Chapter 6

SUMMARY AND CONCLUSIONS

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SUMMARY AND CONCLUSIONS

6.1 STUDY IN RETROSPECT

The present study has been designed to find out the effectiveness of Drawing Skill Oriented Instructional Approach on achievement in Basic Science and for developing the drawing skills of primary level students. The summary of the study is presented in this chapter.

6.1.1 Objectives of the study

The major objectives of the study are:-

1. To develop a design on Drawing Skill Oriented Instructional Approach.
2. To develop lesson transcripts in Basic Science based on Drawing Skill Oriented Instructional Approach.
3. To determine the effect of Drawing Skill Oriented Instructional Approach on achievement in Basic Science of students at primary level.
4. To compare the effectiveness of Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach on achievement in Basic Science of students at primary level.
5. To compare the effectiveness of Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach on achievement in Basic Science under the category of objectives:
   1. Knowledge
   2. Process
   3. Application
   4. Attitude
   5. Creativity
6. To determine the effect of Drawing Skill Oriented Instructional Approach on drawing skill development of students at primary level.

7. To compare the effectiveness of Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach on drawing skill development of students at primary level.

8. To compare the effectiveness of Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach with respect to the different levels of the development of drawing skill:
   1. Understanding
   2. Application
   3. Quality

9. To compare the effect of Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach on drawing attitude of students at primary level.

10. To compare the effect of Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach on drawing interest of students at primary level.

11. To compare the retention on achievement in Basic Science and Drawing Skill of students taught through Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach at primary level.

6.1.2 Hypotheses of the study

   The hypotheses formulated in the study were:

   1. Achievement in Basic Science as a whole will be significantly higher in primary school students taught through the Drawing Skill Oriented
Instructional Approach than that of those taught through the present Activity Oriented Approach.

2. Achievement in Basic Science under the different categories of objectives will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

3. Drawing Skill development as a whole will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

4. Drawing Skill development at different levels will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

5. Drawing Attitude will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

6. Drawing Interest will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

7. The retention in Basic Science achievement and Drawing Skill of students at Primary level taught through the Drawing Skill Oriented Instructional Approach is better than that of students taught through the present Activity Oriented Approach.
6.1.3 Methodology in brief

Experimental method was used to conduct the present study. The design selected was pre-test post-test non-equivalent group design (Best, 1995) and it was conducted on a sample of 300 students of Standard VII (150 students each in both experimental and control group). The students were selected from four schools of Ernakulam and Kottayam district in Kerala. One Aided and one Government school were selected from each district. From each school one division was selected as experimental group and the other as control group. Raven’s Progressive Matrices of Intelligence and previous Basic Science Achievement were used for comparing the groups. The tools used were the Raven’s Standard Progressive Matrices, lesson transcripts based on Drawing Skill Oriented Instructional Approach and present Activity Oriented Approach, an Achievement Test in Basic Science, a Drawing Skill Test, a Drawing Attitude Scale and a Drawing Interest Inventory. The tests were given to both groups as pre-test before the experimental treatment. The experimental group was taught with the lesson transcripts based on Drawing Skill Oriented Instructional Approach and the control group was taught through present Activity Oriented Approach. When all the classes were over, the same tests, except Raven’s Standard Progressive Matrices were administered to the experimental and control groups as post-test. A Delayed Memory Achievement Test and Drawing Skill Test were administered to the Experimental and Control groups, thirty days after the post-test in order to measure their retention capacity. The pre-test and post-test scores were subjected to statistical analysis by applying the technique of ‘t’- test and Analysis of Covariance.
6.2 MAJOR FINDINGS

Important findings emerged out of the study are given below.

6.2.1 FINDINGS FROM THE ANALYSIS OF PRE-TEST AND POST-TEST SCORES

6.2.1.1 Comparison of Experimental and Control groups on Achievement in Basic Science as a whole with regard to pre-test and post-test Scores

6.2.1.1.1 The analysis of pre-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (-0.24) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.1.2 The analysis of post-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (12.42) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their achievement in Basic Science as a whole. (Mean of Experimental group is 18.59; Mean of Control group is 15.28)

6.2.1.1.3 The analysis of Gain Scores in Basic Science Achievement as a whole using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (11.29) is significant at 0.01 level. So it is evident that the gain scores of the experimental group are significantly greater than that of the control group when Basic Science Achievement as a whole is considered (Mean of Experimental group is 18.59; Mean of Control group is 15.28).
6.2.1.1.4 The Analysis of Variance of pre-test and post-test Scores of students in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 0.06 is not significant even at 0.05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 154.39 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their post-test achievement in Basic Science as a whole.

6.2.1.1.5 The analysis of Covariance of pre-test and post-test Scores of students in the Experimental and Control groups showed that there was significant difference between the means of post-test scores of the two groups (Fyx 156.57 is significant at 0.01 level. The mean of Experimental group is 18.59; Mean of Control group is 15.28).

6.2.1.1.6 When the adjusted means of post-test scores of students in the Experimental and Control groups were compared, the Experimental group was found to be statistically superior to the Control group with regard to their achievement in Basic Science as a whole (The adjusted mean of post-test scores of Experimental group is 18.60 and that of Control group is 15.28).

The above analysis leads to the major conclusion that learning through Drawing Skill Oriented Instructional Approach is more effective than the present Activity Oriented Approach with respect to Basic Science Achievement as a whole.
6.2.1.2 Comparison of Experimental and Control groups on Achievement in Basic Science under different categories of Objectives with regard to pre-test and Post-test Scores

The pre-test scores of the two groups were analyzed using the test of significance. It revealed that under the level of objectives Knowledge, Process, Application, Attitude and Creativity, the Experimental and Control groups do not differ significantly.

The analysis of post-test scores using the techniques, test of significance and ANCOVA under the objectives Knowledge, Process, Application, Attitude, and Creativity revealed that the ‘t’ values obtained is significant at 0.01 level. From these, it is clear that the Experimental group showed better performance than Control group at Knowledge, Process, Application, Attitude and Creativity levels.

6.2.1.2.1 Comparison of Experimental and Control groups on Basic Science Achievement scores under the category of Objective – Knowledge.

6.2.1.2.1.1 The analysis of pre-test scores under the category of Objective – Knowledge, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (1.17) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.2.1.2 The analysis of post-test scores under the category of Objective – Knowledge, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (13.16) is
significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their achievement in Basic Science under the category of Objective – Knowledge (Mean of Experimental group is 4.37; Mean of Control group is 2.8).

6.2.1.2.1.3 The analysis of Gain Scores in Basic Science Achievement under the category of Objective – Knowledge, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (11.80) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Basic Science Achievement at Knowledge level is considered (Gain Score Mean of Experimental group is 4.37; that of Control group is 2.8).

6.2.1.2.1.4 The Analysis of Variance of pre-test and post-test Scores of students at Knowledge level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 1.39 is not significant even at .05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 173.38 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their post-test achievement in Basic Science under the category of Objective – Knowledge.

6.2.1.2.1.5 The analysis of Covariance of pre-test and post-test Scores of students in the Experimental and Control groups under the category of Objective – Knowledge, showed that there was significant difference between the means of post-test scores of the two groups Fyx 170.62 is significant at
0.01 level. (Mean of Experimental group is 4.37; Mean of Control group is 2.8). The Experimental group is found to be superior to the Control group.

6.2.1.2.1.6 When the adjusted means of post-test scores of students in the Experimental and Control groups under the category of Objective – Knowledge, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of post-test score of Experimental group at Knowledge level is 4.37 and that of Control group is 2.81).

From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Basic Science Achievement under the category of Objective – Knowledge.

6.2.1.2.2 Comparison of Experimental and Control groups on Basic Science Achievement scores under the category of Objective – Process

6.2.1.2.2.1 The analysis of pre-test scores under the category of Objective – Process, using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (-0.69) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.2.2.2 The analysis of post-test scores under the category of Objective – Process, using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (22.07) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their
achievement in Basic Science under the category of Objective – Process (Mean of Experimental group is 4.44; Mean of Control group is 2.50).

6.2.1.2.2.3 The analysis of Gain Scores in Basic Science Achievement under the category of Objective – Process, using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (19.94) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Basic Science Achievement at Process level is considered (Gain Score Mean of Experimental group is 3.16; that of Control group is 1.18).

6.2.1.2.2.4 The Analysis of Variance of pre-test and post-test Scores of students at Process level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 0.49 is not significant even at .05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 487.44 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their post-test achievement in Basic Science under the category of Objective – Process.

6.2.1.2.2.5 The analysis of Covariance of pre-test and post-test Scores of students in the Experimental and Control groups under the category of Objective – Process, showed that there was significant difference between the means of post-test scores of the two groups Fyx 495.09 is significant at 0.01 level. (Mean of Experimental group is 4.44; Mean of Control group is 2.50). The Experimental group is found to be superior to the Control group.
6.2.1.2.2.6 When the adjusted means of post-test scores of students in the Experimental and Control groups under the category of Objective – Process, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of post-test score of Experimental group at Process level is 4.45 and that of Control group is 2.50).

From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Basic Science Achievement under the category of Objective – Process.

6.2.1.2.3 Comparison of Experimental and Control groups on Basic Science Achievement scores under the category of Objective – Application

6.2.1.2.3.1 The analysis of pre-test scores under the category of Objective – Application, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (-0.90) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.2.3.2 The analysis of post-test scores under the category of Objective – Application, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (10.77) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their achievement in Basic Science under the category of Objective – Application (Mean of Experimental group is 3.76; Mean of Control group is 2.45).
6.2.1.2.3.3 The analysis of Gain Scores in Basic Science Achievement under the category of Objective – Application, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (10.10) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Basic Science Achievement at Application level is considered (Gain Score Mean of Experimental group is 2.51; that of Control group is 1.15).

6.2.1.2.3.4 The Analysis of Variance of pre-test and post-test Scores of students at Application level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 0.81 is not significant even at .05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 116.11 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their post-test achievement in Basic Science under the category of Objective – Application.

6.2.1.2.3.5 The Analysis of Covariance of pre-test and post-test Scores of students in the Experimental and Control groups under the category of Objective – Application, showed that there was significant difference between the means of post-test scores of the two groups (Fyx 114.76 is significant at 0.01 level. (Mean of Experimental group is 3.76; Mean of Control group is 2.45). The Experimental group is found to be superior to the Control group.

6.2.1.2.3.6 When the adjusted means of post-test scores of students in the Experimental and Control groups under the category of Objective – Application, were compared, the Experimental group was found to be
statistically superior to the Control group. (The adjusted mean of post-test score of Experimental group at Application level is 3.76 and that of Control group is 2.46).

From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Basic Science Achievement under the category of Objective – Application.

6.2.1.2.4 Comparison of Experimental and Control groups on Basic Science Achievement scores under the category of Objective – Attitude

6.2.1.2.4.1 The analysis of pre-test scores under the category of Objective – Attitude, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (-0.58) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.2.4.2 The analysis of post-test scores under the category of Objective – Attitude, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (7.73) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their achievement in Basic Science under the category of Objective – Attitude (Mean of Experimental group is 3.77; Mean of Control group is 2.88).

6.2.1.2.4.3 The analysis of Gain Scores in Basic Science Achievement under the category of Objective – Attitude, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value
obtained (6.61) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Basic Science Achievement at Attitude level is considered (Gain Score Mean of Experimental group is 2.25; that of Control group is 1.28).

6.2.1.2.4.4 The Analysis of Variance of pre-test and post-test Scores of students at Attitude level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 0.88 is not significant even at .05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 59.83 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their post-test achievement in Basic Science under the category of Objective – Attitude.

6.2.1.2.4.5 The Analysis of Covariance of pre-test and post-test Scores of students in the Experimental and Control groups under the category of Objective – Attitude, showed that there was significant difference between the means of post-test scores of the two groups (Fyx 58.86 is significant at 0.01 level. (Mean of Experimental group is 3.77; Mean of Control group is 2.88). The Experimental group is found to be superior to the Control group.

6.2.1.2.4.6 When the adjusted means of post-test scores of students in the Experimental and Control groups under the category of Objective – Attitude, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of post-test score of Experimental group at Attitude level is 3.77 and that of Control group is 2.88).
From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Basic Science Achievement under the category of Objective – Attitude.

6.2.1.2.5 Comparison of Experimental and Control groups on Basic Science Achievement scores under the category of Objective – Creativity

6.2.1.2.5.1 The analysis of pre-test scores under the category of Objective – Creativity, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (1.02) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.2.5.2 The analysis of post-test scores under the category of Objective – Creativity, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (7.31) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their achievement in Basic Science under the category of Objective – Creativity (Mean of Experimental group is 3.87; Mean of Control group is 3.02).

6.2.1.2.5.3 The analysis of Gain Scores in Basic Science Achievement under the category of Objective – Creativity, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (6.29) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Basic Science Achievement at Creativity level is
considered (Gain Score Mean of Experimental group is 2.53; that of Control group is 1.72).

6.2.1.2.5.4 The Analysis of Variance of pre-test and post-test Scores of students at Creativity level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 1.06 is not significant even at .05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 54.53 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their post-test achievement in Basic Science under the category of Objective – Creativity.

6.2.1.2.5.5 The Analysis of Covariance of pre-test and post-test Scores of students in the Experimental and Control groups under the category of Objective – Creativity, showed that there was significant difference between the means of post-test scores of the two groups(Fyx 53.55 is significant at 0.01 level. (Mean of Experimental group is 3.87; Mean of Control group is 3.02).The Experimental group is found to be superior to the Control group.

6.2.1.2.5.6 When the adjusted means of post-test scores of students in the Experimental and Control groups under the category of Objective – Creativity, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of post-test score of Experimental group at Creativity level is 3.87 and that of Control group is 3.00).

From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Basic Science Achievement under the category of Objective – Creativity.
6.2.1.3 Comparison of Experimental and Control groups on Drawing Skill development as a whole with regard to pre-test and post-test Scores

6.2.1.3.1 The analysis of Drawing Skill pre-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (-0.24) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their Drawing Skill pre-test scores.

6.2.1.3.2 The analysis of Drawing Skill post-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (12.42) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their Drawing Skill development as a whole. (Mean of Experimental group is 18.59; Mean of Control group is 15.28)

6.2.1.3.3 The analysis of Gain Scores in Drawing Skill development as a whole using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (11.29) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Drawing Skill development as a whole is considered (Mean of Experimental group is 11.85; Mean of Control group is 8.50).

6.2.1.3.4 The Analysis of Variance of Drawing Skill pre-test and post-test Scores of students in the Experimental and Control groups showed that there was no significant difference between the means of Drawing Skill pre-test scores of the two groups (Fx 0.06 is not significant even at 0.05 level). But
there was significant difference between the means of the Drawing Skill post-test scores of the two groups (Fy 154.39 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their Drawing Skill development as a whole.

6.2.1.3.5 The Analysis of Covariance of Drawing Skill pre-test and post-test Scores of students in the Experimental and Control groups showed that there was significant difference between the means of post-test scores of the two groups Fyx 156.57 is significant at 0.01 level. The mean of Experimental group is 18.59; Mean of Control group is 15.28).

6.2.1.3.6 When the adjusted means of Drawing Skill post-test scores of students in the Experimental and Control groups were compared, the Experimental group was found to be statistically superior to the Control group with regard to their Drawing Skill development as a whole. (The adjusted mean of post-test scores of Experimental group is 18.60 and that of Control group is 15.28)

The above analysis leads to the major conclusion that learning through Drawing Skill Oriented Instructional Approach is more effective than the present Activity Oriented Approach with respect to Drawing Skill development as a whole.

**6.2.1.4 Comparison of Experimental and Control groups on Drawing Skill development at different levels with regard to pre-test and post-test Scores**

Drawing Skill pre-test scores of the two groups were analyzed using the test of significance. It revealed that at different levels - Understanding,
Application and Quality - the Experimental and Control groups do not differ significantly.

The analysis of Drawing Skill post-test scores using the techniques, test of significance and ANCOVA at different levels - Understanding, Application and Quality, revealed that the ‘t’ values obtained is significant at 0.01 level. From these, it is clear that the Experimental group showed better performance than Control group at Understanding, Application and Quality levels of Drawing Skill.

6.2.1.4.1 Comparison of Experimental and Control groups on the basis of Drawing Skill Test scores at the level – Understanding

6.2.1.4.1.1 The analysis of Drawing Skill pre-test scores at the level – Understanding, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained(-1.09) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.4.1.2 The analysis of Drawing Skill post-test scores at the level – Understanding, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (7.39) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their Drawing Skill development at the level – Understanding (Mean of Experimental group is 6.69; Mean of Control group is 5.48).

6.2.1.4.1.3 The analysis of Gain Scores in Drawing Skill development at the level – Understanding, using the technique, test of significance of difference
between Experimental and Control groups revealed that the 't' value obtained (5.92) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Drawing Skill development at Understanding level is considered (Gain Score Mean of Experimental group is 1.81; that of Control group is 0.42).

6.2.1.4.1.4 The Analysis of Variance of Drawing Skill pre-test and post-test Scores of students at Understanding level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 1.21 is not significant even at .05 level). But there was significant difference between the means of the Drawing Skill post-test scores of the two groups (Fy 54.66 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their Drawing Skills at the level –Understanding.

6.2.1.4.1.5 The Analysis of Covariance of Drawing Skill pre-test and post-test Scores of students in the Experimental and Control groups at the level –Understanding, showed that there was significant difference between the means of Drawing Skill post-test scores of the two group (Fyx 54.30 is significant at 0.01 level. (Mean of Experimental group is 6.69; Mean of Control group is 5.48). The Experimental group is found to be superior to the Control group.

6.2.1.4.1.6 When the adjusted means of Drawing Skill post-test scores of students in the Experimental and Control groups at the level –Understanding, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of Drawing Skill post-test scores of
Experimental group at Understanding level is 6.69 and that of Control group is 5.49).

From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Drawing Skill development at the level – Understanding.

### 6.2.1.4.2 Comparison of Experimental and Control groups on the basis of Drawing Skill Test scores at the level – Application

**6.2.1.4.2.1** The analysis of Drawing Skill pre-test scores at the level – Application, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (0.52) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

**6.2.1.4.2.2** The analysis of Drawing Skill post-test scores at the level – Application, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (5.36) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their Drawing Skill development at the level – Application (Mean of Experimental group is 9.74; Mean of Control group is 7.81).

**6.2.1.4.2.3** The analysis of Gain Scores in Drawing Skill development at the level – Application, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (4.73) is significant at 0.01 level. So it can be evidenced that the gain
scores of the experimental group are significantly greater than that of the control group when Drawing Skill development at Application level is considered (Gain Score Mean of Experimental group is 2.58; that of Control group is 0.72).

6.2.1.4.2.4 The Analysis of Variance of Drawing Skill pre-test and post-test Scores of students at Application level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (F<sub>x</sub> 0.28 is not significant even at .05 level). But there was significant difference between the means of the Drawing Skill post-test scores of the two groups (F<sub>y</sub> 28.74 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their Drawing Skills at the level – Application.

6.2.1.4.2.5 The Analysis of Covariance of Drawing Skill pre-test and post-test Scores of students in the Experimental and Control groups at the level – Application, showed that there was significant difference between the means of Drawing Skill post-test scores of the two groups F<sub>yx</sub> 28.95 is significant at 0.01 level. (Mean of Experimental group is 9.74; Mean of Control group is 7.81). The Experimental group is found to be superior to the Control group.

6.2.1.4.2.6 When the adjusted means of Drawing Skill post-test scores of students in the Experimental and Control groups at the level – Application, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of Drawing Skill post-test scores of Experimental group at Application level is 9.75 and that of Control group is 7.81).
From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Drawing Skill development at the level – Application.

6.2.1.4.3 Comparison of Experimental and Control groups on the basis of Drawing Skill Test scores at the level – Quality

6.2.1.4.3.1 The analysis of Drawing Skill pre-test scores at the level – Quality, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (-1.02) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.4.3.2 The analysis of Drawing Skill post-test scores at the level – Quality, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (8.20) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to their Drawing Skill development at the level – Quality (Mean of Experimental group is 12.46; Mean of Control group is 8.9).

6.2.1.4.3.3 The analysis of Gain Scores in Drawing Skill development at the level – Quality, using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (8.27) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Drawing Skill development at Quality level is considered (Gain Score Mean of Experimental group is 5.42; that of Control group is 1.50).
6.2.1.4.3.4 The Analysis of Variance of Drawing Skill pre-test and post-test scores of students at Quality level in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 4.11 is not significant even at .05 level). But there was significant difference between the means of the Drawing Skill post-test scores of the two groups (Fy 67.30 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their Drawing Skills at the level – Quality.

6.2.1.4.3.5 The Analysis of Covariance of Drawing Skill pre-test and post-test scores of students in the Experimental and Control groups at the level – Quality, showed that there was significant difference between the means of Drawing Skill post-test scores of the two group Fyx 65.28 is significant at 0.01 level. (Mean of Experimental group is 12.46; Mean of Control group is 8.9). The Experimental group is found to be superior to the Control group.

6.2.1.4.3.6 When the adjusted means of Drawing Skill post-test scores of students in the Experimental and Control groups at the level – Quality, were compared, the Experimental group was found to be statistically superior to the Control group. (The adjusted mean of Drawing Skill post-test scores of Experimental group at Quality level is 12.45 and that of Control group is 8.91).

From this it can be concluded that Drawing Skill Oriented Instructional Approach is found to be more effective than the present Activity Oriented Approach with respect to Drawing Skill development at the level – Quality.
6.2.1.5 Comparison of Experimental and Control groups on Drawing Attitude Development with regard to pre-test and post-test Scores

6.2.1.5.1 The analysis of Drawing Attitude Scale pre-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (0.25) is not significant at 0.05 and 0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.5.2 The analysis of Drawing Attitude Scale post-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (21.10) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to the development of Drawing Attitude. (Mean of Experimental group is 23.66; Mean of Control group is 13.40)

6.2.1.5.3 The analysis of Gain Scores in Drawing Attitude development using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (17.38) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Drawing Attitude development is considered (Mean of Experimental group is 13.78; Mean of Control group is 3.60).

6.2.1.5.4 The Analysis of Variance of Drawing Attitude Scale pre-test and post-test Scores of students in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 0.06 is not significant even at .05 level). But there was
significant difference between the means of the post-test scores of the two groups (Fy 445.53 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their Drawing Attitude development.

6.2.1.5.5 The Analysis of Covariance of Drawing Attitude Scale pre-test and post-test Scores of students in the Experimental and Control groups showed that there was significant difference between the means of post-test scores of the two groups Fyx 444.34 is significant at 0.01 level. (Mean of Experimental group is 23.66; Mean of Control group is 13.40).

6.2.1.5.6 When the adjusted means of Drawing Attitude Scale post-test scores of students in the Experimental and Control groups were compared, the Experimental group was found to be statistically superior to the Control group with regard to their Drawing Attitude development. (The adjusted mean of post-test scores of Experimental group is 23.66 and that of Control group is 13.41).

The above analysis leads to the major conclusion that learning through Drawing Skill Oriented Instructional Approach is more effective than the present Activity Oriented Approach with respect to Drawing Attitude development.

6.2.1.6 Comparison of Experimental and Control groups on Drawing Interest Development with regard to pre-test and post-test Scores

6.2.1.6.1 The analysis of Drawing Interest Inventory pre-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained(1.54) is not significant at 0.05 and
0.01 levels. The mean scores helped to state that the Experimental and Control groups do not differ significantly in their pre-test scores.

6.2.1.6.2 The analysis of Drawing Interest Inventory post-test scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (4.84) is significant at 0.01 level. So it can be concluded that the Experimental group was in an advantageous position than the Control group with regard to the progress in Drawing Interest. (Mean of Experimental group is 15.4866; Mean of Control group is 13.7)

6.2.1.6.3 The analysis of Gain Scores in Drawing Interest Inventory using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (4.09) is significant at 0.01 level. So it can be evidenced that the gain scores of the experimental group are significantly greater than that of the control group when Drawing Interest progress is considered (Mean of Experimental group is 6.63; Mean of Control group is 5.08).

6.2.1.6.4 The Analysis of Variance of Drawing Interest Inventory pre-test and post-test Scores of students in the Experimental and Control groups showed that there was no significant difference between the means of pre-test scores of the two groups (Fx 6.49 is not significant even at .05 level). But there was significant difference between the means of the post-test scores of the two groups (Fy 23.43 is significant at 0.01 level). So it can be concluded that the Experimental group was superior to the Control group in their Drawing Interest progress.
6.2.1.6.5 The Analysis of Covariance of Drawing Interest Inventory pre-test and post-test Scores of students in the Experimental and Control groups showed that there was significant difference between the means of post-test scores of the two groups. \( F_{yx} = 22.13 \) is significant at 0.01 level. (Mean of Experimental group is 15.48; Mean of Control group is 13.7).

6.2.1.6.6 When the adjusted means of Drawing Interest Inventory post-test scores of students in the Experimental and Control groups were compared, the Experimental group was found to be statistically superior to the Control group with regard to their Drawing Interest progress. (The adjusted mean of post-test scores of Experimental group is 15.47 and that of Control group is 13.71).

The above analysis leads to the major conclusion that learning through Drawing Skill Oriented Instructional Approach is more effective than the present Activity Oriented Approach with respect to Drawing Interest progress.

6.2.1.7 Comparison of Delayed Memory Achievement Test Scores of Students in Experimental and Control groups

The analysis of Delayed Memory Achievement Test Scores using the technique, test of significance of difference between Experimental and Control groups revealed that the ‘t’ value obtained (13.57) is significant at 0.01 level. This shows that there is significant difference between the means of the Delayed Memory Achievement Test Scores of students in the Experimental and Control groups (Mean of Experimental group is 18.08; Mean of Control group is 14.48). It means that the Experimental group and the Control group differ significantly with respect to their retention capacity on Achievement in Basic Science. So it can be concluded that the Drawing Skill Oriented...
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Instructional Approach is more effective than the present Activity Oriented Approach in the Delayed Memory Achievement.

6.2.1.8 Comparison of Delayed Memory Drawing Skill Test Scores of Students in Experimental and Control groups

The analysis of Delayed Memory Drawing Skill Test Scores using the technique, test of significance of difference between Experimental and Control groups revealed that the 't' value obtained (16.01) is significant at 0.01 level. This shows that there is significant difference between the means of the Delayed Memory Drawing Skill Test Scores of students in the Experimental and Control groups (Mean of Experimental group is 27.97; Mean of Control group is 20.03). It means that the Experimental group and the Control group differ significantly with respect to their retention capacity on Drawing Skills. So it can be concluded that the Drawing Skill Oriented Instructional Approach is more effective than the present Activity Oriented Approach in Drawing Skill retention.

6.3 TENABILITY OF HYPOTHESES

The tenability of the hypotheses is stated below:

6.3.1 HYPOTHESIS 1

The first hypothesis was that the Achievement in Basic Science as a whole will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.1.1, 6.2.1.1.2, 6.2.1.1.3, 6.2.1.1.4, 6.2.1.1.5 and 6.2.1.1.6 shows that the Achievement in Basic Science as a whole of students taught through the Drawing Skill Oriented Instructional Approach is more effective than the present Activity Oriented Approach in Delayed Memory Achievement.
Approach is significantly higher than those taught through the present Activity Oriented Approach. So the above hypothesis is fully substantiated.

6.3.2 HYPOTHESIS 2

The second hypothesis was that the Achievement in Basic Science under different categories of objectives namely knowledge, process, application, attitude and creativity will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.2.1.1, 6.2.1.2.1.2, 6.2.1.2.1.3, 6.2.1.2.1.4, 6.2.1.2.1.5, 6.2.1.2.1.6, 6.2.1.2.2.1, 6.2.1.2.2.2, 6.2.1.2.2.3, 6.2.1.2.2.4, 6.2.1.2.2.5, 6.2.1.2.2.6, 6.2.1.2.3.1, 6.2.1.2.3.2, 6.2.1.2.3.3, 6.2.1.2.3.4, 6.2.1.2.3.5, 6.2.1.2.3.6, 6.2.1.2.4.1, 6.2.1.2.4.2, 6.2.1.2.4.3, 6.2.1.2.4.4, 6.2.1.2.4.5, 6.2.1.2.4.6, 6.2.1.2.5.1, 6.2.1.2.5.2, 6.2.1.2.5.3, 6.2.1.2.5.4, 6.2.1.2.5.5 and 6.2.1.2.5.6 leads to the acceptance of the hypothesis in the case of Achievement in Basic Science under the categories of objectives - knowledge, process, application, attitude and creativity at 0.05 and 0.01 levels. From the findings it can be concluded that the Achievement in Basic Science of students taught through the Drawing Skill Oriented Instructional Approach is significantly higher than those taught through the present Activity Oriented Approach under the categories of objectives -knowledge, process, application, attitude and creativity. Thus the second hypothesis is fully substantiated.
6.3.3 HYPOTHESIS 3

The third hypothesis was that the Drawing Skill development as a whole will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.3.1, 6.2.1.3.2, 6.2.1.3.3, 6.2.1.3.4; 6.2.1.3.5 and 6.2.1.3.6 shows that the development in Drawing Skill as a whole of students taught through the Drawing Skill Oriented Instructional Approach is significantly higher than those taught through the present Activity Oriented Approach. So the third hypothesis is fully substantiated.

6.3.4 HYPOTHESIS 4

The fourth hypothesis was that the Drawing Skill development at different levels namely understanding, application and quality will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.4.1.1, 6.2.1.4.1.2, 6.2.1.4.1.3, 6.2.1.4.1.4, 6.2.1.4.1.5, 6.2.1.4.1.6, 6.2.1.4.2.1, 6.2.1.4.2.2, 6.2.1.4.2.3, 6.2.1.4.2.4, 6.2.1.4.2.5, 6.2.1.4.2.6, 6.2.1.4.3.1, 6.2.1.4.3.2, 6.2.1.4.3.3, 6.2.1.4.3.4, 6.2.1.4.3.5 and 6.2.1.4.3.6 leads to the acceptance of the above hypothesis in the case of development in Drawing Skill at the levels – namely understanding, application and quality at 0.05 and 0.01 levels. From the findings it can be concluded that the development in Drawing Skill of students taught through the Drawing Skill Oriented Instructional Approach is significantly higher than those taught through the present Activity Oriented
Approach at different levels namely- understanding, application and quality.
Thus the fourth hypothesis is fully substantiated.

6.3.5 HYPOTHESIS 5

The fifth hypothesis was that the Drawing Attitude development will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.5.1, 6.2.1.5.2, 6.2.1.5.3, 6.2.1.5.4, 6.2.1.5.5 and 6.2.1.5.6 shows that the development of Drawing Attitude of students taught through the Drawing Skill Oriented Instructional Approach is significantly higher than those taught through the present Activity Oriented Approach. So the fifth hypothesis is fully substantiated.

6.3.6 HYPOTHESIS 6

The sixth hypothesis was that the Drawing Interest Enhancement will be significantly higher in primary school students taught through the Drawing Skill Oriented Instructional Approach than that of those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.6.1, 6.2.1.6.2, 6.2.1.6.3, 6.2.1.6.4, 6.2.1.6.5 and 6.2.1.6.6 shows that the Drawing Interest Enhancement of students taught through the Drawing Skill Oriented Instructional Approach is significantly higher than those taught through the present Activity Oriented Approach. So the sixth hypothesis is fully substantiated.

6.3.7 HYPOTHESIS 7

The seventh hypothesis was that the retention in Basic Science achievement and in Drawing Skills of students at Primary level taught through
the Drawing Skill Oriented Instructional Approach is better than the students those taught through the present Activity Oriented Approach.

The findings numbered 6.2.1.7. and 6.2.1.8. Indicate that the retention in Basic Science achievement and in Drawing Skills of students taught through the Drawing Skill Oriented Instructional Approach is better than that of students taught through the present Activity Oriented Approach. So the seventh hypothesis is fully substantiated.

6.4 CONCLUSIONS OF THE STUDY

From the analysis of the statistical data, it is concluded that the Drawing Skill Oriented Approach has produced very desirable instructional results, and that these results weigh heavily in favour of accepting all the seven hypotheses. The major conclusions that are arrived at in the present study are noted below.

6.4.1 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach on Achievement in Basic Science of students at primary level.

6.4.2 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach on Achievement in Basic Science under different levels of objectives namely Knowledge, Process, Application, Attitude and Creativity of students at primary level.

6.4.3 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach with regard to the Drawing Skill Development of students at primary level.

6.4.4 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach with regard to the Drawing Skill
Development at different levels namely understanding, application and quality of students at primary level.

6.4.5 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach with regard to the Drawing Attitude Development of students at primary level.

6.4.6 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach with regard to the Drawing Interest Enhancement of students at primary level.

6.4.7 The Drawing Skill Oriented Instructional Approach is more effective than present Activity Oriented Approach with regard to retention in achievement and retention in Drawing Skills of students at primary level.

**6.5 EDUCATIONAL IMPLICATIONS OF THE STUDY**

The investigator hoped that the Drawing Skill Oriented Instructional Approach might draw some attention from educators due to the benefit of this Approach in terms of both skill and cognitive development. The major implications of the study are listed below.

Drawing Skill Oriented Instructional Approach should be introduced from primary level for all disciplines especially in Basic Science because, it enhances Science Achievement, develops drawing skills and nourishes affective domain.

The Drawing Skill of students taught through Drawing Skill Oriented Instructional Approach is significantly higher than that of those taught using Activity Oriented Approach. Thus it can be concluded that Drawing Skill Oriented Instructional Approach helped the students in the experimental group to show more Drawing Skills. So, each school should provide ample
opportunities for students to get in touch with Drawing Skill Oriented Instructional Approach.

In developing the drawing skills among Basic Science students, teachers have a great role to play. So, pre-service and in-service training on Drawing Skill Oriented Instructional Approach shall be arranged and teachers may be encouraged to Drawing Skill Oriented Instructional Approach. Drawing Skill Oriented Instructional Approach shall be used more frequently in Basic Science class rooms and guide books and exercise books on drawing shall be prepared and made available to the teachers.

Findings demonstrate the existence of a positive relationship between studying through drawing activities and academic achievement. So, more stress should be given to Drawing Skill Oriented Instructional Approach while constructing or revising the curriculum of primary and secondary education. Curriculum designers should also be given awareness about Drawing Skill Oriented Instructional Approach.

This study proves that drawing is an essential and integral part of every child’s education and not merely an extra activity. So, by creating legislative provisions, Drawing Skill Oriented Instructional Approach should become a compulsory strategy of Science instruction.

Organize supplementary activities like scientific drawing competitions and fine art fests at school level to motivate drawing skill development among the students. Checking with various organizations that regularly hold competitions to design posters, collages etc. to see what might be an appropriate outlet for student’s drawing skills. Organize excursions to local Art Colleges and Galleries.
Draw an object or subject means study that object or subject. So, every single drawing expresses an idea. So, teachers should encourage the students to make drawings of peoples, houses, costumes, trees, vehicles etc. It should enhance the environmental consciousness of the student.

Teachers should try to integrate Drawing Skill Oriented Instructional Approach with different creative areas. Students may like to illustrate poems or stories they have written or read. Motivate students to illustrate a scene from a drama, religious festival and places of worship. This can be done in addition to the various shapes and patterns associated with different faiths. Sports offer a huge variety of action poses and pictures. Provide activities like draw a football match, gymnastics or yoga positions etc.

Children need to experience things first hand to understand the world around them especially things like life cycle, food chain etc. Give them real resources as possible as the subject of drawing activities and let the children to look and touch, feel the texture and compare the composition. Learning from experience is vital for their visual memories. It helps their observation, awareness and will increase their drawing skill. Provide various communication devices like internet, interactive CD-ROM as an alternative to borrow books from the libraries.

Students taught through Drawing Skill Oriented Instructional Approach demonstrated more self confidence about their academic performance. They were also far more likely to believe that they did well in school in general, particularly in Basic Science. So, In a Drawing Skill Oriented classroom with strong art's climate, teachers and students both benefit.
The investigator hopes that the Drawing Skill Oriented Instructional Approach would become a starting enterprise for the practice of ‘Cultural pedagogy’ at work. The Drawing Skill Oriented Instructional Approach shall be modified to Drawing Skill development Model and must be incorporated in T.T.I. and B.Ed. curriculum.

6.6 SUGGESTIONS OF THE STUDY

The findings and the results of testing of the hypotheses have revealed that Drawing Skill Oriented Instructional Approach is effective than present Activity Oriented Approach in curriculum transactions. Based on the conclusions, the following suggestions can be made in order to improve implementation of the Drawing Skill Oriented Instructional Approach.

The present status of student’s Drawing Skill particularly in Basic Science is very pitiable. So, provision must be made to incorporate Drawing Skill Oriented Instructional Approach in Basic Science curriculum at primary level.

In developing the Drawing Skills among Basic Science students the teachers, experts and educationalists have a great role to play. So the teachers should follow Drawing Skill Oriented Instructional Approach to develop the drawing skills and Drawing Skill Oriented Instructional Approach must be incorporated as an instructional strategy in B.Ed. and TTI’s/TTC’s curriculum.

In-service training should be organized to acquaint the teachers in service with Drawing Skill Oriented Instructional Approach.

Drawing Skill Oriented Instructional Approach should be introduced from primary school level of Kerala. The present study illustrates the learning
phases in Drawing Skill Oriented Instructional Approach in detail. Hence the primary school teachers should be encouraged to apply this Approach in their regular classroom teaching.

6.7 SUGGESTIONS FOR FURTHER RESEARCH

The findings of this study lead for further probing in the future:--

1. This study is done with Standard VII only. Further studies could be carried out at all standards as well as the secondary, higher secondary and college level.

2. The same investigation could be carried out in other subjects.

3. In this study the sample were only Malayalam medium students. This study could be conducted with the English medium Schools as well as CBSE patterned schools also.

4. A study can be conducted to analyze the limitations which stand in the way of implementing the Drawing Skill Oriented Instructional Approach in the present day class rooms.

5. Effectiveness of Drawing Skill Oriented Instructional Approach on the main stream of students with academic disabilities should be researched.

6. Research should be done to find whether the Drawing Skill Oriented Instructional Approach is suited for talented and gifted students.

7. A comparative study can be conducted to find out the effectiveness of Drawing Skill Oriented Instructional Approach for developing drawing skills of children at pre-primary level.
8. A study can be conducted to develop tools to assess drawing skills of students at pre-primary and secondary level.

9. An experimental study can be conducted to find out the effectiveness of folk arts and traditional arts on achievement in basic science students at primary level.

10. Similar studies on wider sample including more areas and in various standards of primary and secondary level would be more helpful for valid generalisations.