraining experience with other teachers

From the figure shown above it can be observed that majority of the head teachers (76%) mentioned that teachers were sharing training experiences with other teachers ofschools whereas 24% of them mentioned that teachers were not sharing such kind of experiences with other teachers of their school.

Figure -4.42

Distribution of the head teachers in terms of their responses on trained teacherconducting innovative practices / action research
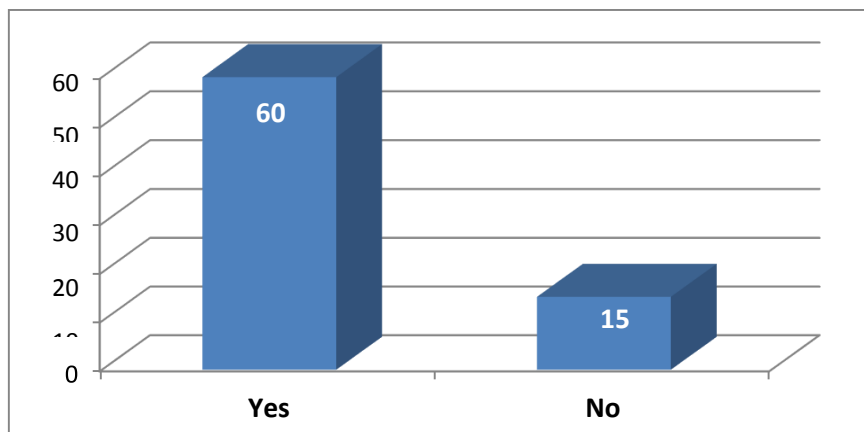
From the figure shown above it can be seen that out of 75 (100%) respondent head teachers, most of them (80%) responded that the trained teachers were conducting innovative practices and action research after receiving training whereas 20% of them mentioned that teachers were not conducting such kind of activities even after receivingtraining.
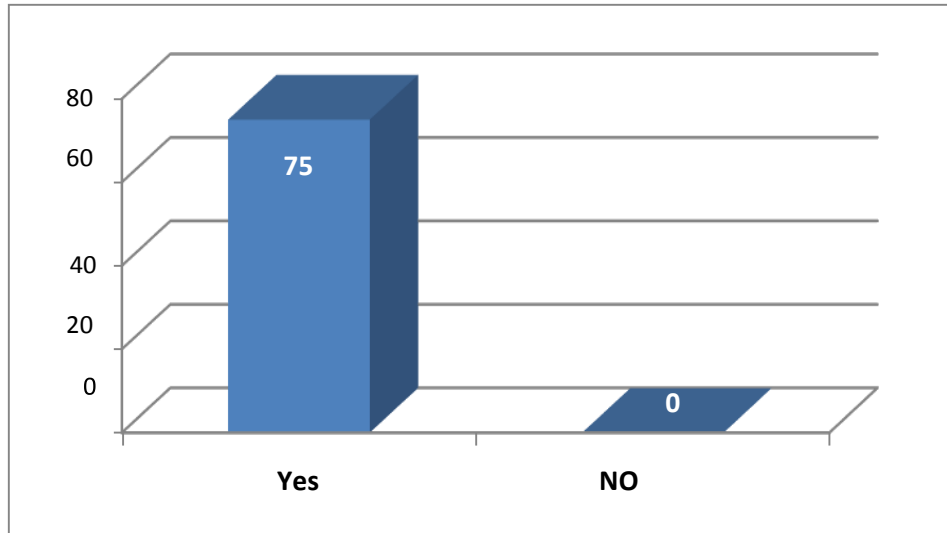
Figure - 4.43

Distribution of the Head teachers in terms of their responses about teacher's useof new teaching methods and techniques after receiving training
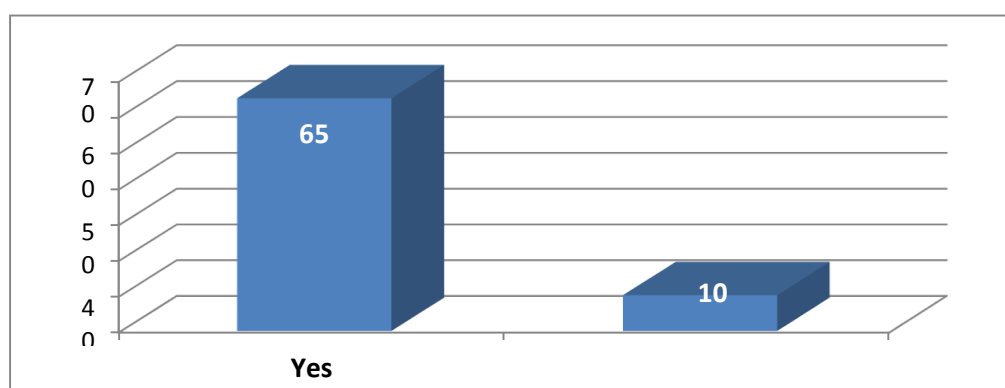
From the figure above it can be seen that out of 75 (100%) respondent head teachers, most (87%) of them mentioned that teachers were using new teaching methods and techniques after receiving in-service training whereas, 13% of them mentioned that there was no change in teachers' teaching methods or techniques.
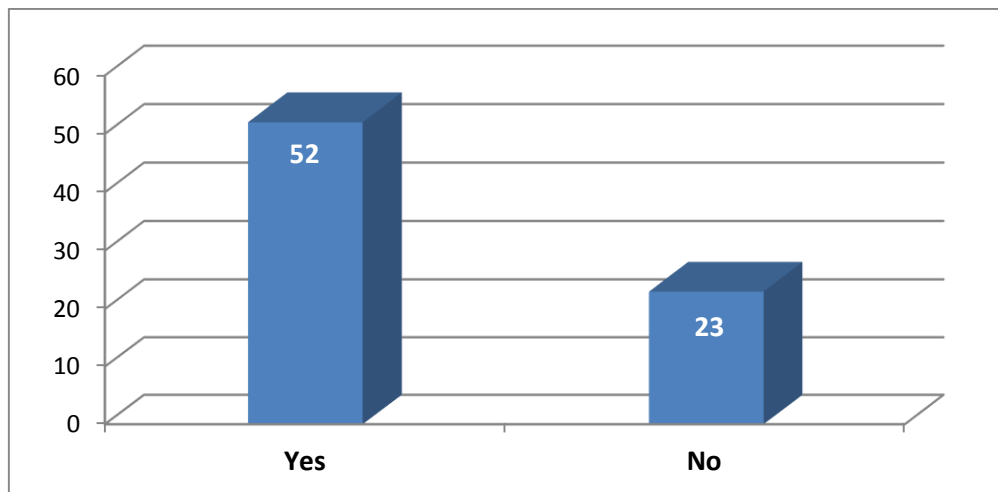
Figure -4.44

Distribution of the head teachers in terms of their responses about cooperation toteachers to undergo different trainings

With respect to the question on cooperation given to teachers, it was seen that all (100%) head teachers mentioned that they were encouraging and cooperating with theteachers for receiving different kinds of in-service training.

Figure - 4.45

Distribution of the head teachers in terms of their views on requirement of frequent training at school level to improve quality of education

From the **figure-4.45,** it can be observed that majority (69%) of the head teachers responded that there needs to be continuous school level training to improve quality ofeducation whereas, 31% of them were not of such kind view.
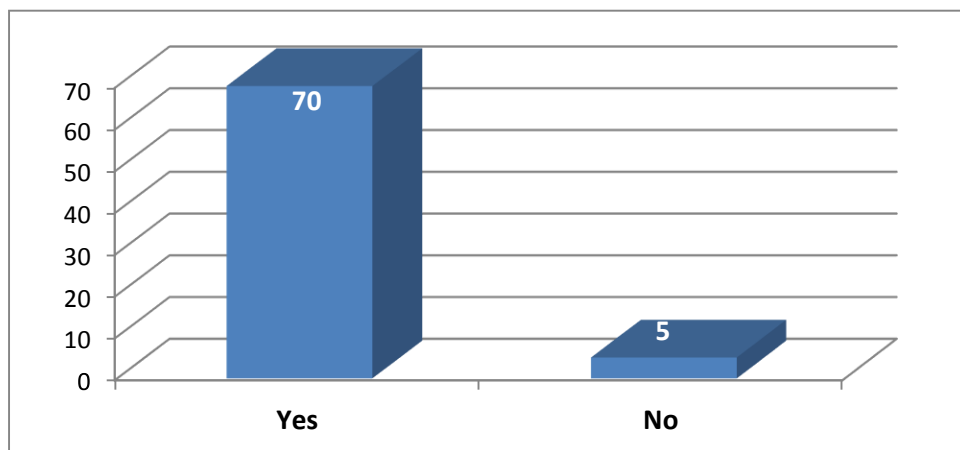
Figure - 4.46

Distribution of the head teachers in terms of their responses about their supportto teachers for creating a lively classroom environment
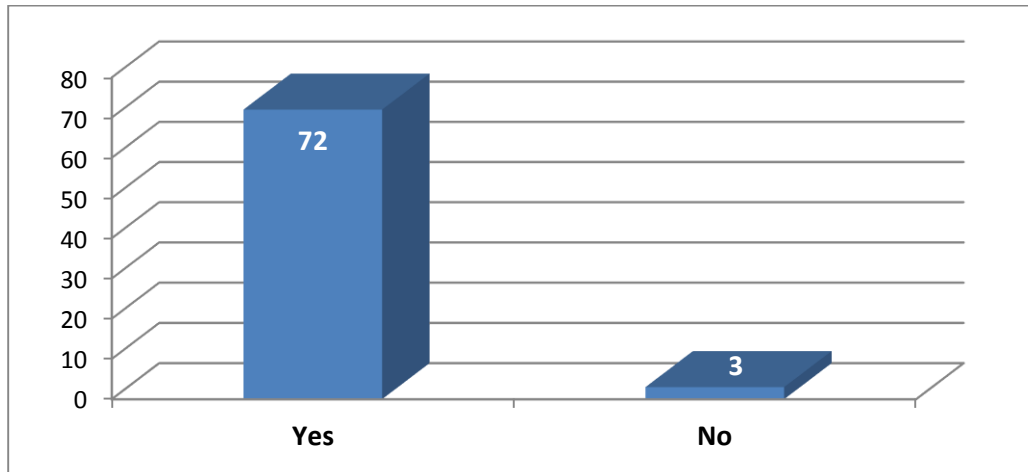
With respect to this question it was seen that out of 75 (100%) respondent head teachers, most (96%) of them mentioned that they did provide support to teachers for creating lively classroom climate whereas only 4% were not providing such kind of support to teachers.

Figure- 4.47

Distribution of the head teachers in terms of their responses about increasedlearning achievement of students due to teacher's training

From the **figure-4.47,** it can be observed that all the 75 (100%) head teachers responded, most (93%) of them mentioned that the students' learning achievement hadincreased due to teachers' training whereas only 7% mentioned that no such kind of impact was seen due to teachers' training.
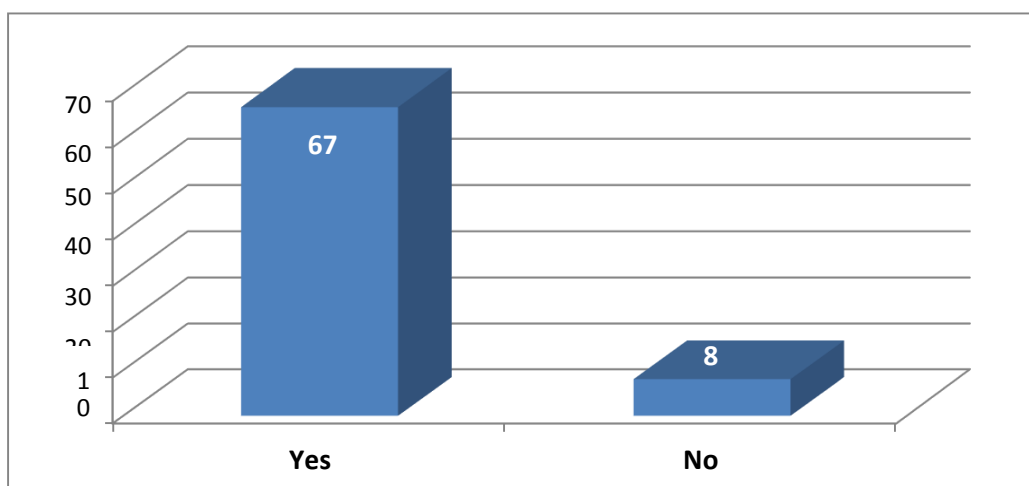
Figure -4.48

Distribution of the head teachers in terms of their responses on increased effectiveness of teacher's teaching due to training
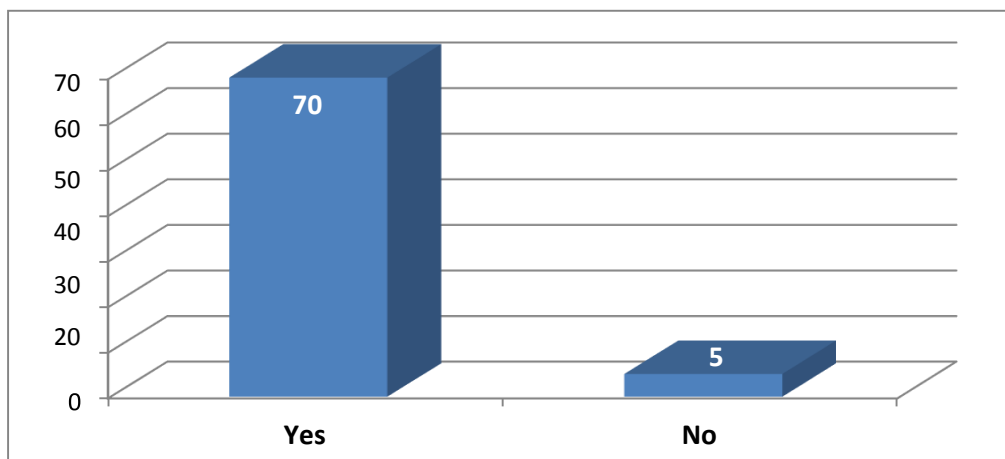
From the figure above it can be seen that all of 75 (100%) respondent head teachers, most (93%) of them mentioned that the teachers' teaching methods had become more effective due to the training whereas only 7% of them were not of such kind of opinion.
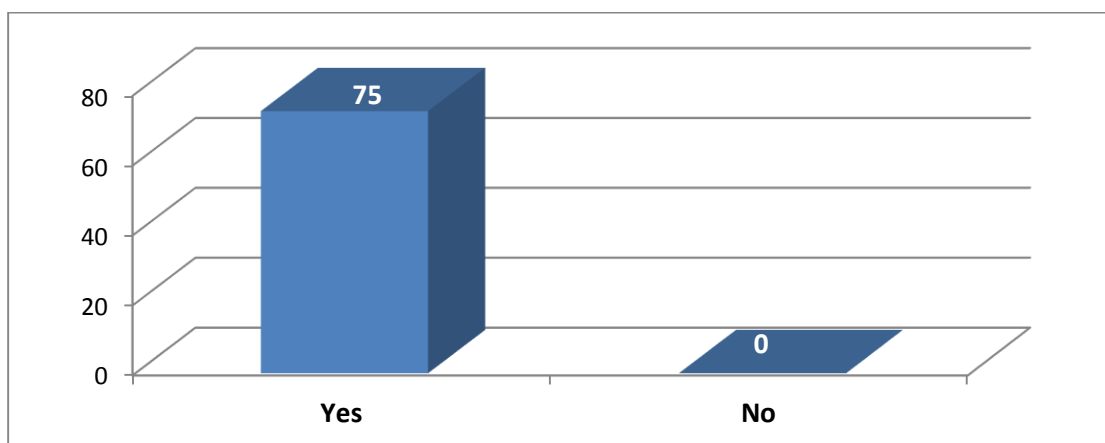
Figure -4.49

Distribution of the head teachers in terms of their responses about implementation of training in classroom teaching by the teacher

From the figure shown above it can be observed that out of 75 (100%) respondent headteachers, most (89%) of them the teachers were implementing the received training in their classrooms whereas, 11% of them mentioned that the teachers were not implementing the received training in their classrooms.
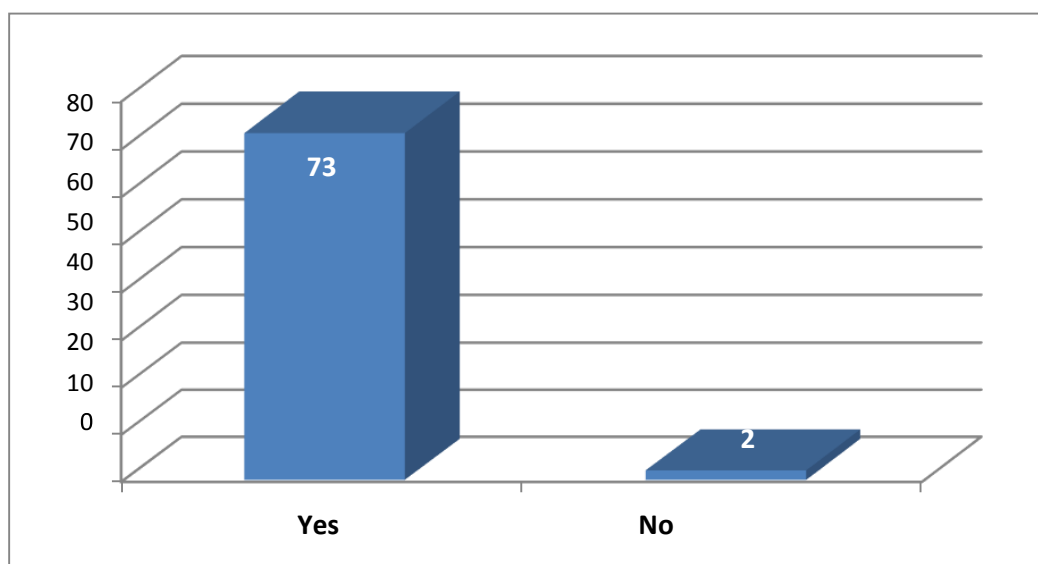
Figure -4.50

Distribution of the head teachers in terms of their response to the usefulness ofin-service training for classroom management

From the figure above it can be seen that all (100%) the head teachers mentioned that the in-service training programmes were useful for classroom management.

Figure -4.51

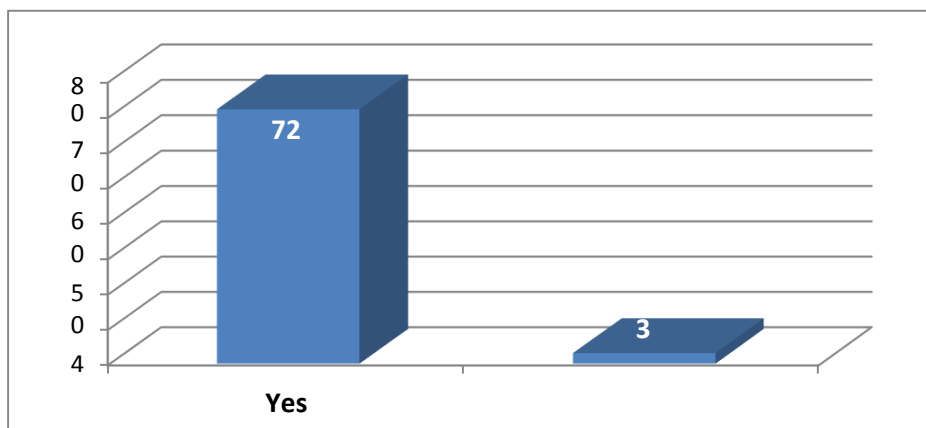**Distribution of the head teachers in terms of their responses about availability ofspace for group work during in-service training programmes**

From the figure above it can be observed that out of 75 (100%) respondent head teachers, most 73 (97%) of the head teachers responded that space for group works wasavailable during in-service training whereas only 2 (3%) of them mentioned that spacewas not available for group works.

Figure -4.52

Distribution of the head teachers in terms of their responses regarding the usageof training materials in the classroom after receiving training

From the figure 4.52 it can be seen that out of 75 (100%) respondent head teachers, most (96%) of the head teachers responded that the teachers were using the training materials like training modules/notebooks in their classrooms whereas, only 4% of them mentioned that the teachers were not using training materials in their classrooms.

Figure - 4.53

Distribution of the head teachers in terms of their responses about teachers'readiness for training
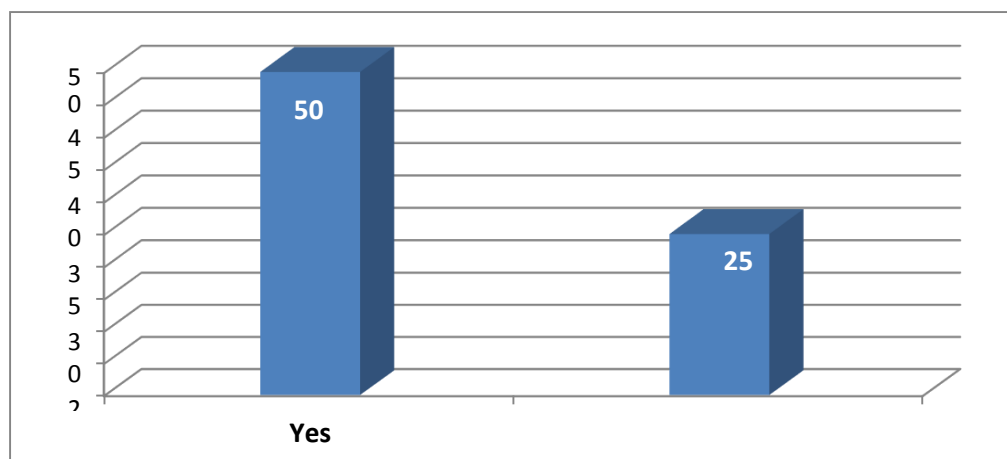
From the figure above it can be seen that out of 75 (100%) respondent head teachers, majority (67%) of them mentioned that teachers went readily for the training programswhereas 33% of them mentioned that they were required to make the teachers ready forthe training.

Figure -4.54

Distribution of the head teachers in terms of their responses on teacher's discussion about training with them
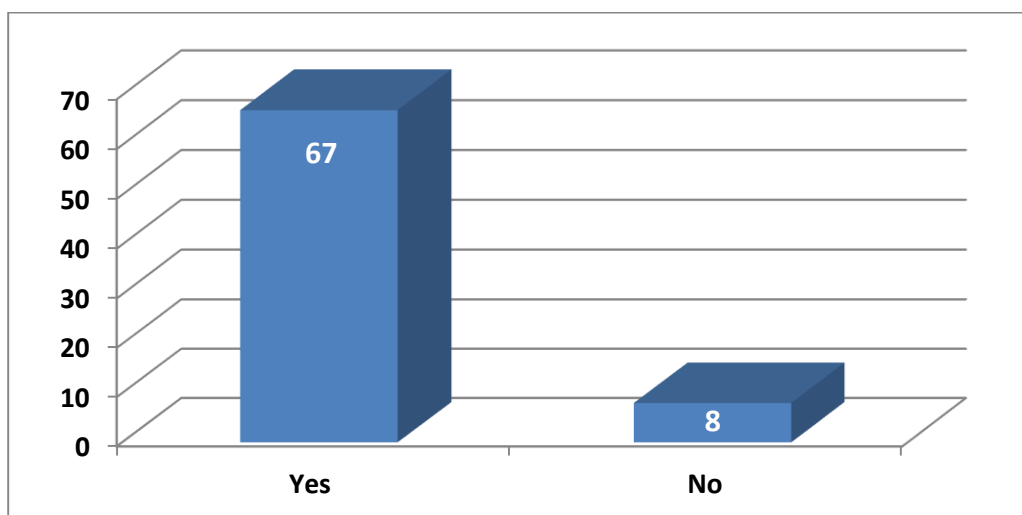
From the figure above it can be observed that out of 75 (100%) respondent head teachers, as per 89% of them, the teachers discuss about the training with them whereas 11% of them responded that teachers were not discussing about the training with them.**Interpretation**

From the responses of the Head Teachers it could be inferred that they were aware of the ongoing activities in the in-service training programs and majority of the Head Teachers responded that there needs to be continuous school level training to improve quality of education; the fact that there were 31% of them who were not of such kind view can be interpreted that these Head Teachers may have found certain issues lacking and their views would be very useful in improving the quality of training in future.

From the data it could be inferred that majority of the teachers were implementing their learning of new teaching methods and techniques after receiving in-service training andthere was improvement in students' academic levels due to the same. However, for these questions too there were Head Teachers who did not agree – this may indicate that the training was not satisfactory according to them; it could also be interpreted thatimplementation of the learning in the schools was a challenging issue for manyteachers.

Both the above should be kept in mind while designing future programs.

4.4.4 Teachers' Opinions about the In-Service Training Programmes

In order to know the views of primary school teachers about the in-service training programmes organized by the DIETs, an opinionnaire was used to elicit the data.

The tool consisted of 26 items. The data collected from 650 primary schools' teacherswere analyzed in terms of frequency and percentage of teachers' opinions in threedegrees viz Always (3), Occasionally (2) and Never (1) along with the Intensity Index. The analyzed data followed by interpretation are presented in the following table. 4.14.

Table -4.14

Summary of the opinions of the primary school teachers towards the in-servicetraining programmes organized by DIETs

Sr. No.	Items	A -3	O -2	N -1	II
1	Teachers are given opportunity for discussion ofacademic related issues	585 (90%)	59 (9%)	6 (1%)	2.9
2	Teachers are given opportunity to pose questions related to their instructional practices.	507 (78%)	137 (21%)	6 (1%)	2.8
3	In-service training helps teachers in professional development.	306 (47%)	189 (29%)	155 (24%)	2.2
4	Teachers get new knowledge through the training programmes.	540 (83%)	110 (17%)	0	2.8
5	Training is useful for improving teachingpreparedness.	527 (81%)	104 (16%)	19 (3%)	2.8
6	Audio-visual aids are used in training sessions	455 (70%)	182 (28%)	13 (2%)	2.7
7	We are satisfied with the facilities providedduring the training.	410 (963%)	221 (34%)	19 (3%)	2.6
8	Training programs are helpful for planningactivities in the classroom.	123 (19%)	286 (44%)	241 (37%)	2.2
9	Various methods and techniques are used during the training program.	325 (50%)	137 (21%)	188 (29%	2.2
10	The training program provides information on diagnosis and remediation for simplifying the difficult contents in teaching to teachers.	487 (75%)	150 (23%)	13 (2%)	2.7
11	Resource persons are well equipped in their respective fields/areas	325 (50%)	202 (31%)	123 (19%)	2.3
12	The developed training modules are useful for us.	572 (88%)	78 (12%)	0	2.9

No.	Statement	A	O	N	Mean
13	Same experts are being called for the training programs.	162 (25%)	234 (36%)	254 (39%)	1.9
14	Training programs should be designed keeping in mind the local conditions of the schools.	319 (49%)	253 (39%)	78 (12%)	2.4
15	We are not provided the training schedule timely.	136 (21%)	254 (39%)	260 (40%)	1.8
16	Having external experts in training programs will make teachers more interested in training.	442 (68%)	189 (29%)	19 (3%)	2.7
17	By attending the training programme, our schools are not facing management related issues.	188 (29%)	345 (53%)	117 (18%)	2.1
18	During the training of science / mathematics teaching, various activities like project method, problem solving method are organized.	488 (75%)	156 (24%)	6 (1%)	2.7
19	Training is useful in understanding the teaching points of the subject better.	514 (79%)	130 (20%)	6 (1%)	2.8
20	As a result of teacher training, children's learning outcomes increase.	488 (75%)	143 (22%)	19 (3%)	2.7
21	Based on in-service training, the teacher's teaching work becomes effective.	488 (75%)	143 (22%)	19 (3%)	2.7
22	In-service training plays an important part in creating curricular and co-curricular activity related environment at the school.	475 (73%)	162 (25%)	13 (2%)	2.7
23	Teacher preparedness for continuous and comprehensive evaluation is enhanced through the training program.	527 (81%)	110 (17%)	13 (2%)	2.8
24	The hygiene at the training centre is satisfactory	423 (65%)	221 (34%)	6 (1%)	2.6
25	Our opinions/representations are considered by the expert during training.	136 (21%)	234 (36%)	280 (43%)	1.8
26	Training coordinator is cooperative.	540 (83%)	97 (15%)	13 (2%)	2.8

A=Always, O=Occasionally, N=Never

1. In terms of the opinion of the teachers towards the statement no1 ` Teachers are given opportunity for discussion of academic related issues', 585 (90%), 59 (9%) and 6 (1%) of the teachers gave their opinions in always, occasionally and never respectively. The intensity index of 2.9 shows that most of the teachers opined thatTeachers were given opportunity for discussion of academic related issues.

2. For the statement no2 'Teachers are given opportunity to pose questions related to their instructional practices', 507 (78%), 137 (21%) and 6 (1%) teachers gave theiropinion in always, occasionally and never respectively. The intensity index 2.8 shows that most of the teachers opined that the training always provides them withthe opportunity to pose academic questions.

3. In terms of the opinions of the teachers towards the statement no 3 'In-service training helps teachers in professional development', 306 (47%), 189 (29%) and 155 (24%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 2.2 shows that the majority of the teachers opinedthat in-service training did help in their professional development.

4. For the statement no 4, 'Teachers get new knowledge through the training programmes', 540 (83%) and 110 (17%) teachers gave their opinions in always andoccasionally respectively. The intensity index 2.8 shows that the most of the teachers opined that they were receiving new knowledge through the training programme.

5. In terms of the opinions of the teachers towards the statement no 5, 'Training is useful for improving teaching preparedness', 527 (81%), 104 (16%) and 19 (3%) ofthem gave their opinions in always, occasionally and never respectively. The intensity index 2.8 shows that most of the teachers opined that the training was always useful for improving their teaching preparedness.

6. In terms of the opinions of the teachers towards the statement no. 6, 'Audio-visualaids are used in training sessions, 455 (70%), 182 (28%) and 13 (2%) of them gavetheir opinions in always, occasionally and never respectively. The intensity index 2.7 shows most of the teachers opined that audio-visual aids were always used in training classes.

7. For the statement no. 7, 'We are satisfied with the facilities provided during the training', 410 (63%), 221 (34%) and 19 (3%) teachers gave their opinions in always,occasionally and never respectively. The intensity index 2.6 shows that most of theteachers opined that they were always satisfied with the facilities provided during the training.

8. For the statement no. 8 'Training programs are helpful for planning activities in theclassroom', 123 (19%), 286 (44%) and 241 (37%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 1.8 shows that the majority of the teachers opined that training programs were occasionally helpful forplanning activities in the classroom.

9. In terms of the opinions of the teachers towards the statement no.9, 'Various methods and techniques are used during the training program', 325 (50%), 137 (21%) and 188 (29%) of them gave their opinions in always, occasionally and neverrespectively. The intensity index 2.2 shows that majority of the teachers opined thatvarious methods and techniques were occasionally used during the training program.

10. In terms of the opinions of the teachers towards the statement no10, 'The training program provides information on diagnosis and remediation for simplifying the difficult contents in teaching', 487 (75%), 150 (23%) and 13 (2%) of them gave their opinions in always, occasionally and never respectively. The intensity index 2.7 shows most of the teachers opined that the training program always provided information on diagnosis and remediation for simplifying the difficult contents in teaching to teachers.

11. For the statement no 11, 'Resource persons are well equipped in their respective fields/areas', 325 (50%), 202 (31%) and 123 (19%) teachers gave their opinions inalways, occasionally and never respectively. The intensity index 2.3 shows that majority of the teachers opined that resource persons were well equipped in their respective fields.

12. In terms of the opinion of the teachers towards the statement no12, ` The developedtraining Modules are useful for us', 572 (88%) and 78 (12%) of the teachers gave their opinions in always and occasionally respectively. The intensity index of 2.9 shows that most of the teachers opined that the developed training module was always useful for them.

13. For the statement no13, 'Same experts are being called for the training programs', 162 (25%), 234 (36%) and 254 (39%) teachers gave their opinion in always, occasionally and never respectively. The intensity index 1.9 shows that majority ofthe teachers opined that on average; same experts were not being called for the training programs.

14. For the statement no14 'Training programs should be designed keeping in mind thelocal conditions of the schools', 319 (49%), 266 (41%) and 68 (10%) primary school teachers gave their opinions in always, occasionally and never respectively.

   The intensity index 2.4 shows that majority of the teachers opined that the training programs should be occasionally changed according to the local conditions of the schools.

15. In terms of the opinions of the teachers towards the statement no15, 'We are not provided the training schedule timely', 136 (21%), 254 (39%) and 260 (40%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 1.8 shows that the majority of the teachers opined that they were notprovided the training schedule timely.

16. For the statement no16, 'Having external experts in training programs will make teachers more interested in training', 442 (68%), 189 (29%) and 19 (3%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 2.7 shows that the most of the teachers opined that having external experts intraining programs would make teachers more interested in training.

17. In terms of the opinions of the teachers towards the statement no. 17, 'By attendingthe training programme, our school are not facing management related issues', 188(29%), 345 (53%) and 117 (18%) of them gave their opinions in always, occasionally and never respectively. The intensity index 2.1 shows that majority ofthe teachers opined that by attending the training programme, their schools were not facing management related issues, occasionally.

18. In terms of the opinions of the teachers towards the statement no18, 'During the training of science/mathematics teaching, various activities like project method, problem solving method are organized', 488 (75%), 156 (24%) and 6 (1%) of themgave their opinions in always, occasionally and never respectively. The intensity index 2.7 shows most of the teachers opined that during the training of science/mathematics teaching, various activities like project method, problem solving method were always organized.

19. For the statement no19, 'Training is useful in understanding the teaching points ofthe subject better', 514 (79%), 130 (20%) and 6 (1%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 2.8 shows that most of the teachers opined that the training was useful in understanding the teaching points of the subject better.

20. For the statement no20, 'As a result of teacher training, children's learning outcomesincrease', 488 (75%), 143 (22%) and 19 (3%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 2.7 shows that the most of the teachers opined that as a result of teacher training, children's learning outcomes had shown improvement.

21. In terms of the opinions of the teachers towards the statement no21, 'Based on in- service training, the teacher's teaching work becomes effective', 488 (75%), 143 (22%) and 19 (3%) of them gave their opinions in always, occasionally and never respectively. The intensity index 2.7 shows that majority of the teachers opined thatbased on in-service training, the teacher's teaching work becomes always effective.

22. In terms of the opinions of the teachers towards the statement no22, 'In-service training plays an important part in creating curricular and co-curricular activity related environment at the school', 475 (73%), 162 (25%) and 13 (2%) of them gave their opinions in always, occasionally and never respectively. The intensity index 2.7 shows most of the teachers opined that in-service training always plays an important part in creating curricular and co-curricular activity related environmentat the school.

23. For the statement no23, 'Teacher preparedness for continuous & comprehensive evaluation is enhanced through the training program', 527 (81%), 110 (17%) and 13 (2%) teachers gave their opinions in always, occasionally and never respectively.The intensity index 2.8 shows that most of the teachers opined that teacher preparedness for continuous & comprehensive evaluation was always enhanced through the training program.

24. In terms of the opinions of the teachers towards the statement no 24,'The hygiene at the training center is satisfactory', 423 (65%), 221 (34%) and 6 (1%) of them gave their opinions in always, occasionally and never respectively. The intensity index 2.6 shows that most of the teachers opined that the hygiene at the training center was satisfactory.

25. In terms of the opinions of the teachers towards the statement no 25, 'Our opinions/representations are considered by the expert during training', 136 (21%), 234 (36%) and 280 (43%) of them gave their opinions in always, occasionally andnever respectively. The intensity index 1.8 shows most of the teachers opined that their opinions/representations were considered occasionally by the expert during training.

26. For the statement no26, 'Training coordinator is cooperative', 540 (83%), 97 (15%)and 13 (2%) teachers gave their opinions in always, occasionally and never respectively. The intensity index 2.8 shows that most of the teachers opined that thetraining coordinator was cooperative.

Interpretation

From the data got from the opinionnaire it could be inferred that the Training programswere interactive and gave the teachers opportunity to pose questions with majority of teachers supporting this view. In response to the question on whether in 'In-service training helps teachers in professional development', there were a fairly large number of teachers who responded 'occasionally', implying that the training was only occasionally helpful. Most of the teachers opined that they were receiving new knowledge through the training programmes. This implies that the training programs did benefit the teachers in terms of knowledge gained. Most of the teachers opined thatthey were always satisfied with the facilities provided during the training.

From the data analysis it could be inferred that majority of the teachers opined thattraining programs were occasionally helpful for planning activities in the classroom.Thus, a large number of teachers did find the activities helpful, but only occasionally. In terms of the opinions of the teachers towards the statement 'Various methods andtechniques are used during the training program', a large percentage of the teachersopined that various methods and techniques were used during the training program.

In terms of the opinions of the teachers towards the statement 'The training program provides information on diagnosis and remediation for simplifying the difficult contentsin teaching' it could be inferred that although majority of the teachers responded that this was done always, there was a large number of teachers who responded that this wasdone only occasionally, an area that should be given due attention.

The teacher responses regarding the statement 'Resource persons are well equipped in their respective fields/areas', a large section of the teachers responded 'never' from which it can be inferred that the selection of resource persons needs to be seen more seriously.

Most of the teachers opined that the developed training module was always useful for them. A large percentage of the teachers opined that they were not provided the training schedule timely. This can be interpreted as an administration issue which can be lookedinto for better implementation of the future programs.

From the data it could also be inferred that the teachers were being given training in thelatest teaching methodologies which were learner centric like project method, problem solving method. The training was found to be useful in understanding the teaching points of the subject better. Avery large percentage of the teachers responded that as a result of the training, students' learning outcomes had increased.

The teachers were found to be satisfied with the hygiene and the cooperation of the administration.

**4.4.5 SECTION IV: Questionnaire For Teachers**

This section deals with the data collected for the fourth objective i.e. To study the views and reactions of the functionaries and beneficiaries of in-service training programmes in terms of:

- Training needs,

- Training materials and modules,

- Transactional modalities,

- Planning, organization and implementation

Data related to the primary school teachers' views and reactions of in-service training programmes were collected from the 650 teachers of primary schools located in the sixdistricts (Vadodara, Surat, Amreli, Rajkot, Kutch, and Idar) through the questionnaire.The analysis and interpretation of the collected data is presented in the following section.

Figure - 4.55

Distribution of the primary school teachers in terms of their response aboutreceiving training materials/modules during training
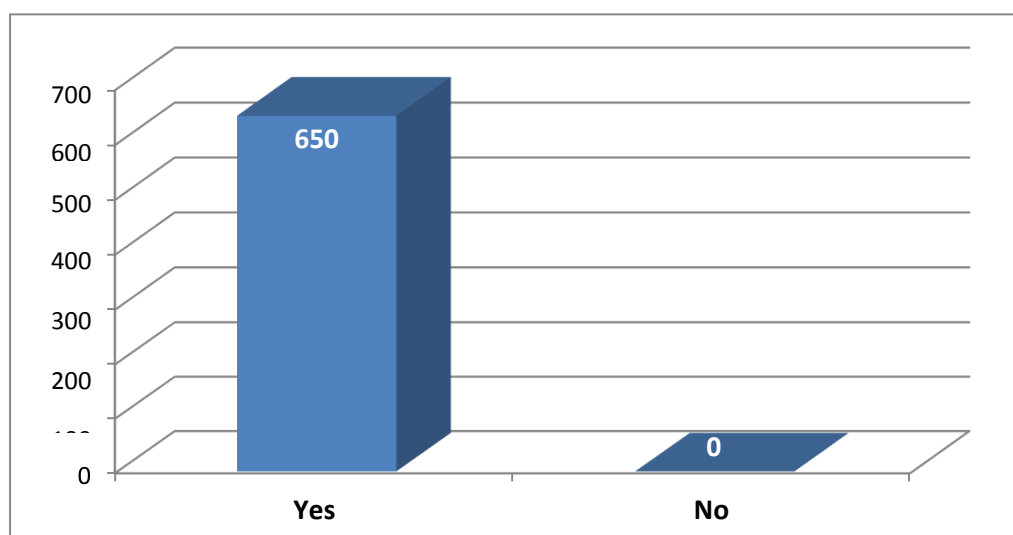
From the figure it could be observed that all the 650 (100%) respondent primary schoolteachers mentioned that they were receiving training materials/modules during training.When they were further asked about the timing of receiving training materials/modulesduring the training, their responses received have been given in the following table.

Table -4.15

Distribution of the primary school teachers in terms of their response abouttiming of receiving training materials/modules during training

Sr. No	Timing of receiving training materials/modules during training	Number of Teachers	
		Frequency	Percentage
1	Before commencement of training	169	26
2	On the first day of training	299	46
3	On the last day of training	104	16
4	In between the training whenever required	78	12
Total		**650**	**100**

From the table above it could be observed that out of 650 (100%) respondent school teachers, 169 (26%) teachers were receiving training materials/modules before beginning of training whereas 299 (46%) and 104 (16%) teachers were receiving on thefirst day and last day of training respectively. The remaining 78(12%) teachers were receiving training materials/modules in between the training whenever required.

The teachers were further asked about the quality of the training materials/modules and their responses received have been presented in the following table.
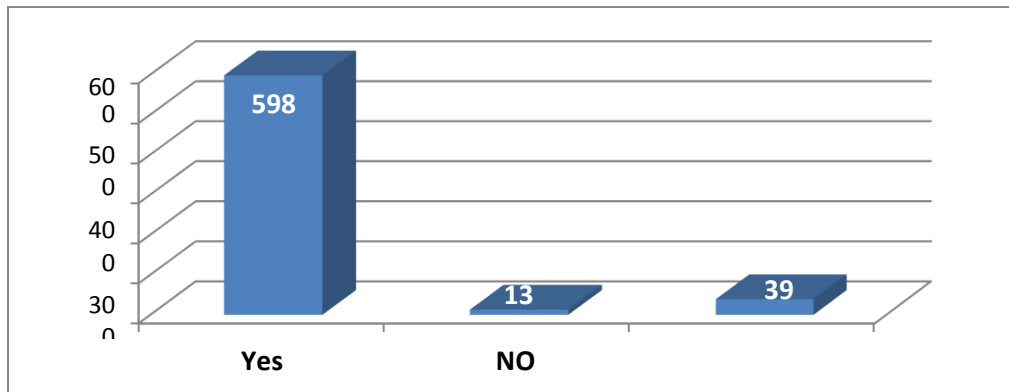
Table -4.16

Distribution of the primary school teachers in terms to their response about thequality of training materials/modules

Sr. No	Quality of training materials/modules	Number of Teachers	
		Frequency	**Percentage**
1	Very good	182	28
2	Good	455	70
3	Average	13	2
4	Below average	0	0
Total		**650**	**100**

From the table above, it could be seen that out of 650 (100%) respondent school teachers, majority of them i.e. 182 (28%) teachers mentioned that the quality of trainingmaterials/modules was very good while 455 responded that it was good (70%) respectively. As per the remaining 13 (2%) teachers, the quality of training materials/modules was average. There was no teacher who rated the quality as below average.
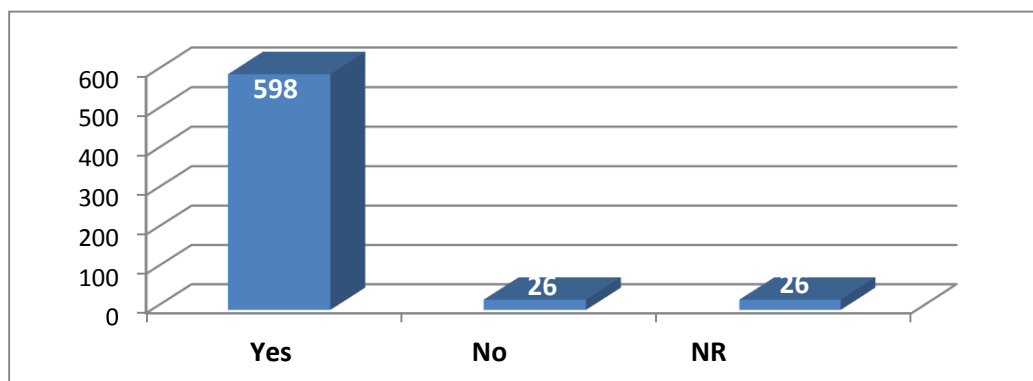
Figure -4.56

Distribution of the primary school teachers in terms of their response about theirviews on training materials/modules

From the figure above it can be seen that out of 650 (100%) respondent primary school teachers, most of them i.e. 598 (92%) mentioned that the training materials/modules were informative whereas only 13 (2%) teachers mentioned that the training materials/modules were not informative. The remaining 39 (6%) teachers did not attempt the question.
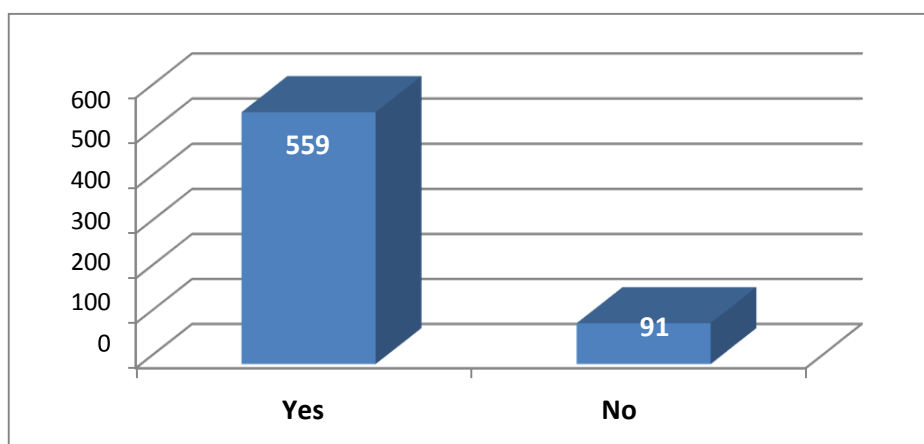
Figure -4.57

Distribution of the primary school teachers in terms of their response about receiving training materials/modules related to subject content in every trainingperiod

From the figure above it can be observed that out of 650 (100%) respondent primary school teachers, most of them i.e. 598 (92%) teachers mentioned that they were receiving training materials/modules related to subject content in every training periodwhereas only 26 (4%) teachers mentioned that they were not receiving training materials/modules related to subject content in every training period. The remaining 26(4%) teachers did not attempt the question.
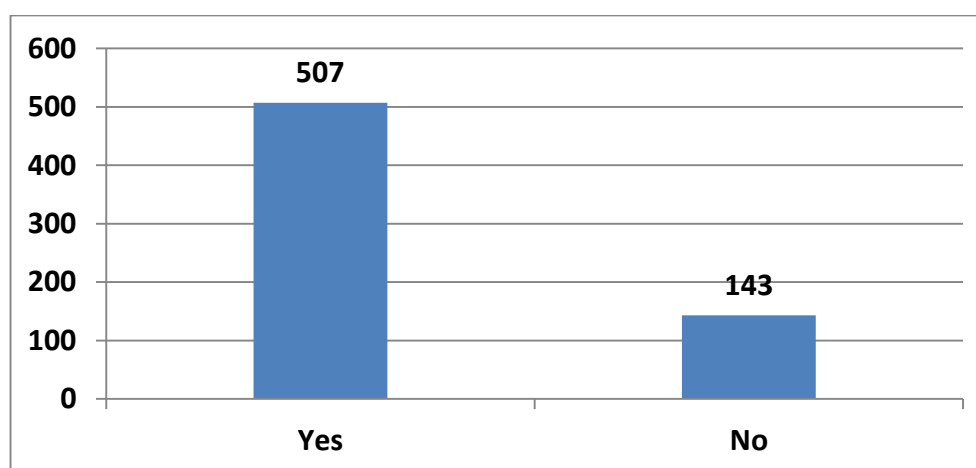
Figure -4.58

Distribution of the primary school teachers in terms of their response about theirviews on training materials/modules

From the **figure 4.58** it can be observed that out of 650 (100%) respondent primary school teachers, 559 (86%) teachers mentioned that the training materials/modules were informative whereas 91 (12%) teachers mentioned that the training materials/modules were not informative.

Figure -4.59

Distribution of the primary school teachers in terms of their response about receivingtraining materials/modules related to subject content in every training period

From the **figure 4.59** it can be seen that out of 650 (100%) respondent school teachers, 507 (78%) teachers mentioned that they were receiving training materials/modules related to subject content in every training period whereas 143 (22%) teachers mentioned that they were not receiving training materials/modules related to subject content in every training period.

Table -4.17

Distribution of the school teachers in terms of their response about their viewson duration of training program

Sr. No.	Views on duration of training program	Number of Teachers	
		Frequency	Percentage
1	Sufficient	351	54
2	Sufficient to some extent	130	20
3	Not sufficient	26	4
4	Longer duration than requirement	130	20
5	NR	13	2
Total		**650**	**100**

From the table above it can be seen that out of 650 (100%) respondent school teachers,as per 351 (54%) and 130 (20%) teachers, the duration of the training programs was sufficient and sufficient to some extent respectively, whereas 26 (4%) and 130 (20%) teachers mentioned that the duration of training programs was not sufficient and longerduration then needed respectively. The remaining 13 (2%) teachers did not attempt thequestion.

Table -4.18

Summary of the response of primary school teachers in terms of their satisfaction with the quality of resource person

Sr. No.	Points	SD	D	N	A	SA	NR	Total
1	Instructional techniques	13 (2)	13 (2)	143 (22)	364 (56)	104 (16)	13 (2)	650 (100)
2	Presentation of subject	0	26 (4)	78 (12)	390 (60)	143 (22)	13 (2)	650 (100)
3	Interaction with trainees	0	13 (2)	91 (14)	351 (54)	195 (30)	0	650 (100)
4	Participation of trainees	13 (2)	13 (2)	104 (16)	260 (40)	247 (38)	13 (2)	650 (100)
5	Content mastery	13 (2)	26 (4)	130 (20)	286 (44)	169 (26)	26 (4)	650 (100)
6	Use of resources	13 (2)	13 (2)	78 (12)	351 (54)	182 (28)	13 (2)	650 (100)
7	Behavior with trainee (rapport building)	0	13 (2)	65 (10)	364 (56)	195 (30)	13 (2)	650 (100)

SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

Figure in the parenthesis indicate percentage (%)

- From the table above, it can be seen that in terms of the satisfaction level with the instructional techniques by the resource persons, 468 (72%) primary school teachers agreed that they were satisfied with the work techniques of resource persons whereas 26 (4%) of them disagreed.

- In terms of the satisfaction level from the presentation of subject by the resource persons, 533 (82%) primary school teachers agreed that they were satisfied with the presentation of subject by the resource persons whereas 26 (4%) of them disagreed.

- In terms of the satisfaction level from the resource persons' interaction with trainees, 546 (84%) primary school teachers agreed that they were satisfied with the interaction of resource persons with trainees whereas 13 (2%) of them disagreed.

- With respect to the question regarding participation of trainees, 507 (78%) primaryschool teachers agreed that they were satisfied with the participation of trainees whereas 26 (4%) of them disagreed.

- In terms of the content mastery of resource persons, 507 (78%) primary school teachers agreed that they were satisfied with the content mastery of resource personswhereas 39 (6%) of them disagreed.

- In terms of the satisfaction level from the use of resources by the resource persons,533 (82%) primary school teachers agreed that they were satisfied with the use of resources by the resource persons whereas 26 (4%) of them disagreed.

- In response to the resource persons' behavior with trainees (rapport building), 559 (86%) primary school teachers agreed that they are satisfied with the behavior of resource person with trainees (rapport building) whereas 13 (2%) of them disagreed.

Table -4.19

Distribution of primary school teachers in terms of their response on trainingprogramme as per their need

Sr. No.	Development of skills through training	Frequency	Percentage
1	Very much	260	40
2	To some extent	351	54
3	Not at all	13	2
4	NR	26	4
	Total	**650**	**100**

From the table above, it can be seen that out of the total 650 (100%) respondent primary school teachers, 260 (40%) teachers mentioned that the training programmes were verymuch as per their need whereas 351 (54%) teachers mentioned that the trainingprogrammes were as per their need to some extent. Only 13 (2%) teachers mentioned that the training programmes were not at all as per their need whereas, the remaining 26 (4%) teachers did not attempt the question.

Figure 4.60

Distribution of the primary school teachers in terms of use of training points intheir classroom
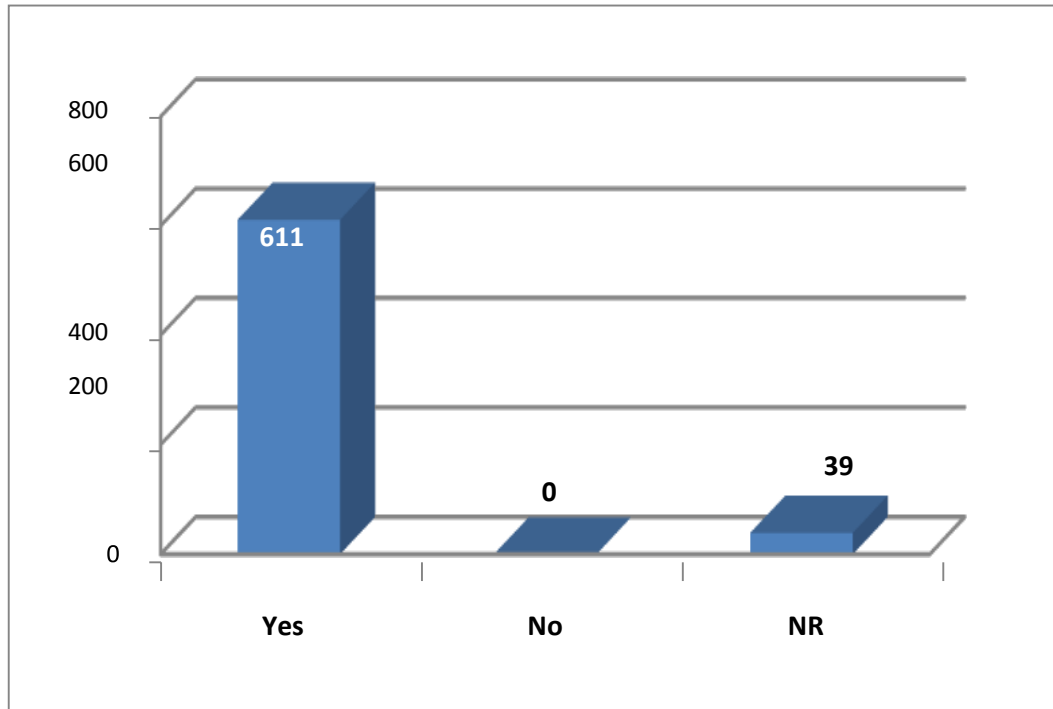
From the **figure -60** it can be seen that out of 650 (100%) respondent primary school teachers, 611 (94%) teachers mentioned that they were using training points in their classroom whereas 39(6%) teachers did not attempt the question.

Response given to the reasons for using training topics in the classroom.

As per most of the teachers, the topics on new trends in education, knowledge of evaluation techniques, understanding the use of different methods and teaching resources were helpful in designing their classroom instruction.

Few teachers responded that the training programs were not designed keeping in mindthe needs of the teachers and thus they were not able to implement the training topics.

Table 4.20

Summary of the opinions of primary school teachers in terms of improvement/advantage felt through in-service training

Sr. No.	Improvement/Advantage	Very less	To some extent	Very much
1	Classroom interaction	39(6)	299(46)	312(48)
2	Identification of learning difficulties	39(6)	312(48)	299(46)
3	Giving assignments	39(6)	312(48)	299(46)
4	Use of teaching resources	52(8)	286(44)	312(48)
5	Assessment & remedial work	65(10)	221(34)	364(56)

- From the table 4.23, it can be seen that in terms of the improvement/advantage ofthe in-service training in classroom interaction, the primary school teachers mentioned that the in-service training improved their classroom interactions very much (48%), to some extent (46%) and very less (6%).

- In terms of the advantage of the in-service training in identification of learning difficulties of students, the teachers mentioned that the in-service training had verymuch (46%), to some extent (48%) and very less (6%) advantage in identifying learning difficulties of their students.

- In terms of the advantage of the in-service training in achieving mastery in giving assignments, the teachers mentioned that the in-service training had very much (46%), to some extent (48%) and very less (6%) advantage in achieving mastery ingiving assignments.

- With respect to the use of teaching resources, the teachers mentioned that the in- service training had given them very much (48%), to some extent (44%) and very less (8%) advantage in this area.

- The primary school teachers, in response to the training received with respect to students' evaluation and remedial teaching, mentioned that the in-service training had very much (56%), to some extent (34%) and very less (10%) advantage in students' evaluation and remedial teaching.

Table -4.21

Summary of the reactions of primary school teachers in terms of useful components of training

Sr. No.	Components	Yes	No	Total
1	Understanding of continuous and comprehensive evaluation	637 (98)	13 (2)	650 (100)
2	Management of classroom climate	650 (100)	0	650 (100)
3	Understanding of gender and gender discrimination	637 (98)	13 (2)	650 (100)
4	Understanding of diagnostic and remedial teaching	650 (100)	0	650 (100)
5	Understanding of activity based learning	637 (98)	13 (2)	650 (100)
6	Increase in knowledge of Samagra Shiksha and RTE provisions.	611 (94)	39 (6)	650 (100)
7	School management and record management	611 (94)	39 (6)	650 (100)
8	Understanding of inclusive education	624 (96)	26 (4)	650 (100)

From the **table 4.21** it can be observed that out of total 650 (100%) respondent primaryschool teachers, all of them mentioned that skill in managing classroom climate and understanding in diagnostic and remedial teaching had increased. Most of the teachers(98%) mentioned that their understanding increased in the components of continuous and comprehensive evaluation (98%), gender and gender discrimination (98%), activityoriented teaching (98%) and inclusive education (96%), knowledge of Samagra Sikha and RTE provisions (94%) and school management and record administration (94%).

Response of Teachers regarding role of Training programmes in improving thequality of education.

As per most of the teachers, the topics on classroom management helped them to manage the classroom better both for individual and group activities; better

understanding of continuous and comprehensive evaluation helped them in the designing of related activities and also in the designing of learning outcomes to assess student learning; knowledge of gender discrimination and inclusive education helped them to create an environment where learners of all kinds could participate meaningfully in the learning process.

Few teachers responded that the training programs were not designed keeping in mindthe needs of the teachers and also that they were not able to implement the training topics due to local conditions and factors.

Interpretation

From the data, it could be inferred that while all the teachers responded that they weregetting training modules, they gave different views regarding the time when they weregetting the modules.

Majority of the teachers mentioned that the quality of the training modules was good; there was no teacher who rated the quality as below average.

Majority of the teachers also mentioned that the training modules were informative. Though not a very large number, there were teachers who did not answer this question.The data also indicated that the teachers were receiving training materials/modules related to subject content. From the responses given by majority of the teachers, it couldbe inferred that the duration of the training programs was sufficient (54%); thus quite a large number of teachers had difference in opinion with respect to the duration of the programs.

From the data it could be inferred that with respect to the instructional techniques, majority of the teachers were satisfied. They were also satisfied with the presentation of the subject matter by the resource persons; the interaction between the resource persons and teachers; content mastery of the resource persons and with the use of resources required in the training programs.

4.4.6 SECTION IV: Questionnaire for Resource Persons

Objective IV of the Study was to study the views and reactions of the Resource Persons of in-service training programmes in terms of Training needs, Training materials and modules, Transactional modalities, Planning and implementation

The analysis and interpretation of the collected data is presented in the following section.
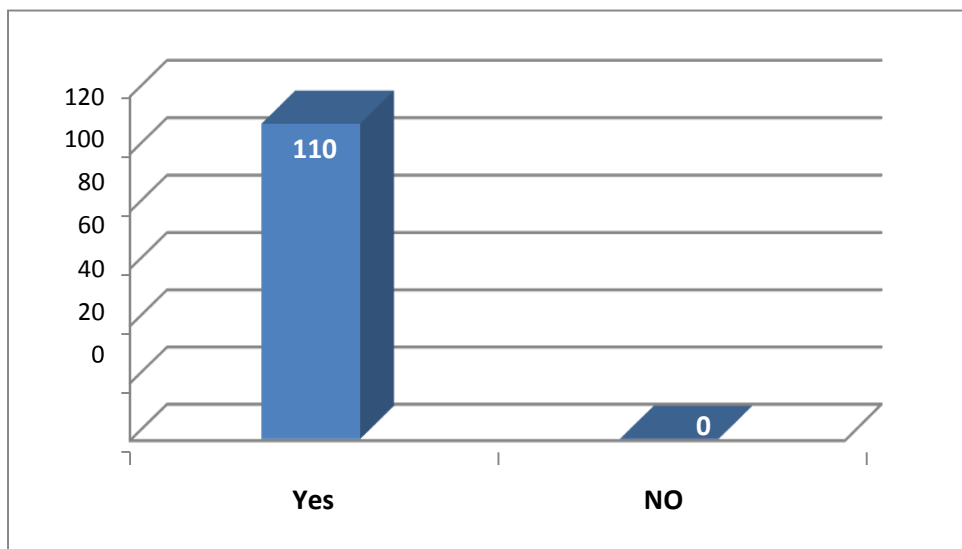
Figure – 4.61

Distribution of the resource persons in terms of their responses about time for preparation before the training
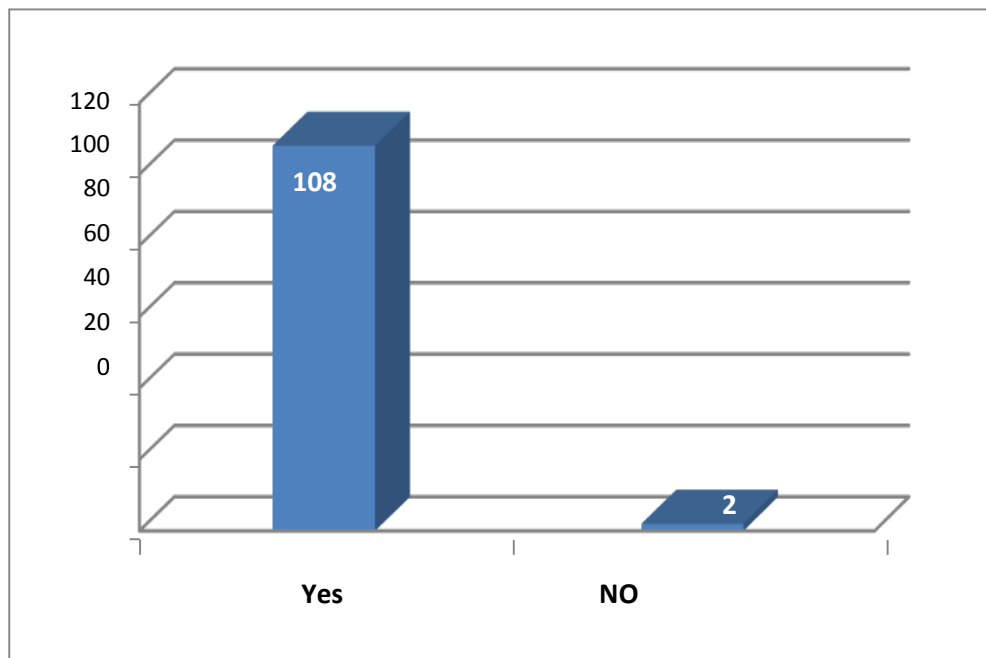
From the figure it can be seen that out of 110 (100%) respondent resource persons, most of them (98%) responded that they were getting enough time before the training for preparation about the training whereas only 2% of them mentioned that they were not getting enough time for preparation.

Figure -4.62

Distribution of the Resource persons in terms of their responses on encouragement to teachers

From the figure above it can be seen that all (100%) the respondent resource personsmentioned that they were encouraging teachers to join in training.

Figure -4.63

Distribution of the resource persons in terms of their responses getting requiredtraining resources
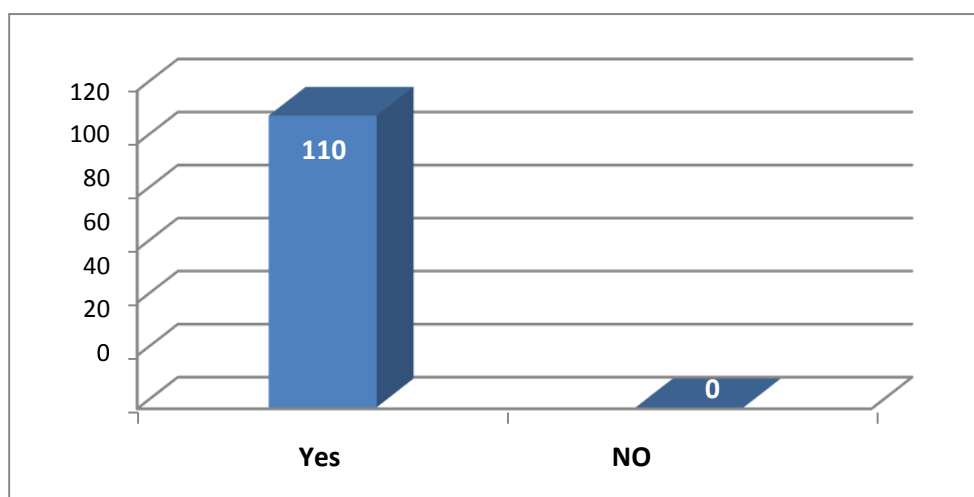
From the figure it can be observed that all (100%) the respondent resource persons weregetting required related resources during the training for giving training to the teachers.

Figure -4.64

Distribution of the resource persons in terms of their responses on availability ofteaching-learning materials at training center
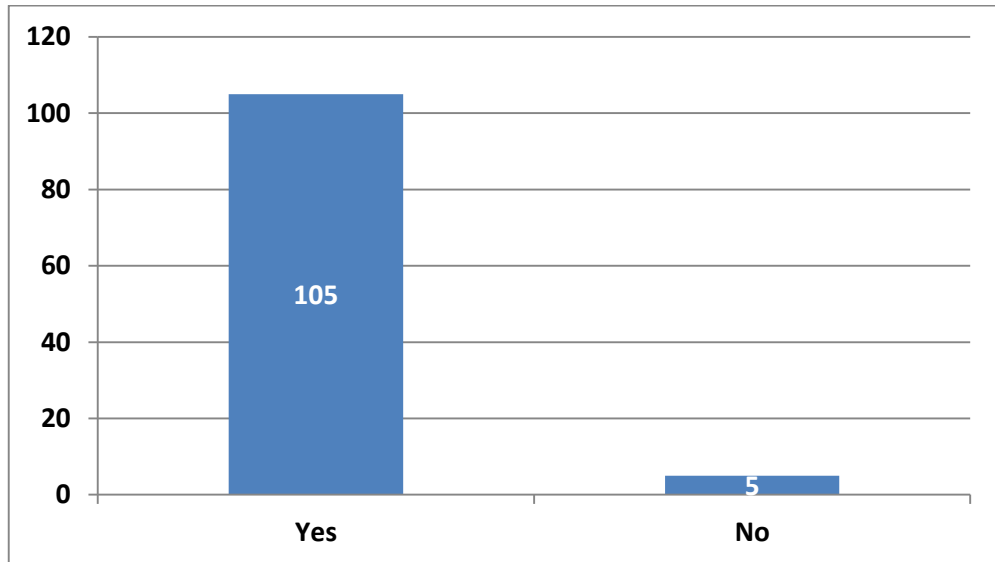
From the figure it can be seen that most of the resource persons (95%) mentioned that training related teaching-learning materials were available at the training centerswhereas only 5% of them mentioned that such materials are not available at training centers.

Figure -4.65

Distribution of the resource persons in terms of their views on module basedtraining to teachers
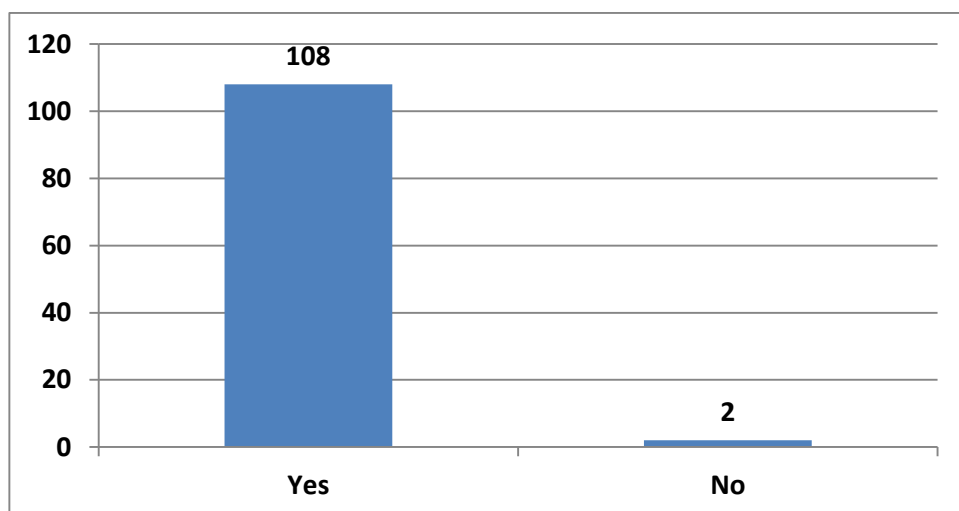
From the figure it can be observed that most (98%) of the resource persons mentionedthat they were providing module based training to the teachers.

Figure -4.66

Distribution of the resource persons in terms of their responses on timely distribution of module
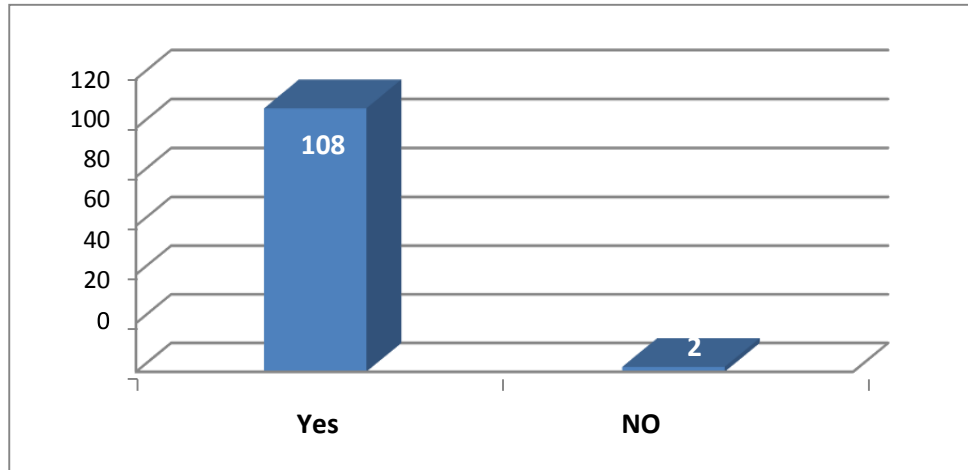
From the figure it can be seen that out of 110 (100%) respondent resource persons, most (98%) of them mentioned that training modules were being distributed timely among the participant teachers.
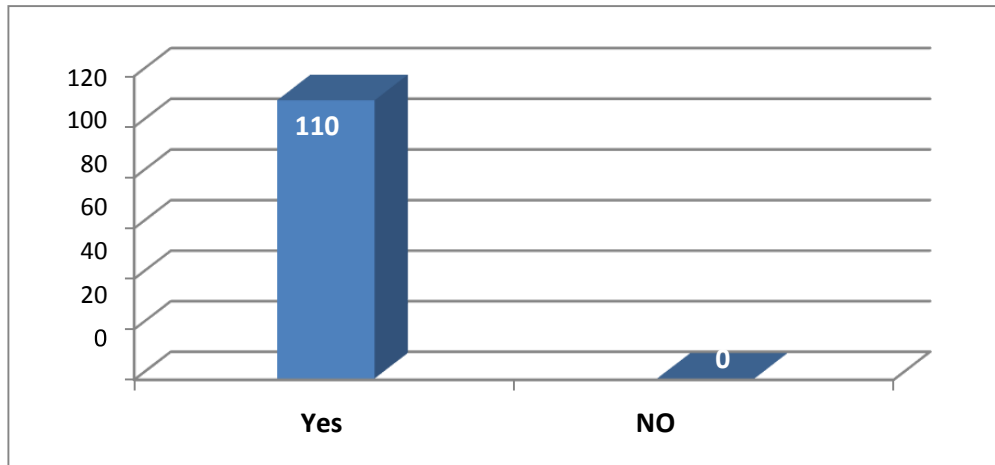
Figure 4.67

Distribution of the resource persons in terms of their responses on their satisfaction with the honorarium
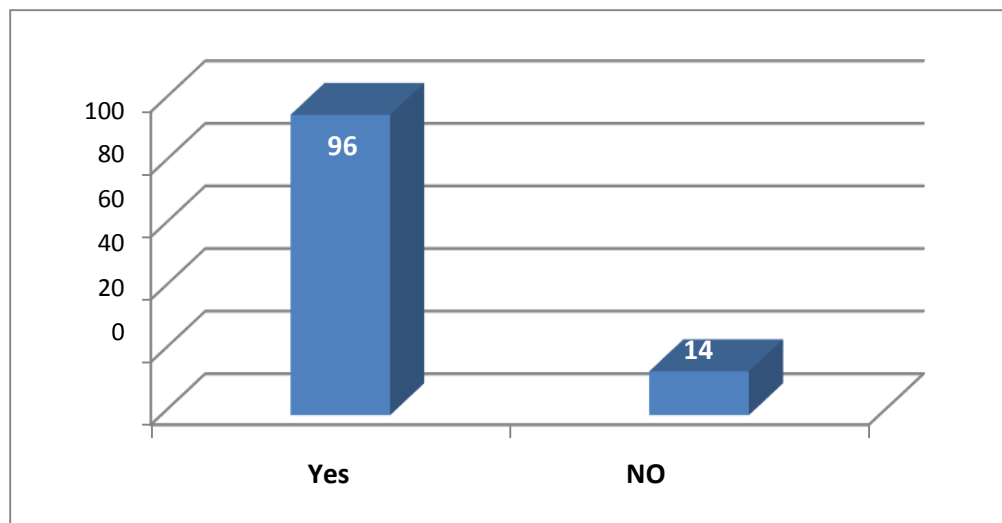
From the figure it can be seen that all of 110 (100%) respondent resource persons, most(87%) of them were satisfied with the training honorarium provided to them whereas 13% of them were not satisfied.
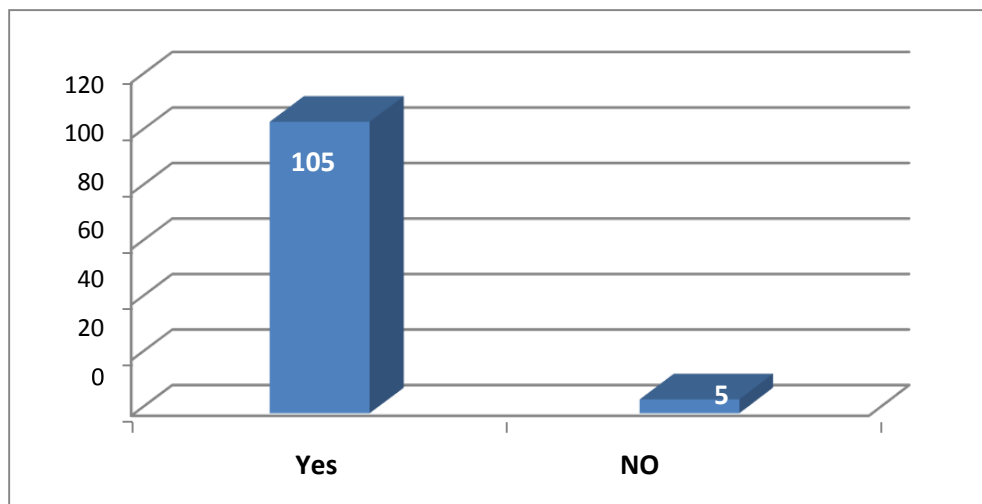
Figure - 4.68

Distribution of the resource persons in terms of their responses about cooperation from training center

From the figure above it can be observed that all (100%) the respondent resource persons mentioned that they were receiving required cooperation from the training centers.
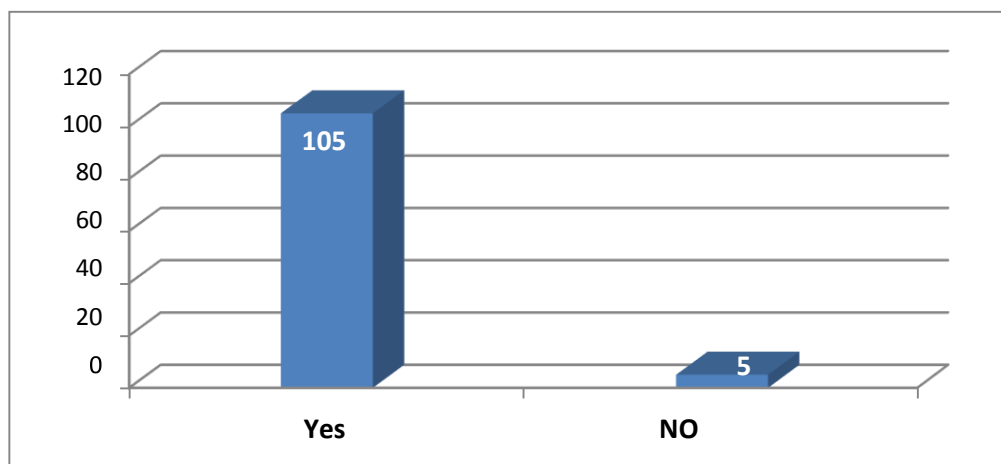
Figure -4.69

Distribution of the resource persons in terms of their responses about availabilityof adequate space for group work

From the figure it can be seen that most (95%) of the resource persons mentioned that adequate space for group works was available at training centers whereas only 5% of them mentioned that adequate space for group works was not available at training centers.
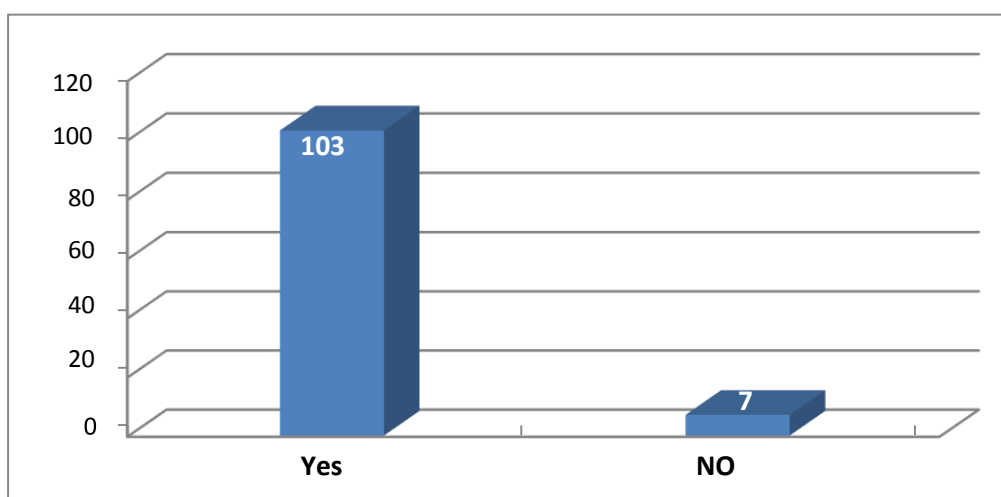
Figure -4.70

Distribution of the resource persons in terms of their responses on teachers'cooperation during training

From the figure above it can be observed that most (95%) of the respondent resource persons mentioned that the participant teachers did cooperate during the trainingwhereas only 5% of them were not cooperating during the training.
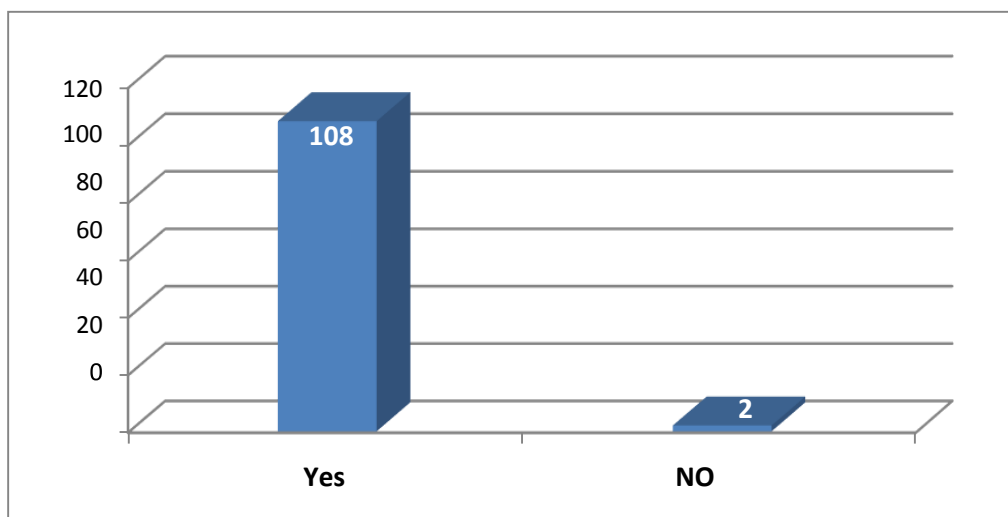
Figure -4.71

Distribution of the resource persons in terms of their responses on providingtraining as per schedule

From the figure above it can be seen that out of 110 (100%) resource persons, most (94%) of them mentioned that they were providing training as per the schedule whereasonly 6% of them were not able to provide training as per the schedule.
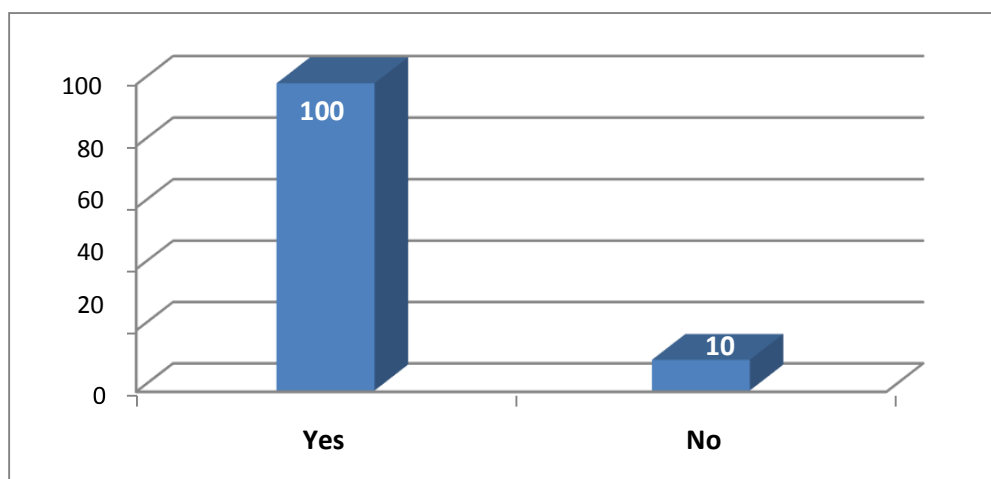
Figure -4.72

Distribution of the resource persons in terms of their responses on cooperationfrom training convener

From the figure above it can be observed that most (98%) of the resource persons mentioned that they were receiving cooperation from the training convener.
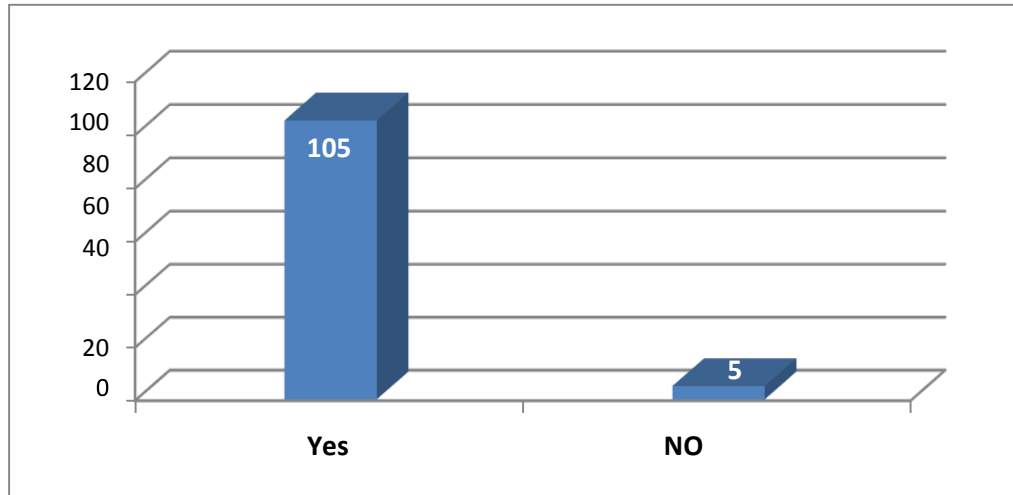
Figure -4.73

Distribution of the resource persons in terms of their responses about punctuality of time by the teachers

From the figure above it can be seen that out of 110 (100%) respondent resource persons, most (91%) of the resource persons responded that all the participant teachers did maintain punctuality of time and were present right from the beginning of the training whereas 9% of them were not of the same view.

Figure -4.74

Distribution of the resource persons in terms of their responses regarding adequate time as per the subject

From the figure above it can be observed that out of 110 (100%) respondent resource persons, most (95%) of them mentioned that adequate time was available as per the training subject whereas only 5% of them mentioned that adequate time was not available to deal with training subject.

Figure -4.75

Distribution of the resource persons in terms of their responses on usefulness ofin-service training programmes for primary education
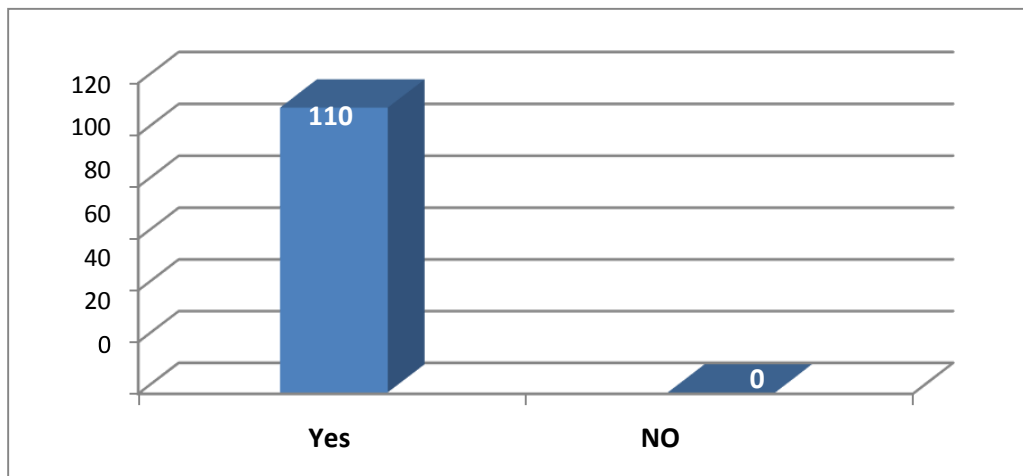
From the figure above it can be seen that all (100%) the respondent resource persons mentioned that the in-service training programmes will benefit primary education.

Responses of Resource Persons regarding benefits of In-service training programmes.

When asked regarding the benefits of in-service training programmes to primary education, it was observed that out of 110 (100%) respondent resource persons, majority of them mentioned that the in-service training programmes can benefit in spreading awareness about new trends in education among the teachers.

The other benefits of in-service training programmes, as per few resource persons, were making teachers aware of effective teaching practices, using innovations in teaching- learning, providing solutions to classroom teaching related problems, knowledge updation and finally designing activities for developing children holistically.

Responses of Resource Persons regarding problems faced during in-service training

When asked regarding the problems faced, out of 110 (100%) respondent resource persons, majority of the Resource Persons mentioned that lack of teachers' involvement in training programmes was the major problems they faced.

There were a large number that responded that they faced problems due to inadequate time for the training.

Few of the resource persons responded that according to them the problems faced were unavailability of proper space, lack of resources and other logistic related problems

Responses of resource persons regarding suggestions for improvement in in-service training programmes.

From the responses, it could be seen that out of 110 (100%) respondent resource persons, few of them suggested to organize the training programmes in such a way that school schedules would not be affected; few others suggested that training should be provided via online mode.

The other suggestions regarding training received from the resource persons

were availability of adequate time for each session, need based and activity based training, availability of resources and logistic services at training venue, training on weekend days, selection of less number of participants, training for use of ICT and innovations and development of monitoring mechanisms so as the evaluate the effectiveness of training.

Interpretation

From the data it could be inferred that the Resource Persons got enough time for preparation for the training implying that they were informed well in advance.

The resource persons had responded that training related teaching-learning materials were available at the training centers and that training modules were being distributed timely among the participant teachers; adequate space for group works was available at training centers implying good organizing and planning of the Training Programs. From the data it could be inferred that Resource Persons, were providing training as per the scheduled time and that adequate time was available as per the training subjects.

From the responses given by the Resource Persons, it could be inferred that the in- service training programmes would benefit primary education in spreading awareness about new trends in education among the teachers; making teaching effective by using innovations in teaching-learning; knowledge updation and exchanging ideas and developing children holistically.

From the data, the problems faced could also be inferred which were lack of teachers' involvement in training programmes; irrelevant questions from participants; lack of interest among participants; logistic related problems; repeated training and lack of resources.

From the data it could be seen that the respondent resource persons suggested organization of training programmes in such a way so that school schedules would not be affected while a small percentage suggested training should be provided online mode. The other suggestions regarding training received from the resource persons were availability of adequate time for each session; need based training; activity based training; readymade availability of resources and logistic services at training venue; training on weekend days, selection of less number of participants training on ICT and innovations and development of monitoring mechanisms so as to evaluate the effectiveness of training.