CHAPTER NO. VII

SUMMARY AND CONCLUSIONS
7.1 INTRODUCTION.

The impact of philosophical, sociological and scientific innovations on education is so great that consequently changes in educational settings, methodologies and objectives are a must. Teacher has multidimensional roles to play. Teaching is an activity designed to assist the learner to attain multiple objectives, pupils differential potentialities, personality patterns and learning styles. To cope with multidimensional objectives of teaching and variety of pupils, teacher has to employ different tactics of instructions.

To provide all round development, teachers need to design suitable instructional strategies which help the students grow emotionally, physically, socially and intellectually. Teachers need to know how to modify the behaviour of the students so that they function effectively in changing society. Moreover, the learning theories have also been emphasized too much in teacher education but they could not solve the classroom's problems. As a result, the educational institutions are not able to produce efficient teachers. Now there is a shift from learning theories to teaching theories, in the context of education. The educationalists and psychologists have made efforts to evolve teaching theories. Researchers in foreign countries have tried to formulate some teaching strategies, commonly known as Models of teaching.
Bruce Joyce & Marsha Weil (1972) have transformed these theoretical plans into practical procedures to be used by teachers in natural classroom setting. The term 'Models of teaching' have been defined by Joyce Bruce & Marsha Weil, "As an instructional design". These Models describe the process of specifying & producing particular environmental situation which causes interest in the student and a specific change occurs in his or her behaviour. Bruce & Weil have warned that a Model of teaching is not a simple fixed formula for completing the subject. It provides guide lines of creating an environment from which students are likely to learn certain kind of things but it has to be flexible so as to modify it to fit different types of subject matter and individual learner.

7.2 STATEMENT OF THE PROBLEM.

"Comparison of Advance Organiser and Reception Strategies for acquisition of Language Concepts in relation to Cognitive style, Intelligence and Creativity".

7.3 OBJECTIVES OF STUDY.

The study was carried to find the answers for the following:

(1) Whether acquisition of concepts is affected by strategies of concept attainment and advance organiser or not.

(2) Whether acquisition of concepts by a learner and his creativity are independent of each other or not.
Whether students possessing different cognitive styles differ in acquiring concepts.

Whether students having differential intelligence differ in attaining concepts.

Whether there is any interaction between strategies of teaching concepts and intelligence level of the learner.

Whether there is interaction between strategies of teaching and cognitive style.

Whether there is any interaction between strategies of teaching concepts and creative level of the learner.

7.4 **Hypotheses:**

The study was advanced on the basis of hypotheses given below:

1. There will be significant difference in the acquisition of concepts of the group taught through Reception Strategy and the group taught through Advance Organiser Strategy.

2. There will be significant difference in the acquisition of concepts of groups having differential cognitive styles.

3. There will be significant difference in the acquisition of concepts of groups having different intelligence levels.
4. There will be significant difference in the acquisition of concepts of groups having different creative levels.

5(a) There will be a significant interaction between strategies of teaching and intelligence.

5(b) There will be no significant interaction between strategies of teaching and creativity.

5(c) There will be a significant interaction between strategies of teaching and cognitive style.

5(d) No significant interaction will be found between intelligence and creativity.

5(e) There will be a significant interaction between intelligence and cognitive style.

5(f) There will be a significant interaction between creativity and cognitive style.

6(a) There will be a significant interaction among strategy of teaching, intelligence and creativity.

6(b) There will be significant interaction among strategy of teaching, intelligence and cognitive style.

6(c) There will be significant interaction among intelligence, creativity and cognitive style.

6(d) There will be no significant difference among strategy of teaching, cognitive style and creativity.
7. There will be no interactional effect in terms of acquisition of concepts among strategies of teaching, creativity, intelligence and cognitive style.

7.5 Sample

For the present study the students enrolled in 9th Class during 1987-88 in different schools in Chandigarh formed the population. Out of these schools five schools were randomly selected. Total sample consisted of 288 students. Half of them were assigned randomly to each teaching strategy. The students of group-I were taught with C.A.M. and group-II with A.O.M.

7.6 Tools Used

1. To measure intelligence level Jalota Test was used (General Mental Ability Revised Hindi Version 1981).

2. To measure creativity Torrence Test of Creativity (both Forms A and B) was used.

3. To identify cognitive style Group Figure Embedded Test by Witsen was used.

4. A test to measure achievement of concepts was developed by the investigator.
7.7 PROCE D U R E.

The scheme for the experiment was as under:

**STEP-I**
Following tests were administered on total samples:

(i) Achievement test as a pre-test.

(ii) Jalota test to measure intelligence level of the students.

(iii) Torrence Test of creativity to measure creative level of the students.

(iv) Group Figure Embedded test to identify cognitive style of the students.

**STEP-II**
Total sample was divided into two equal groups. Concepts of Hindi language were taught to group I and II through Concert Attainment Model and Advance Organiser Model respectively.

**STEP-III**
At the end of teaching the same achievement test which was used as a post-test.

**STEP-IV**
After one month same achievement test was administered as a retention-test.
**TABLE 7.1**

Summary of Analysis of Variance (Achievement Gain Scores)

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>d.f</th>
<th>S.S</th>
<th>M.V.</th>
<th>F-ratio</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>5954.00</td>
<td>5954.00</td>
<td>85.67</td>
<td>Significant at 0.01</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>144.5</td>
<td>144.5</td>
<td>2.08</td>
<td>Non significant</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>99.9</td>
<td>99.9</td>
<td>1.44</td>
<td>Non significant</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>710.9</td>
<td>710.9</td>
<td>10.23</td>
<td>Significant at 0.01</td>
</tr>
<tr>
<td>AxB</td>
<td>1</td>
<td>385.4</td>
<td>385.4</td>
<td>5.55</td>
<td>Significant at 0.05</td>
</tr>
<tr>
<td>AxC</td>
<td>1</td>
<td>180.2</td>
<td>180.2</td>
<td>2.59</td>
<td>Non significant</td>
</tr>
<tr>
<td>AxD</td>
<td>1</td>
<td>79.2</td>
<td>79.2</td>
<td>1.14</td>
<td>Non significant</td>
</tr>
<tr>
<td>BxC</td>
<td>1</td>
<td>67.4</td>
<td>67.4</td>
<td>0.97</td>
<td>Non significant</td>
</tr>
<tr>
<td>BxD</td>
<td>1</td>
<td>1817.6</td>
<td>1817.6</td>
<td>26.15</td>
<td>Significant at 0.01</td>
</tr>
<tr>
<td>CxD</td>
<td>1</td>
<td>50.8</td>
<td>50.8</td>
<td>0.73</td>
<td>Non significant</td>
</tr>
<tr>
<td>AxBxC</td>
<td>1</td>
<td>221.9</td>
<td>221.9</td>
<td>3.19</td>
<td>Non significant</td>
</tr>
<tr>
<td>AxCxD</td>
<td>1</td>
<td>22.1</td>
<td>22.1</td>
<td>0.32</td>
<td>Non significant</td>
</tr>
<tr>
<td>AxBxD</td>
<td>1</td>
<td>131.8</td>
<td>131.8</td>
<td>1.90</td>
<td>Non significant</td>
</tr>
<tr>
<td>BxCxD</td>
<td>1</td>
<td>140.8</td>
<td>140.8</td>
<td>2.02</td>
<td>Non significant</td>
</tr>
<tr>
<td>AxBxCxD</td>
<td>1</td>
<td>131.5</td>
<td>131.5</td>
<td>1.89</td>
<td>Non significant</td>
</tr>
</tbody>
</table>

\[ W_w = S S_w = 272 \]

Total                      | 287 | 29043   |
### TABLE 7.2

**Main Effect (Retention)**

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>df</th>
<th>SS</th>
<th>MV</th>
<th>F-ratio</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>2877.3</td>
<td>2877.3</td>
<td>143.9</td>
<td>Significant at 0.01</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>129.2</td>
<td>129.2</td>
<td>6.46</td>
<td>Significant at 0.05</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>84.1</td>
<td>84.1</td>
<td>4.21</td>
<td>Significant at 0.05</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>39.5</td>
<td>39.5</td>
<td>1.98</td>
<td>Non significant</td>
</tr>
<tr>
<td>EV= S _w</td>
<td>272</td>
<td>5435.00</td>
<td>20.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>287</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A**-TEACHING MODEL

**B**-COGNITIVE STYLE

**C**-INTELLIGENCE

**D**-CREATIVITY
7.8 RESULTS

The data were analysed using descriptive statistics such as mean, median, standard deviation, skewness and kurtosis. To test the hypotheses, analysis of variance (2x2x2x2) measures was employed. In order to test the significance of difference between means, t-ratios were also calculated. The results are given in table 7.1 and table 7.2.

7.9 CONCLUSIONS

1. Concept Attainment strategy was found to be more effective mode of Teaching Hindi Concepts as compared to Advance Organiser Strategy.

2. Intelligence levels acted as a redundant factor so far as learning of concepts in Hindi language were concerned.

3. There were no significant differences in achievement scores of field dependent and field independent students when taught through any one of the two strategies, but the mean achievement score was high with C.A.M. in comparison to that of A.O.M.
4. Highly creative and low creative students did not differ much on achievement in Hindi language concepts when taught through same teaching strategy. However, the mean achievement scores of the group exposed to C.A.M. was higher than the mean achievement scores of group taught through advance organiser strategy.

5. Both strategies of teaching concepts were found to be equally suitable with students belonging to all levels of intelligence.

6. Cognitive style and intelligence did not interact significantly to produce differential achievement in Hindi language concepts.

7. Interaction between cognitive style and creativity was found to be significant at 0.01 level. Highly creative and field independent students scored high in comparison to high creative, low creative and field dependent students.

8. Field dependent low creative students achieve significantly higher than field independent low creative students.

9. Interaction between levels of intelligence and creativity was found to be insignificant to produce differential achievement scores.
10. The variables namely teaching model, cognitive style and intelligence level did not interact significantly to produce differential achievement.

11. The interaction between teaching model, level of intelligence and levels of creativity is found to be insignificant.

12. Teaching model, cognitive style and levels of creativity did not interact significantly.

13. The interaction between cognitive style, levels of intelligence and levels of creativity was non significant.

14. The interaction involving the variables of teaching models, intelligence levels, cognitive styles and creativity levels was found to be insignificant.

15. The student taught with C.A.M. retained much more in comparison to students taught with A.O.M.

16. Field independent students retained more than field dependent students.

17. High intelligence students retained more than low intelligence students.

18. Creativity acted as a redundant factor towards retention of scores.
7.10 IMPLICATIONS AND APPLICATIONS OF THE PRESENT STUDY:

The findings of the present study have some very important implications for improving the quality of instructions in the teaching of concept of Hindi language at high school stage which may be summarised as below:

Concept Attainment Model was found to be superior to Advance Organiser Model. The Hindi teachers must introduce C.A.M. to teach Concepts of Hindi Grammar at high school level. To make the subject matter more clear the use of negative and positive examples is recommended.

Highly creative and low creative students did not differ much on achievement in Hindi language concepts when taught through same teaching strategy. However, the mean achievement scores of the group exposed to C.A.M were higher than the mean achievement scores of group taught through advance organiser strategy.

Level of intelligence and cognitive style were found to be redundant factors for achievement in concepts of Hindi Language. The Hindi teachers may neglect the intelligence levels and cognitive styles of the students in their lessons, while teaching through C.A.M.

Before introducing C.A.M. in the schools, the teachers must be trained properly to utilise the model. For this, application of modern educational technology should be stressed upon.
7.11 SUGGESTIONS FOR FURTHER STUDIES.

1. The present study may be conducted in other subjects at high school level.

2. The present study can be conducted by involving more topics of Hindi Grammar at high school level.

3. Studies may be conducted by involving more variables.

4. The present study may be conducted at college level in other subjects.

5. Further studies can be made by involving other strategies of teaching Concepts, rules or problem solving.