CHAPTER - V

SUMMARY, FINDINGS, EDUCATIONAL IMPLICATIONS AND SUGGESTIONS
CHAPTER – V

SUMMARY, FINDINGS, EDUCATIONAL IMPLICATIONS AND CONCLUSION

5.1 Summary

5.1.1 Introduction

In-service training programmes are essential for an effective and sound professional growth of teachers. The success of in-service training programmes depends on many factors like administration, organization, selection procedure of teachers (participants), infrastructure facilities, fulfillment of academic needs and attitude of teachers. This conceptual framework has been applied to secondary school teachers very recently. The scarcity of related studies regarding in-service training programmes has raised an important question on the status of in-service training programmes of secondary school teachers with respect to organisation, administration, selection procedure of participants, infrastructure facilities, efficacy and attitudinal change of participants.

Most of the secondary school teachers are aspiring for professional growth in order to fulfill their academic desire, they have to attend in-service training programme. But most of the teachers are unable to attend the training programmes continuously or the organized training programmes are not based on the specific academic needs of teachers.
A well tried out approach for teachers' professional growth is the organisation of the need based in-service training programmes. Such in-service training programmes will develop positive attitude towards teaching profession. Here the teachers undergo in-service training programmes, such in-service training programmes will encourage them more and more to take part in in-service programmes. It is exactly on this premise that the present research study is conducted keeping in view the Indian conditions.

5.1.2 Statement of the problem

The major purpose of the present investigation is to evaluate the status of in-service training programmes of Colleges of Teacher Education (CTE's) in the State of Karnataka. Hence, the problem is stated as ‘Evaluation of In-service programmes of Colleges of Teacher Education (CTE's) in the State of Karnataka’

5.1.3 Objectives of the Study

The present study was undertaken with the following broad and specific objectives.
Broad Objectives

1. To make the status survey of in-service training programmes of Colleges of Teacher Education organized for the benefit of the secondary school teachers.

2. To study whether the training programmes of CTE’s are need based.

3. To study the attitude of secondary school teachers towards in-service training programmes of CTE’s.

4. To suggest measures in terms of training needs for further improvement of in-service training programmes of CTE’s.

Specific Objectives of the Study

1. To study the types of in-service training programmes organized in CTE’s for secondary school teachers.

2. To study the organization in terms of administration and financial aspects.

3. To study the selection procedures of secondary school teachers for in-service training programmes of CTE’s.

4. To study the infrastructure facilities available for the training programmes of CTE’s.

5. To study the needs of secondary school teachers.
6. To study whether the training programmes are need based.

7. To study the attitude of secondary school teachers towards in-service training programmes of CTE’s.

8. To study the attitudinal change among teachers after undergoing training programmes of CTE’s.

5.1.4 Variables Considered in the Study

Independent Variables

1. Sex (men and women)

2. Location (Urban and Rural)

3. Types of Institutions (Government and Private)

4. Number of years of service (below 10 years, between 11-20 years and 21 and more than 21 years)

5. Number of training programmes attended (teachers who attended one training programme and teachers who attended two or more training programmes)

Dependent variables

1. Teachers need assessment

2. Attitude of teachers towards in-service programmes
5.1.5 Hypotheses

In pursuance of fifth, sixth, seventh and eighth objectives of the study stated earlier, the following research hypotheses were set up.

1. There is no significant difference between pre test and post test scores of academic needs and its dimensions among teacher participants.

2. There is no significant difference between pre test and post test scores of academic needs and its dimensions among teacher participants in relation to – sex, location, type of management, years of service and number of programmes attended.

Sub-hypotheses

2.1. There is no significant difference between pre test and post test scores of academic needs and its dimensions among men teachers.

2.2. There is no significant difference between pre test and post test scores of academic needs and its dimensions among women teachers.
2.3. There is no significant difference between pre test and post test scores of academic needs and its dimensions among urban school teachers.

2.4. There is no significant difference between pre test and post test scores of academic needs and its dimensions among rural school teachers.

2.5. There is no significant difference between pre test and post test scores of academic needs and its dimensions among government school teachers.

2.6. There is no significant difference between pre test and post test scores of academic needs and its dimensions among private school teachers.

2.7. There is no significant difference between pre test and post test scores of academic needs and its dimensions among 0 – 10 years experienced teachers.

2.8. There is no significant difference between pre test and post test scores of academic needs and its dimensions among 11 -- 20 years experienced teachers.

2.9. There is no significant difference between pre test and post test scores of academic needs and its dimensions among 21 and above 21 years experienced teachers.
2.10. There is no significant difference between pre test and post test scores of academic needs and its dimensions among teachers who attended one training programme.

2.11. There is no significant difference between pre test and post test scores of academic needs and its dimensions among teachers who attended two and more training programme.

3. There is no significant difference between pre test scores of academic needs and its dimensions among teacher participants in relation to sex, location, type of management, years of service and number of programmes attended.

**Sub-hypotheses**

3.1 There is no significant difference between pre test scores of academic needs and its dimensions among men and women teachers.

3.2 There is no significant difference between pre test scores of academic needs and its dimensions among urban and rural school teachers.
3.3 There is no significant difference between pre test scores of academic needs and its dimensions among government and private school teachers.

3.4 There is no significant difference between pre test scores of academic needs and its dimensions among teacher participants in respect of years of service.

3.5 There is no significant difference between pre test scores of academic needs and its dimensions among teachers who attended one training programme and teachers who attended two and more training programmes.

4. There is no significant difference between post test scores of academic needs and its dimensions among teacher participants in relation to sex, location, type of management, years of service and number of programmes attended.

Sub-hypotheses:

4.1 There is no significant difference between post test scores of academic needs and its dimensions among men and women teachers.
4.2 There is no significant difference between post test scores of academic needs and its dimensions among urban and rural school teachers.

4.3 There is no significant difference between post test scores of academic needs and its dimensions among government and private school teachers.

4.4 There is no significant difference between post test scores of academic needs and its dimensions among teacher participants in respect of years of service.

4.5 There is no significant difference between post test scores of academic needs and its dimensions among teachers who attended one training programme and teachers who attended two and more training programmes.

5. There is no significant difference between pre test and post test attitude scores among teacher participants.

6. There is no significant difference between pre test and post test attitude scores among teacher participants in relation to — sex, location, type of management, years of service and numbers of programmes attended.
Sub-hypotheses

6.1 There is no significant difference between pre test and post test attitude scores among men teachers.

6.2 There is no significant difference between pre test and post test attitude scores among women teachers.

6.3 There is no significant difference between pre test and post test attitude scores among urban school teachers.

6.4 There is no significant difference between pre test and post test attitude scores among rural school teachers.

6.5 There is no significant difference between pre test and post test attitude scores among government school teachers.

6.6 There is no significant difference between pre test and post test attitude scores among private school teachers.

6.7 There is no significant difference between pre test and post test attitude scores among 0 – 10 years experienced teachers.

6.8 There is no significant difference between pre test and post test attitude scores among 11 – 20 years experienced teachers.

6.9 There is no significant difference between pre test and post test attitude scores among 21 and above 21 years experienced teachers.
6.10 There is no significant difference between pre test and post test attitude scores among teachers who attended one training programme.

6.11 There is no significant difference between pre test and post test attitude scores among teachers who attended two and more training programmes.

7. There is no significant difference between pre test attitude scores among teacher participants in relation to sex, location, type of management, years of service and number of programmes attended.

Sub-hypotheses

7.1 There is no significant difference between pre test attitude scores among men and women teachers.

7.2 There is no significant difference between pre test attitude scores among urban and rural school teachers.

7.3 There is no significant difference between pre test attitude scores among government and private school teachers.

7.4 There is no significant difference between pre test attitude scores among teachers participants in respect of years of service.
7.5 There is no significant difference between pre test attitude scores among teachers who attended one training programme and teachers who attended two and more training programmes.

8. There is no significant difference between post test attitude scores among teacher participants in relation to sex, location, type of management, years of service and number of programmes attended.

Sub-hypotheses

8.1 There is no significant difference between post test attitude scores among men and women teachers.

8.2 There is no significant difference between post test attitude scores among urban and rural school teachers.

8.3 There is no significant difference between post test attitude scores among government and private school teachers.

8.4 There is no significant difference between post test attitude scores among teachers participants in respect of years of service.

8.5 There is no significant difference between post test attitude scores among teachers who attended one training programme and teachers who attended two and more training programmes.
5.1.6 Methodology

In the present study, information was collected regarding the status of in-service training programmes in order to study the organization, administration, selection procedure of participants and provision of infrastructure facilities of Colleges of Teacher Education (CTE's) in the State of Karnataka.

The data regarding independent variables such as sex, location, type of management, number of years of service and number of training programmes attended by secondary school teacher participants of in-service training programmes of CTE's was collected to find out the relationship of set factors on need fulfillment and attitude of teachers towards in-service training programmes of CTE's.

The investigator has prepared and used the following tools for the collection of relevant data:

1. Information blank sheet.
2. Construction of questionnaire for secondary school teacher participants.
3. Construction of questionnaire for programme co-ordinators.
4. Construction of secondary school teachers academic need assessment scale (SSTANAS) to know the level of academic needs.

5. Construction of an attitude scale to know the attitude of secondary school teachers towards in-service training programmes.

5.1.7 Sampling

The present study is related with the organization, administration, selection procedure of participants, infrastructure facilities, academic need assessment and attitudinal change of teachers towards in-service training programmes who have participated in in-service training programmes organised by 10 CTE's in the State of Karnataka. Out of 10 Colleges of Teacher Education 6 are Government colleges and 4 of Private aided colleges. Six government Colleges of Teacher Education and one private College of Teacher Education were selected for the study. Out of 10 CTEs, 7 Colleges of Teacher Education were included in the study and the remaining 3 Colleges of Teacher Education have not organized any training programmes during the year 2006-07 and were left out.
Six hundred forty secondary school teachers (440 men and 200 women teachers) were selected for the study. All these participants participated in training programmes of 3 days and above.

By using simple random sampling technique 16 training programmes were selected. Minimum 2 programmes were selected from each CTE. The list of 7 Colleges of Teacher Education selected for the study and number of programmes is given in the table 5.1.

Table 5.1: Names of Colleges of Teacher Education Selected for the Study and Total Number of Programmes Selected.

<table>
<thead>
<tr>
<th>SI. No</th>
<th>Name of the College of Teacher Education</th>
<th>No. of Programmes selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Government College of Teacher Education, Mysore</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Government College of Teacher Education, Belgaum</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Government College of Teacher Education, Gulbarga</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Government College of Teacher Education, Mangalore</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Government College of Teacher Education, Jamakhandi</td>
<td>2</td>
</tr>
<tr>
<td>6.</td>
<td>Government College of Teacher Education, Chitradurga</td>
<td>2</td>
</tr>
<tr>
<td>7.</td>
<td>M.L.M.N. College of Teacher Education, Chikmagalur</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

The sample of men and women teachers, rural and urban teachers and teachers from government and private schools are considered from 16 training programmes of 7 CTE’s in the State of Karnataka. Below mentioned flow chart gives the picture of the sample
### Flow Chart ii:

Total Number of Participants Selected from Different Variables.

#### 5.1.8 Statistical Techniques Adopted for Analysis

To know the attainability of formulated objectives of the study, the data was analyzed by using the following statistical techniques.

1. The data collected are presented in terms of percentages. Mean and SD are also computed.

2. To test the hypotheses 't' test and single classification Analysis of Variance (ANOVA) were used.
5.1.9 Limitations of the Study

1. The sample included the secondary school teacher participants of selected 16 training programmes of CTE’s.

2. The sample covers the rural and the urban teacher participants of 7 CTE’s in the State of Karnataka.

3. The sample covers the government and the private aided school teachers only.

4. The study is limited to secondary school teachers in Karnataka.

5.2 Findings and Conclusions of the Study

The following are the findings of the study.

Opinion of Secondary School Teacher Participants Regarding Status of In-service Training Programmes of CTEs

1. Thirty eight per cent of the teacher participants expressed that the co-ordinators asked about their academic needs before inviting to the training programme.

2. Seventy six per cent of the teacher participants expressed that venue of the training programme was convenient as venue was near to their place of work.
3. Eighty three per cent of the teacher participants demanded boarding and lodging facilities as it was not arranged by programme co-ordinator.

4. Fifty six per cent of the teacher participants expressed that time table of the programme was given in advance.

5. Fifty five per cent of the teacher participants expressed that the resource persons were not competent and informative.

6. It is clear from the data that majority of the resource persons have not used modern audio-visual aids, only

   a) Fourteen per cent of the resource persons have used Computer
   b) Fifteen per cent of the resource persons have used LCD
   c) Ten per cent of the resource persons have used DVD
   d) Eighteen per cent of the resource persons have used audio tape recorder
   e) Forty per cent of the resource persons have used OHP
   f) Sixty seven per cent of the resource persons have used charts and maps
   g) Thirty per cent of the resource persons have used models.

7. Forty eight per cent of the teacher participants have positive opinion for organising training programmes with the inclusion of Saturday and Sunday.

8. It is clear from the data, fifty one per cent of the teacher participants agreed that it is good to conduct training programmes during vacation,
if training programme exceeds the duration of 5 days. In such cases,
there will not be any disturbance to school work.

9. Ninety four per cent of the teacher participants expressed that
resource persons gave adequate opportunities to ask questions.

10. It is found from the data that eighty two per cent of the secondary
school teacher participants received printed materials in the
programme.

11. It is clear from the data that thirty per cent of the teacher participants
received learning materials before the commencement of the lecture,
forty five per cent of the teacher participants received during the
lecture, eight per cent of the participants are received after the lecture
and seven per cent of participants are assured to receive later.

12. It is found from the data that forty one per cent of the teacher
participants are provided with library facilities when programmes are
organized in CTE headquarters.

13. Twenty two per cent of the teacher participants expressed that
secondary school text books were available in the library, three per
cent of teachers expressed that encyclopedia were available, thirty one
per cent of teachers expressed that they got reference books in the
library, nine per cent got dictionaries, six per cent got magazines,
seventeen per cent got journals and twenty three per cent got the newspapers.

14. Only four per cent of the teacher participants favoured that library might open between 8-30 am and 10-00 am, twenty three per cent of teacher participants expressed that the library might kept open from 1-30 pm to 2-30 pm. Only two per cent of them opined that the library might kept open during leisure hours.

15. Sixty two per cent of the teacher participants said that the programme co-ordinator had given assignments at the end of the lecture.

16. Sixty six per cent of the teacher participants gave their opinion about their experiences orally and thirty per cent gave through questionnaire.

17. Ninety three per cent of the teacher participants expressed that the topics discussed were related to the subject area.

18. It is clear from the data that forty four per cent of the teacher participants were satisfied with the travelling allowance and dearness allowance provided.

19. Teacher participants suggested the following suggestions for the success of the training programme.

   a) Competent and suitable resource persons are to be invited.

   b) Resource persons need to use modern audio visual aids,
c) Training programmes must be activity based,

d) Programmes need to be conducted only in CTE headquarters

e) Proper lodging and boarding facility must be provided

f) Educational visits need to be arranged.

**Opinion of CTEs In-service Programme Co-ordinators**

**Regarding Organisation and Infrastructure Facilities**

1. Seventy three per cent of programme co-ordinators opined that the state government has sanctioned funds to organise in-service training programmes well in time.

2. Seventy three per cent of programme co-ordinators have contacted representative sample of secondary school teachers to finalise the details of each training programme.

3. Eighty seven per cent of programme co-ordinators fixed the venue of the programme according to the convenience of the secondary school teachers.

4. Sixty per cent of programme co-ordinators are of the opinion that they finalize the programme details after enquiring about academic needs of secondary school teachers.
5. Eighty seven per cent of programme co-ordinators have not provided lodging and boarding facilities to secondary school teacher participants during the programme.

6. Ninety three per cent of programme co-ordinators provided detailed time table of the training programme to all the teacher participants on the first day.

7. Seventy three per cent of programme co-ordinators expressed that the required number of competent resource persons are available only in programmes conducted at CTE headquarters and District headquarters only.

8. Eighty seven per cent programme co-ordinators expressed that fund fixed for each training programme is sufficient other than SSA training programmes.

9. Ninety three per cent of programme co-ordinators expressed that fund required to organize programme was released by the education department in advance.

10. All the programme co-ordinators expressed that there was no necessity to think of other alternative financial arrangement as the fund was released well in advance by the authorities.
11. Sixty per cent of the programme co-ordinators provided audio visual aids like computer, LCD, DVD, audio tape recorder, OHP, charts and maps for the successful organization of the programmes.

12. Eighty per cent of the programme co-ordinators expressed that most of the resource persons used OHP, charts and maps but only few of them used computers, LCD, DVD and audio tape recorder.

13. Ninety three per cent of programme co-ordinators expressed that they conducted need based academic training programmes.

14. It is clear from the data that 87 per cent of programme co-ordinators expressed that the programmes were conducted throughout the year in a scattered manner.

15. It is observed from the data that training programmes were not concentrated in the month of March. But programmes were conducted in different months of the year.

16. Only 53 per cent of programme co-ordinators expressed that it is convenient to conduct programmes including Saturday and Sunday in case the programme runs for 3 to 5 days. Such system helps them to utilize holidays properly.

17. About 74 per cent of programme co-ordinators expressed that if the programme exceeds five days, it is better to organize such programmes during vacation.
18. It is clear from the data that 93 per cent of the co-ordinators are of the opinion that resource persons provided opportunities to teacher participants to ask questions relating to their doubts and also suggested to refer different sources to improve their teaching.

19. Again it is clear that 93 per cent of programme co-ordinators are of the view that the teacher participants were asking enough questions relating to their doubts.

20. About participants mutual support of information.
   a) Twenty per cent of the programme co-ordinators expressed that 24 per cent of the teacher participants supplemented more information.
   b) Thirteen per cent of programme co-ordinators said that 50 per cent of the teacher participants supplemented more information.
   c) Twenty six per cent of programme co-ordinators said that 75 per cent of the teacher participants supplemented more information.
   d) Thirty three per cent of programme co-ordinators said that all the teacher participants supplemented more information.

21. Only forty per cent of the programme co-ordinators provided materials before the commencement of programme. Sixty per cent of co-ordinators provided materials during the training programme.
22. Sixty per cent of the programme co-ordinators provided library facilities with variety of related books, journals, magazines and news papers. But it was not possible to arrange library facility when programmes were organized out side the CTE.

23. Sixty eight per cent of programme co-ordinators have provided library facility between 1-30 pm and 2-30 pm and also between 6-00 pm and 7-00 pm when programmes were organized in the CTE headquarter.

24. It is clear from the data that ninety three per cent of the programme co-ordinators have given assignment on topics discussed in the programme and the participants have submitted their assignments before the end of the programme.

25. Eighty seven per cent of the programme co-ordinators expressed their opinion that resource persons were satisfied with the honorarium sanctioned by the department.

26. Seventy three per cent of the programme co-ordinators were not happy with the amount sanctioned to them towards travelling allowance and dearness allowance.

27. Eighty per cent of the programme co-ordinators expressed that traveling allowance and dearness allowance given to the secondary school teacher participants was adequate.
28. All the programme co-ordinators have evaluated the effectiveness of different sessions.

29. All the programme co-ordinators collected opinions of secondary school teacher participants through interview by distributing feedback forms.

30. Ninety three per cent of the programme co-ordinators expressed that they use the feedback given by secondary school teacher participants for restructuring the future training programmes.

31. Eighty per cent of the programme co-ordinators organized different follow-up training programmes for the same batch of participants only after getting feedback from them.

32. Fifty three per cent of the programme co-ordinators expressed that terms, conditions and directions issued by the authorities were practicable.

Academic Needs of Secondary School Teachers in different dimensions in relation to different Variables

Sex

1. It was found that academic needs of the secondary school women teachers are more when compared with the needs of the men teachers.
2. The secondary school women teachers personal needs are more than the men teachers personal needs.

3. The curriculum and content needs of women teachers are more than the content needs of men teachers.

4. It is found that instructional needs of women teachers are more than the instructional needs of men teachers.

5. It was found that the men and women teachers information and communication needs are almost similar.

6. Similarly evaluation needs of the men and women teachers are similar.

**Location**

1. It was found that the rural teachers academic needs are more than the urban teachers.

2. The personal needs of teachers are almost same both in urban and rural school teachers.

3. The curriculum and content needs among rural school teachers is more than that of the urban school teachers.

4. The instructional need of the rural school teachers is more than that of the urban school teachers.

5. Information and communication needs of both urban and rural school teachers are similar.
6. The evaluation needs among rural school teachers is more than that of the urban school teachers.

**Type of Management**

1. The academic needs of the government school teachers are more when compared with the private school teachers.

2. The personal academic needs of both government and private teachers are almost similar.

3. Curriculum and content needs of the government school teachers are more than that of the private school teachers.

4. The instructional needs of the government school teachers are more than that of the private school teachers.

5. The private school teachers information and communication needs are more when compared with the government school teachers.

6. The evaluation needs are similar in both the government and private school teachers.

**Length of Service**

The academic needs of the teachers with less than 10 years experience teachers are more than those who have more than 10 years of experience.
1. The personal needs of the teachers with less than 10 years experienced teachers are more when compared with the teachers having 11 and more years of experience.

2. The curriculum and content needs of the teachers with less than 10 years experienced teachers are more compared with 11 and more years of experience.

3. The instructional needs of the teachers with below 20 years experience are more when compared with the teachers having 21 and above more years of experience.

4. The information and communication needs of the teachers with 21 and more years of experience are more when compared with less than 10 years of experience.

5. The evaluation needs of the teachers with 11-20 years of experience are more when compared with other teachers.

**Number of Training Programmes Attended**

1. The academic needs of the teachers attended one training programme are more than that of the teachers attended two or more training programmes.
2. The personal needs are more among teachers who attended two or more training programmes when compared with needs of the teachers who attended only one training programme.

3. The curriculum and content needs are more among teachers who attended one training programme when compared with needs of the teachers who attended two or more training programmes.

4. The instructional needs are more among teachers who attended one training programme when compared with needs of the teachers who attended two or more training programmes.

5. The information and communication needs are more among teachers who attended two or more training programmes when compared with needs of the teachers who attended only one training programme.

6. The evaluation needs are similar among the teachers who attended one training programme and the teachers who attended two and more training programmes.

Secondary School Teachers Academic Need fulfillment in different dimensions through In-service Training Programmes of CTEs in relation to different Variables
Sex

1. It was found that the men teachers academic needs fulfillment is more than that of the women teachers.

2. It was found that the men teachers personal needs fulfillment is more than that of the women teachers.

3. It was found that the men teachers curriculum & content needs fulfillment is more than that of the women teachers.

4. It was found that the men teachers instructional needs fulfillment is more than that of the women teachers.

5. Information and communication needs fulfillment is more in the men teachers than that of the women teachers ICT needs fulfillment.

6. The fulfillment of evaluation needs is more in the men teachers when compared with the women teachers.

Location

1. It was found that the urban school teachers fulfillment of academic need is more than that of the rural school teachers.

2. The fulfillment of personal need among urban school teachers is more than that of the rural school teachers.

3. The fulfillment of curriculum and content need is more in rural school teachers when compared with urban school teachers.
4. The fulfillment of instructional need among urban school teachers is more when compared with the rural school teachers.

5. The fulfillment of information and communication need is similar both in urban and rural school teachers.

6. The fulfillment of evaluation need is similar both in urban school teachers and rural school teachers.

**Type of Management**

1. The fulfillment of needs among the government school teachers is more than that of the private school teachers.

2. The fulfillment of personal needs among the government school teachers is more than that of the private school teachers.

3. The fulfillment of curriculum and content needs are more in the government school teachers than that of the private school teachers.

4. The fulfillment of instructional need is more in the government school teachers when compared with the private school teachers.

5. The fulfillment of information and communication need is more in government school teachers when compared with the private school teachers.
6. The fulfillment of evaluation need is more in government school teachers when compared with the private school teachers.

**Number of Years of Service**

1. The fulfillment of academic needs are more among the teachers who are between 11 and 20 years of experience when compared with the below 10 years and 21 and above years of experienced teachers.

2. The fulfillment of personal need is almost similar among all the teachers who have different number of years of experience.

3. The fulfillment of curriculum and content need is similar among all the teachers with varying number of years of experience.

4. The fulfillment of instructional need is more among teachers who are between 11 and 20 years of experiences when compared with the teachers who are having less than 10 years and 21 or more than 21 years of experience.

5. The fulfillment of information and communication need is more in the teachers with less than 20 years of experience when compared having 21 or more than 21 years of experience.
6. The fulfillment of evaluation need is more among teachers who are in between 11-20 years of experience with other teachers.

**Number of Training Programmes Attended**

1. The fulfillment of academic needs are more among the teachers attended two or more training programmes when compared with the teachers attended only one training programme.

2. The fulfillment of personal need is more among teachers attended two and more training programmes when compared with the teachers attended only one training programme.

3. The fulfillment of curriculum and content need is similar among both teachers attended one training programme and teachers who attended one training programme and two or more training programmes.

4. The fulfillment of instructional needs of teachers attended two or more training programmes is more than the teachers attended only one training programme.

5. The fulfillment of information and communication need is similar in the teachers who attended one training programme and two or more than two training programmes.
6. The fulfillment of evaluation need is similar in teachers who attended one training programme and two or more than two training programmes.

**Attitude of Secondary School Teachers Towards In-service Programmes of CTEs in Relation to Different Variables**

1. It was found that the attitude of the women teachers is more positive than that of the men teachers.

2. It was found that the attitude of urban teachers is more positive than that of the rural teachers.

3. It was found that the attitude of government and private school teachers is positive and similar.

4. It was found that the attitude of teachers who have more than 21 years of experience is positive and higher than the teachers who have less than 20 years experience.

5. It was found that the attitude of the teachers who attended one training programmes is more positive when compared with the teachers who attended two and more training programmes.
Attitudinal Change of Secondary School Teachers Towards In-Service Programmes of CTEs In Relation to Different Variables

1. It was found that the attitudinal change of the women teachers is more positive than that of the men teachers.

2. It was found that the attitudinal change of urban and rural school teachers is positive and similar.

3. It was found that the attitudinal change is positive and similar among government and private teachers and to the maximum.

4. It was found that the attitudinal change of the teachers who have 11 and more than 11 years of experience is more positive when compared with the teachers with below 10 years experience.

5. It was found that, the attitudinal change among teachers who attended two or more training programmes is more positive when compared with the teachers who attended one training programme.

Conclusion

The researcher has drawn the following conclusions on the basis of the findings of the study -
1. With respect to the selection procedure of the participants, the teachers are of the opinion that co-ordinators have not given equal weightage to all the teachers from different types of management.

2. With respect to organization and administration, CTE's made efforts to provide Information and Communication Technology and suitable resource persons only at CTE headquarters and district places.

3. With respect to infrastructure facilities, most of the facilities were available in CTE's and were used only at CTE's headquarters and district places.

4. With respect to need fulfillment, secondary school teachers needs are effectively fulfilled except information and communication technology needs.

5. With respect to attitudinal change, secondary school teachers had better positive attitudinal change towards in-service training programmes of CTE's. This is in conformity with the results reported by Anaberi Rajeshwar Rao (6), Lakshmi Narayana U. (57: 42-43), Vincent De. Paul S. (117: 17-20), Sharma Subhash Chandra (92: 1484) and Srivastava S. (108: 468-469).
5.3 Educational Implications of the Study

Based on the results obtained in this study, the following educational implications may be suggested.

1. The study reveals that in-service training programmes are useful to perform more effectively and makes a difference in teacher behaviour in terms of getting mastery over their subjects. In turn, it reflects on the achievement of students. But CTE’s are concentrating more on the government and the private aided secondary school teachers training. In this regard, CTE’s and other agencies of in-service training programmes have to invite private unaided secondary school teachers also.

   Starkweather (109: 1333A), Casteneda (26: 1789) reported that teachers perceived the professional development of the programme which could be most effective for improving their practice and students’ learning. Findings of Patel Jignesh Bhogilal (76) have also supported this findings.

2. The study reveals that success of the training programme depends on proper organization and good administration by the co-ordinator.
Hence, the co-ordinator has to organize the training programme in a systematic manner. So that teacher participants must feel happy and convenient i.e.

i) The co-ordinator has to give equal weightage to all the subject areas.

ii) Participants should be intimated well in advance with schedule of the programme and printed material.

iii) Venue and duration should be fixed suitably in all respects.

iv) Suitable resource persons should be invited

v) Co-ordinator has to intimate to the head of the institutions strictly to send selected teachers to attend the programme.

Mama K. (62: 818-819) in his study found that adequate communication did not exist between the organizing authority and secondary school teachers. And also teachers were prevented from attending training programmes by the principals.

Sharma Subhash Chandra (92: 1484) found that maximum number of teachers listed common defects of organization, such as
unsuitability of time, lack of expertise, lack of reference materials etc.,

Duggal (34: 13) in his study found that the schedule of the programme was not provided well in advance to teachers. Guidelines for the organization of in-service training programmes were not followed by the co-ordinator of in-service training programmes in terms of assessment and prioritization of the training needs and selection of resource persons etc. Which in turn de-motivated the teachers to participate in the training programmes.

3. The results of the study indicates that the fulfillment of objectives of any in-service training programmes depends on the provision of infrastructure facilities. Therefore CTE's co-ordinators and other agencies have to provide necessary infrastructure facilities like Audio Visual aids, seating arrangements, black board, suitable resource persons, library facility, lodging and boarding, drinking water and sanitary facilities within the campus, so that full time involvement of participants is possible.
Gafoor Abidul P.K. (42: 53) found in his study that the availability and utility of material facilities of DIET's were not satisfactory.

Patel Jignesh Bhogilal (76) found in his study that infrastructural facilities were available in DIET's. But teachers are of the opinion that qualified and effective resource persons have to be selected for training programmes, building hostels, blackboard, toilet, library and other civil works needed to DIET's to immediate attention.

Panda et. al (73: 18) found that lack of Audio Visual aids cause dis-interest and de-motivated the teachers to participate in the training programmes.

Ray (85: 148A) in his study found that the teacher participants reported a change in teaching to the extent of integrating the technology as a result of good infrastructural facilities provided in the training programme.
4. The study has brought to light that efficacy of the training programmes depends on fulfillment of the academic needs. Most of the academic needs of the secondary school teachers are fulfilling through in-service training programmes except information and communication technology need which is very essential to all teachers especially at secondary level. Hence, CTE's and other agencies of in-service training programmes have to organize need based and long term training on Microsoft which includes the use of computer, preparation of computer assisted programme, preparation and use of compact disk (CD's), use of LCD, Laptop, Fax messages, E-mail and Internet. This ICT need fulfillment create interest and make teachers to be more informational and active.

RIE, Maharashtra (140: 466-467), in its study found that head masters expressed the need of presentation of teaching aids.

Pushpanandan K. (78: 45-46) found that the teachers expressed their interest created and usefulness of the training as the training programmes were need based.
Patel Jignesh Bhogilal (76), Hegade Shridhar Gopal Krishna (52) and Ray (85: 148A) also supported that the ICT works significantly on professional growth.

Stewart (110: 574A) studied that technology training was considered to promote the implementing the methods learned.

Oberlander (71: 146A) in his study reported that problem based technology training showed favourable technology integration in teachers classroom teaching.

5. The study has thrown light on the attitude of teachers towards in-service training programmes. Many definitions revealed that in-service training programmes cause enrichment of knowledge, continuation of education and professional growth of teachers. Therefore, it is essential for all teachers to have positive attitude towards in-service training programmes. Hence, CTE’s and other agencies should provide such of the experiences to teachers which develop favourable attitude from each training programme. Teachers have to get academic benefit so that they feel happy to attend further training programmes. Teachers have to be provided
with better infrastructural facilities in the training programmes. Co-ordinators have to organize need based training programmes.

Srivastava S. (108: 468-469) in his study showed that there is significant improvement in the attitude with increasing number of training programmes attended.

The study conducted by Sharma Subhash Chandra (92: 1484) reveals that seventy six per cent of teachers could find a positive change in their attitude towards the profession due to in-service training programmes attended.

Findings of the study conducted by Vincent De Paul S. (117: 17-20) are in conformity with the findings of the present study. It is inferred that there is significant difference between the mean scores of attitude towards the in-service training programmes of the elementary school teachers with respect to the different variables. It was concluded that elementary school teachers have better attitude towards in-service training programmes.
On the basis of the findings, the investigator suggested the following suggestions for improving the in-service programmes organizing by Colleges of Teacher Education.

1. The present study helps to prepare a plan for organizing in-service programme for teachers of different levels.
2. It helps to design the procedure of selecting to fix the venue to participate in in-service programmes.
3. The present study helps the co-ordinators to fix the venue and duration for the programme well in advance.
4. The present study helps the co-ordinators to pool the facilities required for organizing programmes successfully.
5. The present study helps to know the needs of secondary school teachers.
6. The study helps the co-ordinators to organize need based programmes.
7. The present study helps to know the attitude of teachers towards in-service programmes.
8. The present study helps to know the attitudinal change of teachers towards in-service programmes.
5.4 Suggestions for the Further Study

While conducting the present study a need for a few specific research studies relating to the field was felt. The suggestions for such studies are enumerated below:

1. A comparative study of in-service programmes organized in 2 or 3 states may be conducted.
2. A study may be undertaken involving the secondary school students to know the impact of training given to secondary school teachers.
3. The similar study may be organized to evaluate the in-service programmes organized for the benefit of teachers working in elementary and secondary teacher training institutions.
4. A study may be organized to evaluate the induction training programmes organized by Karnataka State Pre-University Board in different divisions.
5. A study may be organized to evaluate the induction training programme organized by different universities in the State.
6. Similar studies may be conducted to evaluate the orientation courses and refresher courses organized by Academic Staff Colleges of different states.