CHAPTER - V

SUMMARY, CONCLUSIONS AND EDUCATIONAL IMPLICATIONS

This chapter is divided into three sections. Section 5.1 deals with the summary of introduction and methodology of the study. Conclusions which are based on the results of analysis and interpretation of the data obtained through the Classroom Observation Forms, Achievement Tests and Interview Schedule are presented under section 5.2. Likewise, section 5.3 presents educational implications of the present study.

5.1 Summary

Summary of introduction and methodology of the present study is presented under the following headings:

5.1.1 Emergence of the Problem

Improvement of the quality of primary education is a matter of prime concern for all today. Various studies (Karmacharya, 1975; Shrestha, 1982; CHIRAG, 1996; and HLNEC, 1998) have proved that quality of primary education can be improved through teacher training. Primary Teacher Training (PTT) was first started in Nepal after the establishment of Basic Teacher Training Center (BTTC) in 1947 (CHIRAG, 1996). Since then, the country has experienced various types of PTT programmes.

At present 10-month PTT programme, according to the recommendation made by National Education Commission (NEC) formed in 1992, is being conducted. The total duration of the programme is divided into four phases, each of 2.5 months' duration (CHIRAG, 1996; Malla, et al. 1998). The main purpose of the 10-month PTT programme is to enhance the performance of the teachers through training which should eventually help to improve the performance of students (NEC, 1992). In 1998, the number of primary school teachers was 91878, of which 49195 (53.54%) was untrained (HMG/MOE, 2000). The government has targeted to train these untrained teachers by 2002 A.D. (Pradhan, 1997).
In order to meet the quantitative target of training all untrained teachers and to improve their teaching performance, the government has adopted three training strategies for which three agencies (NCED, BPEP and DEC) were made responsible to conduct the 10-month PTT programme. These three agencies through their respective training strategies had been conducting the first phase of the 10-month training when this study was initiated in 1996. The training strategy adopted by each of these agencies was found to be different from each other (Malla, et al. 1998). But no one has been able to justify yet which of these three training strategies is more effective in enhancing the teaching quality of teachers, and increasing achievement level of students. So, the question regarding which of these existing training strategies (NCED, BPEP, and/or DEC strategy) is effective in terms of improving the performance of teachers and students, is still unanswered.

Similarly, the PTT programmes conducted at different periods of time, were found to be different in terms of their duration, types (pre-service and in-service, continuous or phase-wise, specialized or non-specialized), management of trainers, minimum qualification of trainees for being eligible to participate in PTT programme, implementation procedure etc. Hence, several questions like, "How should the training be made easily accessible to all untrained teachers as early as possible ?", "What should be the total duration of PTT programme ?", "What type of training should be conducted?", "Which agency/agencies should be involved in conducting PTT programme ?", "How should the trainers be managed ?", "What should be the minimum qualification for trainees to participate in PTT programme ?", "How should they be selected for the programme ?", "What should be the implementation procedures ?" etc., have been raised. Infact, these questions related to training strategy are still unanswered. In this regard, some studies indicated that the existing strategies did not fulfil the target of the teachers to be trained and also could not accomplish the objective of PTT programme (CHIRAG, 1996; Pradhan, 1997; Malla, et al. 1998). These studies suggested that alternative strategy should be developed to meet the target of training the teachers. However, a training strategy which was suitable for the PTT programme in Nepal, was not
suggested by them. Similarly, no study has been conducted, so far, to justify an effective and appropriate training strategy for PTT programme in Nepal.

Findings of the previous studies, problems and the questions regarding the training strategy mentioned above urged to conduct the present study to find out the effect of NCED, BPEP and DEC strategies on performance of the teachers and students, and also to propose an appropriate training strategy for the improvement of PTT programme in Nepal.

5.1.2 Statement of the Problem

Based on the background and problem mentioned above, the present study is entitled "A Study of Effect of Various Teacher Training Strategies on Performance of Teachers and Students of Primary Schools of Nepal: A Proposed Training Strategy"

5.1.3 Objectives of the Study

The objectives of the present study are enumerated below:

1. To compare performance of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Nepali Language, Social Studies and Mathematics with respect to:
   - Seating Arrangement
   - Teacher's Planning and Presentation
   - Teacher's Instructional Qualities
   - Use of Instructional Materials
   - Use of Blackboard
   - Teaching Approaches
   - Students' Evaluation
   - Summing up of Lesson

2. To compare teaching behaviour of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Nepali Language, Social Studies and Mathematics in relation to the following behaviour ratios:
   - Teacher Talk (TT)
   - Indirect Teacher Talk (ITT)
3. To compare the achievement level of grade V students taught by the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Nepali Language, Social Studies and Mathematics.

4. To propose a strategy for improvement of Primary Teacher Training (PTT) programme in Nepal in terms of:
   - Accessibility of Training
   - Duration of PTT Programme
   - Types of PTT programme
   - Involvement of Private Sector
   - Involvement of Agencies
   - District Coverage
   - Distribution of Training Centres
   - Fixation of Quota
   - Qualification and Selection Criteria for Trainees
   - Management of Trainers
   - Training Manuals
   - Implementation Procedures

5.1.4 Hypotheses of the Study

The following hypotheses were formulated for the study:

1. There are no significant differences in the teaching performance of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Nepali Language with respect to:
   1.1 Seating Arrangement
   1.2 Teacher's Instructional Qualities
   1.3 Use of Blackboard
2. There are no significant differences in the teaching performance of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Social Studies with respect to:

2.1 Seating Arrangement
2.2 Teacher's Instructional Qualities
2.3 Use of Blackboard
2.4 Teaching Approaches
2.5 Evaluation of Students

3. There are no significant differences in the teaching performance of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Mathematics with respect to:

3.1 Seating Arrangement
3.2 Teacher's Instructional Qualities
3.3 Use of Blackboard
3.4 Teaching Approaches
3.5 Evaluation of Students

4. There are no significant differences in teaching behaviour of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Nepali Language in relation to the following teaching behaviour ratios:

4.1 Teacher Talk (TT)
4.2 Indirect Teacher Talk (ITT)
4.3 Direct Teacher Talk (DTT)
4.4 Pupil Talk (PT)
4.5 Pupil Initiative (PI)
4.6 Indirect to Direct (I/D)
4.7 Teacher Response (TR)
4.8 Teacher Question (TQ)

5. There are no significant differences in teaching behaviour of the teachers trained through various training strategies adopted by NCED,
BPEP and DEC in Social Studies in relation to the following teaching behaviour ratios:

5.1 Teacher Talk (TT)
5.2 Indirect Teacher Talk (ITT)
5.3 Direct Teacher Talk (DTT)
5.4 Pupil Talk (PT)
5.5 Pupil Initiative (PI)
5.6 Indirect to Direct (I/D)
5.7 Teacher Response (TR)
5.8 Teacher Question (TQ)

6. There are no significant differences in teaching behaviour of the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Mathematics in relation to the following teaching behaviour ratios:

6.1 Teacher Talk (TT)
6.2 Indirect Teacher Talk (ITT)
6.3 Direct Teacher Talk (DTT)
6.4 Pupil Talk (PT)
6.5 Pupil Initiative (PI)
6.6 Indirect to Direct (I/D)
6.7 Teacher Response (TR)
6.8 Teacher Question (TQ)

7. There are no significant differences in the achievement level of grade V students taught by the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Nepali Language.

8. There are no significant differences in the achievement level of grade V students taught by the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Social Studies.

9. There are no significant differences in the achievement level of grade V students taught by the teachers trained through various training strategies adopted by NCED, BPEP and DEC in Mathematics.
5.1.5 Delimitation

The following are the delimitations of this study:

1. It is a comparative study regarding the effect of NCED, BPEP and DEC training strategies on teaching performance and teaching behaviour of teachers and achievement level of grade V students. Though NCED was conducting all phases (four phases) of the PTT programme, BPEP and DEC were conducting only the first phase of such training programme when this study was initiated. Hence, this study was confined to the study of the first phase of PTT programme for the purpose of comparison.

2. Since the training package of the first phase consists of only three teaching subjects, i.e. Nepali Language, Social Studies and Mathematics of primary schools, the trained teachers of the first phase were supposed to be teaching the said subjects. Hence, achievement tests for the students of grade V were administered only in these three subjects for the purpose of this study.

3. The effect of teacher training should be reflected in various aspects i.e. enrolment, retention, promotion, reduction of repetition rate, teaching performance, teaching behaviour of the teachers and achievement level of the students. However, this study focused only on teaching performance, teaching behaviour of the trained teachers, and the achievement level of grade V students taught by them.

4. In order to collect the quantitative data required for the accomplishment of objective no. 2 of this study, Flanders' Interaction Analysis Category System (FIACS) was used. Though Flanders developed various behavioural ratios to measure the teaching behaviour of the teachers, only 8 behavioural ratios were calculated in this study. It is because comparison of the teaching behaviour of teachers trained through NCED, BPEP and DEC training strategies, was only one of the several other objectives of the present study. These
ratios were; (i) Teacher Talk, (ii) Indirect Teacher Talk, (iii) Direct Teacher Talk, (iv) Pupil Talk, (v) Indirect to Direct Ratio, (vi) Pupil Initiative Ratio, (vii) Teacher Response Ratio, (viii) Teacher Question Ratio.

5. In Nepali Language Achievement Test, items were not developed from listening and speaking aspects. It is because test on these aspects, particularly speaking, had to be administered to the students individually which was not possible in the present study. Hence, items were drawn from reading comprehension and writing aspects only.

6. Though teacher training programme covers many aspects, only 12 aspects of training, which are conceived as training strategy in the present study, are dealt under this study. These components were (i) Accessibility of Training (ii) Duration of Training (iii) Types of Training (iv) Involvement of Private Sector (v) Involvement of Agencies (vi) District coverage (vii) Distribution of Training Centers (viii) Fixation of Quota (ix) Qualification and Selection of Trainees (x) Management of Trainers (xi) Training Manuals (xii) Implementation Procedures.

5.1.6 Significance of the Study

Although Primary Teacher Training (PTT) was started in Nepal 53 years ago, 53.54 percent of the total primary school teachers were still untrained by the year 1998 (HMG/MOE, 2000). In order to train these teachers, 10-month PTT programme was being conducted through three different training strategies (NCED, BPEP and DEC strategies) when this study was initiated in 1996. The main objective of this programme was to enhance the performance of teachers and students. A huge amount of resources has been expended in the PTT programme conducted through these strategies, but with no empirical evidence as to which of these training strategies is more effective in improving the performance of both teachers and students. In this context, this study tried to assess the effect of the training strategies on the performance of teachers and students. Hence, it would help anyone to get a comparative picture regarding the effect of these training strategies on the
performance of both teachers and students. In addition, it is more useful to the NCED, BPEP and DEC personnel as further improvement in their respective programmes could be made on the basis of the findings of the present study.

The present study is significant in the sense that it proposes a training strategy for PTT programme in Nepal. The proposed strategy can be used by the concerned agencies or based on this training strategy, the planners and programmers can develop a detailed, specific and comprehensive training strategy for PTT programme in Nepal which would help accomplish the objective of PTT programme and to meet the target of training all untrained teachers. Moreover, the training strategy proposed in this study can be one of the important areas for further research.

5.1.7 Method and Procedure

The present study is partly Ex-post Facto and partly Survey Research type. The study attempted to compare teaching performance and teaching behaviour of NCED, BPEP and DEC teachers. This was done on the basis of the data collected from the classroom observations of these three groups of teachers. Similarly, it also tried to compare achievement level of NCED, BPEP and DEC students of grade V. Achievement tests were administered to the students for accomplishing this objective of the study. Lastly, the study tried to propose a training strategy for the improvement of primary teacher training programme of Nepal. The training strategy was proposed on the basis of the opinions and reactions of various responding groups who were involved in PTT programme in Nepal.

5.1.7.1 Sample of the Study

First, all the districts (75) of the country were grouped into three strata in terms of three training strategies, i.e., (i) NCED strategy, (ii) BPEP strategy and (iii) DEC strategy. NCED, BPEP and DEC covered 25, 40 and 10 districts respectively in conducting the first phase of 10-month PTT programme. Second, each group of districts was further classified into two groups in terms of two ecological belts i.e., (i) mountain and hills and (ii) Terai belt. So, all the
districts were classified into six strata (i.e., 3 training strategies x 2 ecological belts = 6 strata).

NCED was conducting PTT programme through its 9 PTTCs. Though there were 9 PTTCs under NCED, only 3 PTTCs were located in NCED districts. The remaining 6 PTTCs were located in BPEP or DEC districts. However, these 6 PTTCs which were located in BPEP or DEC districts, did not give training to the teachers of those BPEP and DEC districts. Out of 3 NCED districts where the PTTCs were available, 2 were in Mountain and Hills belt and 1 was in Terai belt. Hence, that NCED district in Terai belt was included in the study. Out of 2 NCED districts from Mountain and Hills belt, 1 was randomly selected. In this way, 2 districts (1 from Mountain and Hills belt, and 1 from Terai belt) were selected from those NCED districts where PTTCs were available. Then 2 districts each from BPEP and DEC, one from each ecological belt, which were closer to the sample NCED districts, were purposively selected. Hence, altogether, 6 districts were selected for this study using multi-stage stratified random sampling and purposive sampling techniques.

In each sample district, all the schools with grade V and with the teachers who received the first phase of PTT programme were classified into two strata; schools from urban area and schools from rural area. 3 schools from urban area and 6 schools from rural area were randomly selected, thus making a total of 9 schools from each sample district. Hence, 18 schools from each NCED, BPEP and DEC districts were selected using stratified random sampling technique for this study and thus, making a total of 54 sample schools from 6 sample districts.

All the respondents except CLP were selected from the sample districts and sample schools. The respondents contacted for this study were of six groups (i) CLP (ii) DLP (iii) TP (iv) Primary School Teachers (v) Headmasters (vi) Grade V Students. The number of each of these responding groups and students included in this study, were 15, 26, 20, 54, 54 and 985 respectively.
Purposive Sampling, Incidental Sampling and Random Sampling techniques were followed while selecting the various groups of respondents mentioned above.

5.1.7.2 Tools Used

Mainly three types of tools were used to collect the data required for this study. These tools were; (i) Classroom Observation Forms (ii) Achievement Tests (iii) Interview Schedule.

(i) Classroom Observation Forms

Two types of Classroom Observation Forms; Form I and Form II, were used to collect the data regarding teaching performance and teaching behaviour of the teachers. Form I was developed based on two separate Classroom Observation Forms used in similar studies conducted in Nepal previously. This Form was finalized on the basis of the suggestions given by the experts, and on the basis of the results of try-out. The Form consisted of 24 items under eight teaching skills which were (i) Seating Arrangement (ii) Teacher's Planning and Presentation (iii) Teacher's Instructional Qualities (iv) Use of Instructional Materials (v) Use of Blackboard (vi) Teaching Approaches (vii) Students' Evaluation and (viii) Summing up of Lesson. The Form consisted of three types of items, (i) Checklist (ii) Dichotomous (Bipolar) and (iii) Rating-scale. Intra-Inter Observation reliability was calculated. The reliability of this Form was found to be 0.83.

FIACS Form (called Classroom Observation Form II in this study), developed and finalized by Flanders (1960), was used to collect the data regarding various teaching behaviour of the teachers.

(ii) Achievement Tests

Achievement tests in Nepali Language, Social Studies and Mathematics were locally prepared. Prior to trying out the tests to a large number of students, pilot test was given to 5 students in order to ensure whether the instruction of each type of test items was clear or not and to
remove ambiguity in the test items. All these tests were tried-out to 100 students. Difficulty level and discrimination index of each item of the tests were calculated. The final form of the tests included the items with wide range of difficulty. Similarly, the tests consisted only those items which possessed discrimination index of 0.3 or above. But there were 2 items in Social Studies achievement test with discrimination index below 0.3. These items were included for the purpose of content validity. Reliability of each test was also calculated using KR 20.

The final form of Nepali language achievement test consisted of 60 items with 60 full marks (Each sub-item was also considered as item). The test included various types of items, i.e. Multiple Choice, Completion, Matching, Fill-in-the gap, True and False and Short Answer items. The reliability of the test was found to be 0.91.

The final form of Social Studies achievement test with 50 full marks consisted of 50 items. The test included various types of items such as Multiple Choice, True and False, Matching, Completion, Sentence/Word writing and location of places in the map. The reliability of the test was found to be 0.88.

The final form of Mathematics achievement test with 60 full marks consisted of 60 items. Multiple Choice, Matching, Completion type of items were included in this test. Reliability of this test was calculated to be 0.90.

All these tests were validated through experts' judgement method.

(iii) Interview Schedule

In order to gather opinions and reactions regarding the training strategy for PTT programme of Nepal, Interview Schedule was constructed locally. This Interview Schedule was finalized on the basis of the suggestions given by the experts and results of try-out. The final form of the schedule consisted of a total of 34 items. The schedule consisted of both structured and unstructured items.
Though there were five different groups of respondents, the same Interview Schedule was used for all of them. However, all items of the Schedule were not used for all the responding groups. There were altogether 17 items which were used for all the responding groups. The remaining items were used only for a concerned responding group/ groups on the basis of the nature of their jobs. This is because some items in the Schedule were not relevant to the nature of their jobs and hence, they would be unable to provide the opinions as sought by these items. Interview Schedule for CLP, DLP, TP, Headmasters and Teachers consisted of 30, 30, 32, 27 and 22 items respectively.

5.1.7.3 Data Collection Procedure

In order to collect the data on classroom observation, the researcher himself visited all the sample schools and made classroom observations of all the sample teachers. Similarly, the researcher interviewed all the respondents individually to collect the data on opinions and reactions regarding the training strategy for PTT programme in Nepal. The data on achievement test was collected with the help of one Research Assistant (RA) in each sample district. The main reason for recruiting the RA in each sample district for administering the achievement tests was that, the pre-test had to be administered in all the sample schools at the same time i.e. in the beginning of the academic session and so had to be the post-test, at the end of the academic session of the schools. It was not possible for the researcher to reach all the sample schools himself.

5.1.7.4 Data Analysis Procedure

The data collected through Classroom Observation Form I helped the researcher to measure the teaching performance of NCED, BPEP and DEC teachers. This Form consisted of three types of items, Checklist, Bipolar and Rating Scales. The data collected through Checklist and Bipolar type of items of this Schedule, was analysed using percentage. Means, SD, ANOVA and t-ratios were used to analyse the data collected through Rating Scale type of items of this Form.
Classroom Observation Form II i.e. FLA.CS was used to collect the data regarding the teaching behaviour of NCED, BPEP and DEC teachers. Means, SD and t-ratios were used to analyse the data.

The data collected through achievement tests, which served in assessing the students' performance, were analysed using Means, SD, ANOVA and t-ratios.

The data collected through Interview Schedule helped the researcher to propose an appropriate training strategy for PTT programme in Nepal. The data was analysed using percentage.

5.2 Conclusions

The conclusions regarding the teaching performance and behaviour of the teachers, performance of the students, and training strategy, which are based on the results of analysis and interpretation of data, are listed below under their respective headings.

5.2.1 Teaching Performance

The conclusions regarding teaching performance of NCED, BPEP and DEC teachers in three different subjects are listed below under their respective headings.

5.2.1.1 Nepali Language

- Seating arrangement of the students was managed in row-wise manner in almost all the observed NCED, BPEP and DEC classes except in each of two NCED and BPEP classes in which seating arrangement was managed in U-Shape.

The quantitative data regarding the comfortable and suitable seating position of the students in the classrooms indicated that the differences between the mean scores obtained by each of two groups of teachers were found to be insignificant at .05 level. It reveals that one group of teachers did not differ from the others in terms of managing comfortable and suitable seating arrangement.
None of the teachers prepared the written lesson plan for teaching. However, in all NCED classes and in majority of the BPEP classes teacher's presentation was based on previous lesson. Likewise in almost all the classes, NCED and BPEP teachers initiated the lessons either by asking questions or by discussing the relevant topic, so that, majority of the students were found to be motivated while the lesson was being initiated. But, in majority of DEC classes, the teacher started the lesson by giving lecture or by reading the textbooks and hence, majority of the students were not found to be motivated during the initiation of the lessons. So, it can be concluded that presentation of NCED teachers, followed by BPEP teachers, was found to be better than that of the DEC teachers.

The mean scores on instructional qualities obtained by NCED and BPEP teachers were significantly greater than that of DEC teachers at .01 level. But there was no significant difference between the mean scores obtained by NCED and BPEP teachers at .05 level. Hence, the instructional qualities of NCED and BPEP teachers were found to be better than those of DEC teachers. But NCED and BPEP teachers were nearly the same in this regard.

Instructional materials were used only in 6 out of 12 NCED classes and 3 out of 12 BPEP classes. There were no such classes under DEC. NCED teachers used teacher-made type of instructional materials whereas BPEP teachers used ready-made type of instructional materials in majority of the classes. The instructional materials were found to be 'very good' in terms of their appropriateness and usefulness in majority of NCED classes. But this was not true in case of BPEP classes.

The highest mean score on use of blackboard was obtained by NCED teachers, followed by BPEP teachers, then DEC teachers. The mean scores obtained by NCED and BPEP teachers were significantly greater than that of DEC teachers at .01 level. But the difference between the means obtained by NCED and BPEP was insignificant even at .05 level.

NCED and BPEP teachers scored higher mean scores on teaching approaches than DEC teachers which were statistically significant at .05 level. But the
difference between the mean scores obtained by NCED and BPEP teachers was not large enough to be significant even at .05 level. It indicates that NCED and BPEP teachers used teaching approaches more effectively than the DEC teachers. But the extent of effectiveness of the teaching approaches used by NCED and BPEP teachers, was nearly the same.

• The quantitative data regarding the appropriateness of evaluation reveal that the mean scores obtained by NCED and BPEP teachers were significantly greater than that of the DEC teachers at .01 level. It reveals that NCED and BPEP teachers were better than DEC teachers in terms of using evaluation techniques in the classrooms. But the performance of NCED and BPEP teachers was nearly the same as the difference between the mean scores obtained by NCED and BPEP teachers was found to be insignificant even at .05 level.

• In all NCED classes except one, the teachers summarized the lesson at the end of the classes. Such BPEP classes were found only 75 percent of total. But on the contrary, lessons were summarized in only 25% of total observed DEC classes. So, it can be concluded that the teaching performance of NCED teachers in terms of summing up of lesson was better than BPEP and DEC teachers. Similarly, BPEP teachers excelled DEC teachers in this regard.

5.2.1.2 Social Studies

• Seating arrangement was managed in traditional pattern i.e. row type in all the observed classes. Though there was adequate space for managing the seating arrangement in other ways (i.e. U-shape, V-shape etc. according to the nature of the lessons) in some (4 classes) classes each under NCED, BPEP and DEC, the teachers did not change the seating arrangement.

With respect to the comfortable and suitable seating position of the students in the classrooms, all the groups of teachers were found to be the same, as the differences between the mean scores obtained by each two groups of the teachers were insignificant even at .05 level.
None of NCED, BPEP and DEC teachers except one NCED teacher in one class prepared written lesson plan for teaching. However, it was found that the teachers' presentation was based on previous lesson in all BPEP classes and in majority of NCED classes. Such DEC classes were only 25 percent. Likewise, in all NCED and BPEP classes except in one BPEP class, the teachers started the lesson either by asking the questions or by discussing on the related topics. Hence, majority of the students were found to have been motivated while initiating the lessons. But this did not happen in 50 percent of the total DEC classes as the teachers started the lessons by giving lecture. So, it can be concluded that NCED, BPEP and DEC teachers were found to be the same in terms of planning the lesson, but the former two groups were comparatively better than the latter one in terms of presentation of the lesson.

The mean scores on instructional qualities obtained by NCED and BPEP teachers were significantly higher than that of DEC teachers at .01 level. But the difference between the mean scores gained by NCED and BPEP teachers was not statistically significant at .05 level. It indicates that the instructional qualities of NCED and BPEP teachers could be considered more effective than those of DEC teachers. However, the instructional qualities of NCED and BPEP teachers were nearly the same.

Teacher-made type of instructional materials were found to have been used in each of 25 percent of the total NCED and BPEP classes observed. Similarly, the teachers used ready-made type of instructional materials in 8.33 percent each of NCED and BPEP classes. These materials were rated as 'good' and 'very good' in terms of its appropriateness in 25 and 8.33 percent of the both NCED and BPEP classes respectively. But none of DEC teachers used the instructional materials. Regarding usefulness of the materials, they were rated as 'good' in 16.67 and 'very good' in the same percent of the total NCED classes. Similarly, the materials were rated as 'good' in 25.0 percent and 'very good' in 8.33 percent of the total BPEP classes. It can be concluded that NCED and BPEP teachers were comparatively better than DEC teachers in terms of using instructional materials.
• The mean scores obtained by NCED teachers in using blackboard was significantly greater than that of DEC teachers at .01 level. Similarly, BPEP teachers secured higher mean score than DEC teachers which was statistically significant at .05 level. But no significant difference was recorded between the mean scores obtained by NCED and BPEP teachers even at .05 level. So, it can be concluded that the skills of NCED and BPEP teachers on use of blackboard in the classroom were better than that of the DEC teachers. But NCED and BPEP teachers were found to be the same in this regard.

• BPEP, NCED and DEC teachers came first, second and third in obtaining the mean scores in using the teaching approaches in the classroom. However, no significant difference was observed between the mean scores of NCED and BPEP teachers at .05 level. But the mean scores of NCED teachers was significantly greater than that of DEC teachers at .05 level. Similarly, BPEP teachers obtained higher mean score than DEC teachers which was statistically significant at .01 level. Hence, the performance of NCED and BPEP teachers in using various teaching techniques was better than that of DEC teachers. But NCED and BPEP teacher could be considered the same in this regard.

• The mean scores obtained by the NCED and BPEP teachers on appropriateness of evaluation were found to be significantly greater than that of the DEC teachers at .01 level. But the difference between the mean scores of NCED and BPEP teachers was not too large to be significant even at .05 level. So, it can be concluded that the performance of NCED and BPEP teachers in terms of appropriateness of evaluation was better than that of DEC teachers. But the extent of effectiveness of the appropriate way of evaluation used by NCED and BPEP teachers was the same.

• Teachers were found to have summarized the lessons at the end of the classes in all BPEP and in 75 percent of the total NCED classes. But such classes were found to be only 16.67 percent out of the total DEC classes. Hence, BPEP teachers were better than NCED and DEC teachers in terms of the fact that they summarized the lesson. While comparing NCED and DEC teachers, the former group of teachers was better than the latter.
5.2.1.3 Mathematics

• Seating arrangement was managed in row type in all the NCED, BPEP and DEC classes. Though there was adequate space in some of the classes for managing seating arrangement in other ways, according to the nature of the lessons, the teachers did not change it.

The difference between the mean scores obtained by each two groups of the teachers on comfortable and suitable seating position of the students was not found to be significant even at .05 level. Hence, it can be concluded that these three groups of teachers were not different from each other in using the skills on making seating arrangement in the classroom.

• Almost all the teachers did not prepare written lesson plans except in two NCED classes in which the teachers prepared simple notes for teaching. However, teacher's presentation was based on previous lessons in majority of NCED and BPEP classes. But such DEC classes were found to be less than 50 percent. Similarly, in all NCED and BPEP classes, the teachers started the lessons either by asking the questions or by discussing the related topics, and hence, majority of the students were motivated while the lesson was being initiated in all of these classes except in one NCED class. But DEC teachers started the lessons by lecturing in 41.67 percent of the classes. So, majority of the students were not motivated in these classes. It can be concluded that all the groups of teachers were not different from each other in terms of planning. However, NCED and BPEP teachers were better than DEC teachers in terms of presentation of the lessons.

• The highest mean score (16.67%) on instructional qualities was obtained by BPEP teachers, followed by NCED teachers (16.42%) and the lowest (13.42%) by DEC teachers. The mean scores obtained by BPEP and NCED teachers were significantly higher than that of DEC teachers at .01 level. However, the difference between the means obtained by NCED and BPEP teachers was too small to be significant at 0.05 level. It reveals that the instructional qualities of NCED and BPEP teachers were more effective than
those of DEC teachers. But the instructional qualities of both NCED and BPEP teachers could be considered, more or less, the same.

- NCED teachers used teacher-made, ready-made and locally available materials in 2, 1 and 1 classes respectively. But BPEP and DEC teachers used teacher-made instructional materials in one class and ready-made instructional materials in another class.

Regarding the appropriateness of the materials, they were rated as 'very good' in all BPEP and in majority of NCED classes. But the materials were rated as 'good' in one and 'very good' in another DEC class. In terms of usefulness of the materials, they were rated as 'very good' in all NCED and BPEP classes. But the materials were rated only as 'good' in all DEC classes. It reveals that NCED classes were better than BPEP and DEC classes in terms of use of instructional materials.

- The mean score obtained by BPEP teachers in using blackboard adequately and appropriately was significantly greater than that of the DEC teachers at .05 level. But, the difference between mean scores obtained by NCED and BPEP teachers was not significant at .05 level. The same was true in case of difference between mean scores secured by NCED and DEC teachers. Hence, the performance of BPEP teachers in using the blackboard was better than that of the DEC teachers. But the performance of both NCED and BPEP teachers in using blackboard could be considered nearly the same. Similarly, the performance of NCED and DEC teachers could also be considered the same in this regard.

- NCED, BPEP and DEC teachers stood first, second and third in securing the mean scores on using various teaching approaches effectively. Statistically, the mean scores obtained by NCED and BPEP teachers were found to be greater than that of the DEC teachers at .01 level. But there was no significant difference between the mean scores obtained by NCED and BPEP teachers at .05 level. It implies that the extent of effectiveness of teaching approaches used by NCED and BPEP teachers was better than the teaching approaches...
used by DEC teachers. But the performance of NCED and BPEP teachers was nearly the same in this regard.

- The mean scores secured by NCED and BPEP teachers on evaluation techniques used were significantly higher than that of DEC teachers at .01 level. But the difference between the mean scores obtained by NCED and BPEP teachers was too small to be significant even at .05 level. Hence, the evaluation techniques of NCED and BPEP teachers were better than those of DEC teachers.

- NCED and BPEP teachers summarized the lessons at the end of the class in most of their classes. But such DEC classes were found to be only 50 percent. So, the performance of NCED and BPEP teachers in terms of summing up of the lessons could be considered better than that of the DEC teachers.

5.2.2 Teaching Behaviour

The conclusions based on analysis and interpretation of data regarding teaching behaviour of NCED, BPEP and DEC teachers in Nepali language, Social Studies and Mathematics are presented below:

5.2.2.1 Nepali Language

- The means of TT in NCED, BPEP and DEC classes were found to be 58.10, 65.35 and 78.57 percent respectively. However, the differences between the mean percentages of TT of each two groups of classes were not statistically significant at 0.05 level. It reveals that the teaching behaviour of NCED, BPEP and DEC teachers with respect to teacher talk was not significantly different from each other.

- The means of ITT in NCED, BPEP and DEC classes were 16.73, 20.10 and 12.02 percent respectively. But the differences between the mean percentages of each two groups of classes were not significant at 0.05 level. It indicates that there were no differences in teaching behaviour of these three groups of teachers in terms of indirect leadership style of teaching which generates democratic climate in the class.
• The highest mean percentage (66.55%) of DTT was observed in DEC classes followed by BPEP classes (45.25%) and lowest (41.37%) in NCED classes. The differences between the mean percentages of DTT in each of these two groups of classes were not significant at 0.05 level. It reveals that the teaching behaviour of a group of teachers did not differ from that of the other in terms of direct leadership style of teaching.

• The mean percentages of PT in NCED, BPEP and DEC classes were found to be 40.48, 32.75 and 18.16 respectively. However, the differences between the mean percentages of each two groups of classes were found to be insignificant at .05 level.

• The mean percentages of PIR in NCED, BPEP and DEC classes were 7.49, 8.62 and 6.17 respectively. The differences between the mean percentages of each two groups of classes were found to be too small and hence, statistically insignificant at .05 level. It indicates that the teaching behaviour of NCED, BPEP and DEC teachers in terms of PIR was, more or less, the same.

• The mean percentage of I/D ratio in BPEP classes exceeded the means of such ratios in NCED and DEC classes. Similarly, mean of I/D ratio in NCED classes was found to be higher than that in DEC classes. But the differences between each two mean percentages were statistically insignificant at .05 level. It implies that the classroom interaction of a group of teachers did not statistically differ from that of the other groups in terms of indirect leadership style of teaching which creates democratic climate in classes.

• Though the differences between the means of TRR in the classes of each two groups of teachers ranged from 7.07 to 20.89 percent, these differences were found to be insignificant at .05 level. Hence, the teaching behaviour of three groups of the teachers was found to be nearly the same in terms of teachers' tendency to react to the ideas and feelings of pupils.

• NCED teachers obtained the highest mean percent (23.85%) on TQR followed by BPEP teachers (21.58%) and then, DEC teachers who obtained the lowest (12.81%) mean percent. However, the differences between the mean
percentages of TQR of each two groups of teachers were statistically insignificant at .05 level. Hence, the teaching behaviour of three groups of teachers was, more or less, the same with respect to teachers’ tendency to use questions.

5.2.2.2 Social Studies

- The highest mean percent (82.73%) of TT was observed in DEC classes, followed by BPEP classes (72.97%), and the lowest in NCED classes (67.30%). The differences between the mean percentages of TT in each two groups of classes were statistically insignificant at 0.05 level. Hence, the teaching behaviour of NCED, BPEP and DEC teachers in relation to TT was nearly the same.

- The differences between the means of ITT in NCED and BPEP classes, NCED and DEC classes, and BPEP and DEC classes were 1.10, 5.52 and 6.62 percent respectively, which were not significant at .05 level. Hence, the classroom interaction of all the groups of teachers in terms of indirect teacher talk was, more or less, the same.

- The highest mean percent (71.43%) of DTT was observed in DEC classes, followed by BPEP classes (55.04%) and the lowest (50.48%) in NCED classes. Though the differences between the means of DTT in the classes of each two groups of teachers ranged from 4.56 to 20.95 percent, these differences were found to be statistically insignificant. It implies that the teaching behaviour of a group of teachers did not differ from that of the other groups in terms of direct leadership style of teaching which either leads towards authoritarian or towards permissive climate in the class.

- The means of PT in NCED, BPEP and DEC classes were 31.28, 25.17 and 14.03 percent respectively. However, the differences between the mean percentages of PT in each two groups of classes were insignificant at .05 level. Hence, the teaching behaviour of all these groups of teachers in terms of pupil talk in the classrooms was almost the same.
The differences between means of PIR of NCED and BPEP, NCED and DEC, and BPEP and DEC classes were found to be 5.22, 8.51 and 3.29 percent respectively, which were statistically insignificant at .05 level. Hence, the teaching behaviour of all groups of teachers was nearly the same while taking into account the activities initiated by the pupils themselves in the classroom.

The differences between the mean percentages of I/D ratios of each two groups of classes were not large enough to be statistically significant at .05 level. Hence, the teaching behaviour of all the groups of teachers could be considered nearly the same in terms of indirect leadership style of teaching which creates democratic climate in the classes.

The means of TRR in NCED, BPEP and DEC classes were found to have ranged from 42.19 to 66.38 percent. Though the differences between the means of TRR in the classes of each two groups of teachers ranged from 11.43 to 24.19 percent, they were not statistically significant at .05 level. Hence, the teaching behaviour of these three groups of teachers in terms of teachers' response to pupils in the classrooms could be considered the same.

The highest difference of mean percentages of TQR was observed between BPEP and DEC classes; and the lowest between NCED and BPEP classes. But these differences were not statistically significant at .05 level. It reveals that the questioning tendencies of all the groups of the teachers during classroom teaching were nearly the same.

5.2.2.3 Mathematics

The highest mean percent (74.13%) of TT was observed in DEC classes, followed by BPEP classes (69.61%), and the lowest (63.61%) in NCED classes. The differences between the mean percentages of TT in each two groups of classes were not found to be significant at .05 level. It reveals that the teaching behaviour of NCED, BPEP and DEC teachers in terms of TT was nearly the same.

The differences between the mean percentages of ITT of each two groups of teachers ranged from 4.53 to 11.02, which were not statistically significant at
.05 level. It reveals that classroom interaction of a group of teachers did not differ significantly from that of the other in terms of indirect leadership style of teaching in the classroom.

- Though the differences between the means of DTT obtained by NCED and BPEP teachers, NCED and DEC teachers, and BPEP and DEC teachers were 10.54, 21.55 and 11.01 percent respectively, these differences were statistically insignificant at .05 level. Hence, all the groups of teachers were almost the same in terms of direct leadership style of teaching in the classrooms.

- The differences between the means of PT of NCED and BPEP classes, NCED and DEC classes, and BPEP and DEC classes were 6.31, 12.63 and 6.32 percent respectively. However, these differences were found to be statistically insignificant. It reveals that the teaching behaviour of all the groups of teachers with respect to pupil talk in the classrooms was almost the same.

- BPEP, NCED and DEC teachers stood in first, second and third rank in obtaining the mean percent in PIR respectively. But the differences between the mean percentages of each two groups were too small to be significant at .05 level. Hence, all the groups of teachers were nearly the same in terms of the activities related to pupil talk initiation in the classrooms.

- Though the differences between mean percentages of I/D ratios of each two groups of teachers were recorded more than 17 percent, these differences were not significant at .05 level. Hence, the teaching behaviour of a group of teachers with respect to I/D ratio was not significantly different from that of the other groups.

- The mean of TRR in NCED classes was found to be higher by 5.35 percent than that in BPEP classes and by 27.51 percent than that in DEC classes. Similarly, the mean of TRR in BPEP classes was found to be greater than that in DEC classes by 22.16 percent. However, the statistical results reveal that the differences between the mean percentages of TRR of each two groups of teachers were only due to chance factor. It reveals that the teaching behaviour of all the groups of teachers in terms of TRR was nearly the same.
• The differences between the means of TQR in NCED and BPEP classes; NCED and DEC classes; and BPEP and DEC classes were 7.85, 14.58 and 6.73 percent respectively. But these differences were statistically insignificant at .05 level. Hence, the classroom interaction of one group of teachers in terms of teachers' tendency to use the questions in the classroom did not differ from that of the other groups.

5.2.3 Achievement Level of Grade V Students

• NCED students obtained higher mean gain score than the DEC students in Nepali Language, which was statistically significant at .01 level. Similarly, BPEP students excelled DEC students in obtaining mean gain score, which was significant at .05 level. But the difference between the mean gain scores obtained by NCED and BPEP students was found to be very minimal i.e. 0.85, which was not significant even at .05 level. It reveals that the NCED and BPEP students performed better than the DEC students in Nepali Language. But the performance of NCED and BPEP students was nearly the same.

• The mean gain scores of NCED and BPEP students in Social Studies were significantly higher than that of the DEC students at .01 level. But the mean gain score of NCED students did not differ from that of the BPEP students. It implies that the achievement level of NCED and BPEP students in Social Studies were better than that of the DEC students. But no difference was observed between NCED and BPEP students in this regard.

• The mean gain scores of NCED and BPEP students were significantly greater than that of the DEC students in Mathematics at .01 level. But the difference between the mean gain scores obtained by NCED and BPEP students was found to be statistically insignificant even at .05 level. Hence, the performance of NCED and BPEP students in Mathematics was better than that of the DEC students. But the performance of NCED and BPEP students in Mathematics was found to be nearly the same.
5.2.4 Opinions Regarding Strategy for PTT Programme

Conclusions regarding the strategy for PTT programme, which are based on the analysis and interpretation of opinions of various responding groups, are presented below:

5.2.4.1 Accessibility of the Training

- The highest number of respondents, on the whole, viewed that training centres should be increased in order to make training easily accessible to all the untrained teachers, as early as possible. Besides, education campuses should also be mobilized for conducting the PTT programme.

5.2.4.2 Duration of PTT Programme

- About the duration of PTT programme, four types of opinions were presented. They were: the duration of PTT programme should be of; (i) 5 months (ii) 10 months (iii) 15 months (vi) 20 months. Majority of the respondents (82.25%), on the whole, viewed that the duration of PTT programme should be of 10 months. The number of respondents who expressed this view was found to be higher in each responding group.

5.2.4.3 Types of Training

- All the respondents opined that there should be a provision for pre-service PTT programme. This pre-service programme, as viewed by them, should be conducted continuously. The main reasons for making a provision of pre-service PTT programme were; (i) to recruit only trained teachers in the schools as presented by about 90 percent of the respondents, (ii) to make the training accessible at all times to the interested candidates. (iii) to increase the number of trained teachers as early as possible.

- About 50 percent of the total respondents expressed the view that the total duration of in-service PTT programme should be conducted continuously. But 15 percent of the respondents were in favour of conducting it phasewise. The remaining respondents opined that the training programme needs to be conducted both continuously and phasewise.
• The main reasons for conducting in-service PTT programme continuously were; (i) to complete the training within a time period of one year so that the teachers do not require several years to complete a training course, (ii) to conduct the final examination only once (i.e. at the end of the training) which decreases the workload of the examination, (iii) not to hamper the classes of the schools of trainees several time during the course of training (iv) to manage substitute teachers (v) to remove the possibility of forgetting the teaching skills that the trainees have learned in the previous phases and (vi) to select the trainees for PTT programme only once.

• More than three-fourth of the total respondents viewed that trainees should get the training in all the primary school subjects. Hence, the training programme should be of non-specialized type. The main reasons for the necessity of conducting such type of training are; (i) the primary school teacher needs to teach all the subjects, (ii) All the primary school subjects can be taught after training if Intermediate Level graduates are taken. (iii) Grade and multi-grade teaching need to be conducted (iv) the problem of transferring of the teachers is eliminated by making them able to teach all subjects. But less than one-fourth of the respondents stated that the PTT programme should be of specialized type.

5.2.4.4 Involvement of Private Sector

• More than three-fourth of the total respondents viewed that PTT programme should not be conducted in private sector. Of five responding groups, the highest percentage of respondents who agreed to this view was found amongst teachers (92.59%) and the lowest percentage (57.69%) amongst DLP group. The main reason for not conducting PTT programme in private sector were; (i) Training will be expensive for the trainees, (ii) Quality of training will deteriorate and (iii) Government (including education campuses) should be made responsible for conducting the training. But only 21.30 percent of the total respondents were in favour of conducting the training in private sector.
5.2.4.5 Involvement of Agencies

- Majority of the respondents (87.83%), on the whole, viewed that education campuses should be involved in conducting pre-service PTT programme. The number of such respondents who expressed this view was found to have ranged from 80.77 percent in DLP group to 95.0 percent in TP group. The number of respondents who preferred NCED, Higher Secondary Schools and NGOs to be involved in this task was found to be very less.

- More than 53 percent of the total respondents opined that NCED, BPEP and education campuses should be involved in conducting in-service PTT programme to train all the untrained teachers as soon as possible. Similarly, about one-third of the respondents suggested that DEC should also be made responsible in this task.

5.2.4.6 District Coverage

- One or more than one training agency, as viewed by 65.68 percent of the total respondents, should be used for conducting PTT programme in each district in order to train a huge number of working untrained teachers as early as possible and to produce potential teachers required for the future. The number of such respondents who presented this view was found to be higher in each responding group.

5.2.4.7 Distribution of Training Centres

- One or more than one training centre, as stated by 71.30 percent of the total respondents, should be established in each zone to conduct the pre-service PTT programme. The number of respondents who suggested that the training centre should be established in each district or in each region was found to be very minimal.

- In order to train all the working untrained teachers as early as possible, one or more than one training centre, as viewed by 71.01 percent of the total respondents, should be established in each district as per the need of the
district, to conduct in-service PTT programme. The number of respondents who were in favour of establishing the training centre at a zonal level was found to be very minimal.

5.2.4.8 Fixation of Quota

- Ninety-three percent of the total respondents viewed that quota for trainees for PTT programme should be fixed through bottom-up approach. The number of such respondents who presented this view was found higher in each responding group. The remaining 7 percent of the respondents were in favour of top-down approach for fixing the quota for trainees.

5.2.4.9 Qualification and Selection Criteria for Trainees

- Minimum qualification of the trainees to be eligible to participate in PTT programme, as stated by majority of the respondents, should be Intermediate level. The number of respondents who presented this view was higher than the number of respondents who viewed other levels of qualification as an eligibility criterion in all the responding groups, except the teachers. The main reasons for Intermediate level qualification as a necessary criterion were: to make the trainees able to teach particularly Science, Mathematics and English along with other subjects in upper primary grades after the training, to enhance the quality of education through effective teaching, to maintain the uniformity of the standard of minimum qualification required for being a primary school teacher as in the other SAARC countries.

- About forty-four percent of the total respondents viewed that SLC should be the minimum qualification for the trainees to participate in PTT programme. The number of various responding groups who stated this view has ranged from 25 percent in TP group to 50 percent in teacher group.

- More than three-fourth (78.11%) of the total respondents stated that teaching experience should be the criteria for selecting trainees for in service PTT programme. Similarly, 45.56 percent of the total respondents recognized age-bar as a necessary criterion. About one-fourth of the respondents viewed that
priority should be given to the teachers working in the remote areas while selecting the trainees for the PTT programme.

- Trainees for pre-service PTT programme, as stated by about four-fifth of the total respondents, should be selected on the basis of percentage of scores obtained in minimum level of qualification for training. About three-fourth of the respondents opined that written test should be the criterion for the selection of the trainees. Likewise, about 64 percent respondents pointed out that oral test should be held to select the trainees. Hence, majority of the respondents stated that the percentage of obtained score, written and oral tests should be the criteria for selecting trainees for pre-service PTT programme.

5.2.4.10 Management of Trainers

- Majority of the respondents viewed that there should be a provision of permanent trainers in each training agency for conducting the PTT programme. The number of respondents who viewed that secondary school teachers, headmasters, school supervisors should be hired for conducting PTT programme, was found to be less.

- M.Ed., as viewed by three-fourth of the concerned respondents (CLP, DLP and TP), should be the minimum qualification for being a trainer. 80.0 percent of TP with qualification of B.Ed. realised that the level of their qualification was not adequate to conduct the training classes effectively. All the CLP and 57.69 percent DLP agreed with this view.

- All the CLP and TP opined that training for the trainers should be organized to make them able to conduct the training classes effectively. Majority of them stated that the duration of the training should be of 4 weeks. During the training programme, as stated by them, adequate knowledge and skills, which should be imparted to the primary school teachers in the training classes, should be given to the trainers.

- Two-thirds of the total CLP viewed that workshop/seminar would be appropriate for the master-trainers to make them able to conduct the TOT
effectively. 80 percent of these CLP suggested that the duration of such workshop/seminar should be of one week. Only a few number of CLP recommended orientation or training programme for master trainers.

5.2.4.11 Training Manuals

- All the respondents stressed on preparation of Trainee's Manual to make the training classes activity-oriented. Similarly, all the concerned respondents opined that Trainer's Manual with detailed content elaboration should be prepared.

- All the respondents who were in favour of conducting PTT programme through Distance Mode, recommended the preparation of the Self-Learning Materials for the trainees. Similarly, the respondents who recommended the training through radio, realised the necessity of preparing the Radio-Summarised Lesson.

5.2.4.12 Implementation Procedure

- Training will be effective, if there is face to face interaction between the trainers and trainees, as stated by all the respondents. So, they recommended the training which should be conducted through face to face approach. Moreover, some respondents (22.49%) opined that training should be conducted through Distance Mode using Self-Learning Materials along with face to face approach. Similarly 10.06% respondents suggested that the training should be conducted through Distance Mode by radio broadcasting.

- The total duration of teaching practice, as stated by 52.60 percent of total respondents, should be 20% of total PTT programme. Majority of respondents advocated the PTT programme with duration of 10 months. So, it implies that total duration of teaching practice should be of 8 weeks, i.e. 20% of 10 months.

- If the training is to be conducted continuously, time for teaching practice should be managed two times, i.e. one in the middle of the training and the other at the end of the training, as viewed by higher number of the total respondents.
If the training is to be conducted phasewise, time for teaching practice, as stated by higher number of respondents, should be managed at the end of each phase.

Only the trainers of the training centre should be made responsible for supervising the trainees' classes during the teaching practice, as viewed by the highest number (61.04%) of the total respondents. According to 20.13 percent of the respondents, both trainer and subject teachers of the schools should be made responsible for this task. Similarly, 18.83 percent of the respondents opined that trainers and the headmasters should be made responsible for this task.

Evaluation system for assessing the trainees' performance, as viewed by 60.0 percent of the total respondents, should be of decentralized type. But, 37.39 percent of the total respondents were in favour of mixed-pattern of evaluation. The number of respondents who were in favour of centralized type of evaluation system was found very minimal, i.e., 2.61 percent only.

5.2.5 A Proposed Training Strategy

The total duration of PTT programme, as stated by most of the respondents, should be of 10 months.

Since one of the main purposes of education campuses is to produce trained teachers for different levels of school education, and since they have adequate and appropriate instructional and physical facilities, pre-service PTT programmes should be conducted by education campuses in order to recruit only trained teachers in schools, according to the government policy. The total duration of pre-service PTT programme should be conducted continuously.

NCED through its PTTCs, RCs under BPEP and education campuses should conduct in-service PTT programme to train a huge backlog of untrained teachers. The total duration of in-service PTT programme should be conducted continuously. Hence, the untrained teachers can complete the training within a period of one year and they do not need to come to the training centre several times to complete a course of training.

There should be at least one education campus in each zone to conduct pre-service and in-service PTT programme.
• There should be at least one training centre in each district to conduct in-service PTT programme, so that the training could be conducted at district level. This provision can train all the untrained teachers within a period of few years.

• One or more than one training agency can be involved in conducting training for working and potential teachers of a district, according to its necessity.

• Bottom-up approach should be followed while fixing the quota for trainees for PTT programme. Hence, the task of fixing quota should start from the schools of each district and should finally be approved by the MOE.

• Since a primary school teacher needs to teach all the primary school subjects, and in some cases, a teacher needs to conduct grade and multi-grade teaching, general or non-specialization type of PTT programme, where a trainee gets training in all the subjects, should be conducted.

• In order to make the trainees able to teach all the primary schools subjects after the training and to make the teaching and learning effective, minimum qualification of the candidates for being eligible to participate in PTT programme, should be Intermediate level or HS (10+2)

• The candidates for the pre-service PTT programme should be selected on the basis of three main criteria; (i) percentage of score obtained in Intermediate Level or HS (10+2) i.e. minimum qualification required for training (ii) Written test (iii) Oral test.

• Teaching experience should be the main criterion for selecting the working teachers for in-service PTT programme.

• Each training agency, which conducts either in-service or pre-service PTT programme, must have its own permanent professional trainers. The minimum qualification of trainers should be Master Degree in Education.

• In order to prepare trainers to conduct training classes effectively, one month long TOT should be conducted for them.

• In order to prepare master trainers to conduct TOT effectively, one week long workshop/seminar should be conducted for them.
• Manual for both the trainers and trainees should be prepared.

• Priority should be given in conducting face to face type of training as this type of training was found to be better than the training through radio in improving of performance of the teachers and students.

• Total duration of teaching practice should, at least, be of 8 weeks. It should be conducted two times i.e. once in the middle and once at the end of the training. Supervision and evaluation of teaching practice should be done by trainers themselves.

• Evaluation system should be of decentralized type and hence, all the activities related to evaluation should be conducted by each training centre.

5.3 Educational Implications of Present Study and Suggestions for Further Study

This section deals with the implications of the present study. Besides, it also presents some research topics relevant to PTT programme to be conducted by the future researchers.

5.3.1 Educational Implications of the Study

The present study covered two main aspects related to PTT programmes of Nepal: (i) Effect of NCED, BPEP and DEC training strategies on performance of teachers and students of primary schools, and (ii) proposing a better training strategy for the improvement of PTT programme in Nepal. The study revealed that the teaching performance of NCED and BPEP teachers in terms of teacher's planning and presentation, teacher's instructional qualities, use of instructional materials and blackboard, teaching approaches, students' evaluation and summarizing the lesson, was found better than that of the DEC teachers in Nepali Language, Social Studies and Mathematics. But no significant difference was observed between the performance of NCED and BPEP teachers. Hence, the effect of NCED and BPEP training strategies on teaching performance of teachers was comparatively better than that of the DEC training strategy.

Regarding the teaching behaviour of the teachers, the differences in mean percentages of Teacher Talk, Indirect Teacher Talk, Direct Teacher Talk,
Pupil Talk, Pupil Initiative, Indirect to Direct, Teacher Response, Teacher Question Ratios of three groups of teachers trained through NCED, BPEP and DEC strategies were found statistically insignificant in Nepali Language, Social Studies and Mathematics. It implies that one training strategy was not different from the other training strategies in terms of various teaching behaviour ratios mentioned above. Hence, the findings about the teaching behaviour of the three groups of teachers were found different from the findings regarding the teaching performance of these teachers. However, the teaching performance of the teachers could not be evaluated and graded on the basis of these teaching behaviour ratios. The behaviour ratios do not tell what is good and what is bad teaching and also do not make ratings of teaching performance (Flanders, 1960, and Sharma, 1997). They showed only pattern of teaching and learning what a teacher does and how pupils react in the classroom (Flanders, 1960).

Likewise, the achievement level of NCED and BPEP students in Nepali Language, Social Studies and Mathematics was significantly higher than that of the DEC students. But there was no significant difference between the achievement level of NCED and BPEP students in these subjects. Hence, the performance of NCED and BPEP students in terms of achievement status was significantly better than that of the DEC students.

The above mentioned findings reveal that the performance of NCED and BPEP teachers was found better than that of the DEC teachers. Similarly, the performance of NCED and BPEP students was significantly higher than that of the DEC students. The NCED and BPEP training strategies were of face to face type whereas DEC strategy was a distance mode of training. It reveals that face to face type of training is better than the distance mode of training. Hence, the government should give emphasis to face to face type of training in order to improve the teaching performance of the trained teachers and to increase the achievement level of the students. Similarly, if the training is to be conducted through distance mode as well, as at present, weakness of
the DEC should be identified and improvements should be made as early as possible by the concerned agencies.

Similarly, the conclusions regarding the training strategies have shown some rooms for revision of the existing training strategies which would help in quantitative and qualitative improvement of PTT programme of Nepal. Hence, the researcher has proposed an appropriate training strategy for this purpose. This proposed training strategy would help the planners and the programmers to develop detailed and comprehensive primary teacher training programme in Nepal.

5.3.2 Suggestions for the Further Study

Based on the conclusions mentioned above, the researcher suggested some research studies relevant to the present topic to be conducted by the future researchers in the days to come.

1. Impact of Primary Teacher Training Programmes on Attitudinal Change of Primary School Teachers of Nepal.

2. Evaluative Study of Implementation Procedures of Face to Face and Distance Mode of Primary Teacher Training Programmes of Nepal.

3. A Study on Effectiveness of the Existing Curriculum of Primary Teacher Training Programme of Nepal: A Proposed Curriculum

4. A Comparative Study of Effectiveness of Face to Face and Distance Mode of Primary Teacher Training in Nepal.

5. A Comparative Study of Teaching Performance of Trained and Untrained Primary School Teachers of Nepal and Its Impact on Students' Performance.

6. A Study on Teaching Performance of Teachers with Different Level of Qualification.