CHAPTER – 8

SUMMARY, FINDINGS, IMPLICATIONS AND RECOMMENDATIONS

8.1 Introduction
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8.5 Observations of the Study
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8.1 Introduction:

The purpose of the study was to find out effectiveness of the Kolb’s experiential learning model programme for the 9th standard students. Construction and standardization of Achievement test was the phase-1 while development and implementation of the Kolb’s experiential learning model programme was phase-2 during this research study. This chapter helps to get overview of this research study. The detailed report of the present study has been given in the previous chapters. In the present chapter the summary of the report has been presented along with the finding, implications, observations, suggestions and recommendations for prospective researches.

8.2 Summary:

The summary with outlines of the whole study is given under:

8.2.1 Title Of The Present Study:

“EFFECTIVENESS OF KOLB’S EXPERIENTIAL LEARNING MODEL FOR 9TH STANDARD STUDENTS”

8.2.2 Objectives Of The Present Study:

The study was carried out with two types of objectives,

(A) Task objectives (B) Research objectives. These objectives are:

(A) Task Objectives:

1. To construct and standardize Achievement Test.
2. To develop KELM programme for enhancing learning of 9th standard students.
3. To implement KELM programme for enhancing learning of 9th standard students.

(B) Research Objectives:

1. To study the effectiveness of KELM programme for enhancing learning.
2. To study the effectiveness of KELM programme enhancing learning in relation to gender.
3. To study the effectiveness of KELM programme enhancing learning in relation to SES.
4. To study the effectiveness of KELM programme enhancing learning in relation to IQ.

8.2.3 Variables Of The Study:
The variables for the present study were as under:

1. **Independent Variables**:
The independent variables for the present study was
   - Kolb’s Experiential Learning Model

2. **Secondary Independent Variables**:
The Secondary independent variable for the present study were
   - Gender (Boys, Girls)
   - SES (High, Low)
   - IQ (High, Low)

3. **Dependent Variables**:
The dependent variable for the present study was
   - Score obtained by the student of 9th standard on Achievement test

4. **Control Variables**:
The control variable for the present study were
   - Standard – 9th
   - Subject – Social Science
   - Content Matter

8.2.4 Hypotheses Of The Study:
The hypotheses were formulated in pursuance of the objectives and variables of the study as given in Table 8.1.
8.2.5 Population And Sample Of The Study:

The main purpose of the present study was to develop Kolb’s experiential learning model Programme and study its effectives for the 9th standard students. Present study was carried out in two important phases.

Phase 1 includes construction and standardization of Achievement test. For this investigator had followed process of standardization of test. Manuscript, pre-pilot try-out, pilot try-out were carried out as a process of standardization. Student from different schools of Anand district were selected as sample for the construction and try-out of the Achievement Test.

Phase 2 includes development and effectiveness of Kolb’s experiential learning model programme by the investigator. Students of Anand High School, Anand were selected as an experimental group for the study of effectiveness of KELM Programme. And Pioneer high school, Anand was selected as a control group for the study of traditional method. Before dividing the group under experiment and control group. It was necessary to equate both the groups on achievement in social science subject. There for investigator prepared a test covering the curriculum of 8th standard and by using T-test. It was decided that both the groups are sowing equally performance on achievement test and thus both the groups were equitant.

8.2.6 Tools:

The tools used in the present study were

(A) Achievement Test:

In order to find out the achievement of both the groups, i.e. the Experimental group and control group in the particular units of Social Science text-book of Gujarat State Board school text-book syllabus, 2009-2010, the investigator constructed and standardize an achievement test by keeping the mind the three chapters namely: The achievement test was objective in nature. It consist item like-Objective multiple choice type questions related to units.
(B) Socio-Economic Status Scale:

Socio-Economic Status Scale prepared by Prof. Pallaviben P. Patel was used to measure Socio-Economic status of the students. Students with High Socio-Economic Status (High SES) and students with Low Socio-Economic Status (Low SES) were found by the use of this scale.

(C) Intelligence Test:

Verbal Non-verbal Intelligence Test Developed and Standardized by Dr. R.S Patel was used to measure intelligence of the students.

8.2.7 Research Design:

In the present study investigator had selected Two-Group Posttest Design. The investigator has divided equally in two groups of 9th standard students namely control group and experimental group. The students of experimental group were given learning experience with the help of the KELM Programme developed by the investigator. The rest of the students formed the control group, they were taught through traditional method.

8.2.8 Data Collection:

Achievement Test developed and standardized by the investigator was given to the implementation of Programmed in the Experimental group and control group for 9th standard students of Anand high School, Anand and Pinoor high School, Anand. SES Scale prepared by Prof. Pallavi P. Patel and Verbal-nonverbal intelligence test prepared by Dr. R.S. Patel was used to collect data regarding Socio Economic Status and Intelligence of the experimental and control group.

8.2.9 Analysis of Data:

Descriptive statistics of data collected from Achievement Test used as a post-test for the experimental group and control group were computed. Significance of hypotheses was found by using T-test
8.2.10 Results Of Hypotheses Testing:

Results obtained after testing the hypotheses are presented below:

Table 8.1
Results of Hypotheses Testing

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Hypothesis</th>
<th>T</th>
<th>Sig.</th>
<th>Rejected/ Accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There will be no significant difference between mean score on achievement test between control and experimental group.</td>
<td>14.70</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>2</td>
<td>There will be no significant difference in mean scores of achievement test between boys and girls for experimental group.</td>
<td>0.94</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td>3</td>
<td>There will be no significant difference in mean score on achievement test of control and experimental group for boys.</td>
<td>8.74</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>4</td>
<td>There will be no significant difference in mean score on achievement test of control and experimental group for girls.</td>
<td>12.45</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>5</td>
<td>There will be no significant difference in mean score on achievement test between student of high SES and low SES for experimental group.</td>
<td>1.06</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td>6</td>
<td>There will be no significant difference in mean score on achievement test between boys and girls of high SES for experimental group.</td>
<td>1.02</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td>7</td>
<td>There will be no significant difference in mean score on achievement test between boys and girls of Low SES for experimental group.</td>
<td>0.023</td>
<td>Not Sig</td>
<td>Accepted</td>
</tr>
<tr>
<td>8</td>
<td>There will be no significant difference in mean score of boys on achievement test between high SES and low SES for experimental group.</td>
<td>0.27</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td>9</td>
<td>There will be no significant difference in mean score of girls on achievement test</td>
<td>1.60</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td></td>
<td>Statement</td>
<td>Value</td>
<td>Significance</td>
<td>Result</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>---------</td>
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<td>---------</td>
</tr>
<tr>
<td>10</td>
<td>There will be no significant difference in mean score on achievement test of control and experimental group for high SES.</td>
<td>6.65</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>11</td>
<td>There will be no significant difference in mean score on achievement test of control and experimental group for low SES.</td>
<td>7.50</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>12</td>
<td>There will be no significant difference in mean score on achievement test between student of high IQ and low IQ for experimental group.</td>
<td>7.94</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>13</td>
<td>There will be no significant difference in mean score on achievement test between boys and girls of high IQ for experimental group.</td>
<td>0.75</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td>14</td>
<td>There will be no significant difference in mean score on achievement test between boys and girls of Low IQ for experimental group.</td>
<td>0.20</td>
<td>Not Sig.</td>
<td>Accepted</td>
</tr>
<tr>
<td>15</td>
<td>There will be no significant difference in mean score of boys on achievement test between high IQ and low IQ for experimental group.</td>
<td>5.30</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>16</td>
<td>There will be no significant difference in mean score of girls on achievement test between high IQ and low IQ for experimental group.</td>
<td>6.02</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>17</td>
<td>There will be no significant difference in mean score on achievement test of control and experimental group for high IQ.</td>
<td>8.92</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>18</td>
<td>There will be no significant difference in mean score on achievement test of control and experimental group for low IQ</td>
<td>7.51</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
8.3 Findings Of The Study:

After testing the hypotheses, obtained findings are as given below:

1) KELM programme is effective. It is found that mean score of achievement test for experimental group is higher than control group which shows effectiveness of KELM programme.

2) There is no significant difference in mean scores of achievement test between boys and girls for experimental group, which shows that there is no gender effect on effectiveness of KELM programme. KELM Programme is equally effective for boys and girls.

3) The mean score of achievement test for experimental group is higher than control group of boys, which shows KELM Programme is more effective on boys of experimental group. Experiential Learning of boys enhances considerably after KELM Programme.

4) The mean score of achievement test for experimental group is higher than control group of girls, which shows KELM Programme is more effective for girls of experimental group. Experiential Learning of girls enhances considerably after KELM Programme.

5) There is no significant difference in mean scores of achievement test between students of high SES and low SES for experimental group, which shows that there is no SES effect on effectiveness of KELM Programme. KELM Programme is equally effective for high SES and low SES.

6) There is no significant difference in mean scores of achievement test between boys and girls of high SES for experimental group, which shows that there is no gender effect on effectiveness of KELM programme. KELM Programme is equally effective high SES having on for boys and girls.

7) There is no significant difference in mean scores of achievement test between boys and girls of low SES for experimental group, which shows that there is no gender effect on effectiveness of KELM programme. KELM Programme is equally effective low SES having on for boys and girls.
8) There is no significant difference in mean scores of achievement test between high SES and low SES of boys for experimental group, which shows that there is no SES effect on effectiveness of KELM programme. KELM Programme is equally effective on boys of experimental group having high SES and low SES.

9) There is no significant difference in mean scores of achievement test between high SES and low SES of girls for experimental group, which shows that there is no SES effect on effectiveness of KELM programme. KELM Programme is equally effective on girls of experimental group having high SES and low SES.

10) There is significant difference between the mean score of high SES students of experimental group than that of control group. The mean score of experimental group is higher than the control group which shows that KELM Programme is more effective on the students of experimental group having high SES.

11) There is significant difference between the mean score of low SES students of experimental group than that of control group. The mean score of experimental group is higher than the control group which shows that KELM Programmed is more effective on the students of experimental group having low SES.

12) There is significant difference in KELM Score of high IQ and low IQ of experimental group since the mean score of students having high IQ is higher than that of students having low IQ Experiential Learning of students having high IQ is higher than that of students having low IQ for experimental group.

13) There is no significant difference in mean scores of achievement test between boys and girls of high IQ for experimental group, which shows that there is no gender effect on effectiveness of KELM programme. KELM Programme is equally effective of high IQ for boys and girls.

14) There is no significant difference in mean scores of achievement test between boys and girls of low IQ for experimental group, which shows that there is no gender effect on effectiveness of KELM programme. KELM Programme is equally effective of low IQ for boys and girls.
15) There is significant difference between the mean score on boys of high IQ than that of low IQ for experimental group. The mean score on boys of high IQ is higher than the low IQ for experimental group which shows that KELM Programme is more effective on the boys of experimental group having high IQ.

16) There is significant difference between the mean score on girls of high IQ than that of low IQ for experimental group. The mean score on girls of high IQ is higher than the low IQ for experimental group which shows that KELM Programme is more effective on the girls of experimental group having high IQ.

17) There is significance difference between the mean Score of high IQ of experimental group and control group. The mean score of achievement test for experimental group is higher than the control group which shows effectiveness of KELM Programme for students of experimental group having high IQ.

18) There is significance difference between the mean Score of low IQ of experimental group and control group. The mean score of achievement test for experimental group is higher than the achievement test for control group which shows effectiveness of KELM Programme for students’ experimental group having low IQ.

8.4 Implications Of The Study:

Following are the educational implications of the present study,

1) KELM Programme can be used to enhance of Experiential Learning students of 9th standard.

2) KELM Programme can be used to enhance of Experiential Learning of students of any gender as there is no gender effect found on Experiential Learning of boys and girls.

3) A four stage cycle of Kolb’S experiential learning model like Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization
Active experimentation (AE) can be used during curriculum transaction to enhance experiential learning of students.

4) Problems could be identified in text book of all subjects and discussed in classroom to promote problem solving skills of students.

5) Activities promoting analysis could be designed and used in classroom to promote analysis stage of active experimentation.

6) Students find it easy to understand data and problems if their Stages and relationships are presented in form of figure.

7) Students easily find out activities were your experience and new activities were created in your mind for future.

8) Programme can be helpful to students to understand the difficult units of social science subject easily.

9) KELM Programme could be helpful to students in future during problems related to social or interpersonal issues.

10) While applying KELM Programme, well organized questions needs to ask as it lead students to think logically and practically.

11) The worksheet should be developed for the textbook curriculum similar to the worksheets developed during the programme as it enhances KELM.

8.5 Observations Of The Study:

Following are the observations of the present study,

1) Students found KELM Programme very interesting and found willing to undergo such programme in future.

2) By the investigators experience with KELM Programme it was seen that it could be easily adopted by students of secondary school.

3) Students found that KELM Programme helped them to improve their achievement and solving problems.

4) Students found items of KELM programme thought provoking and they had enjoyed solving such problems.

5) Students were willing to undergo such KELM programme in future.
6) Students felt change in their logical level at the end of KELM Programme.
7) Worksheets used during the programme were very effective and all students found it very useful.

8.6 Suggestions From The Study:
1) KELM Programme could be included in pre-service and in-service training programme for teachers to develop understanding of experiential learning.
2) Teacher Educators could also be under go this KELM programme, so that they can be competent enough to train their students teachers regarding this.
3) Basic concept of experiential learning, of Kolb’s model and stages could be included at M.Ed. level to aware students about learning.
4) Areas of KEML Programme could be found in curriculum to enhance learning.
5) Logical questioning could be included in classroom teaching to promote experience.
6) Problems in the subject text could be listed and put before students to promote problem solving, especially in mathematics and science.
7) Stages of Experiential Learning could be kept in mind while designing curriculum.
8) Assignments and Exercises could be designed promoting stages of Experiential Learning.
9) Questions assessing experience thinking could be included in exam papers.

8.7 Recommendations For Further Studies:
Based on the present study, the investigator felt the need for under taken the following studies regarding KEML Programme.
1) Similar study could be conducted on large sample.
2) Similar study could be conducted on students of class VIII and X.
3) The present study was under taken for the content other than secondary curriculum. KEML programme could be prepared for the various secondary school subjects like mathematics, science, language etc.
4) The effectiveness of KELM Programme under individual and collaborative learning models can be studied.

5) Similar study could be conducted with variables other than variable used in present study.

6) Study to develop thinking skills strategies could be done.

7) KELM programme could be developed and its effectiveness could be studied for the content oriented to human life.

8) A long term study on the same line could be done to study effectiveness of KELM programme on student’s achievement.

9) Effect of different stages of human development on experiential thinking could be studied to design learning strategies.

10) Effectiveness of various experiential learning models could be studied in Indian context.

11) Effectiveness of teaching strategies for enhancing experiential learning of gifted and talented students could be studied.

12) Study regarding development of activities, assignments, worksheet etc could be done for the existing text book curriculum.

13) KELM programme for parents could be developed and studied.

14) KELM Programme based on poetry, Jokes, Short Stories, films, SMS, pictures, Role play, YouTube could be developed and study its effectiveness.