## INDEX

<table>
<thead>
<tr>
<th>CHAPTER CONTENT</th>
<th>PAGE NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgement</td>
<td>i</td>
</tr>
<tr>
<td>Index</td>
<td>ii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>viii</td>
</tr>
<tr>
<td>List of Graphs</td>
<td>xi</td>
</tr>
<tr>
<td>List of Charts</td>
<td>xiii</td>
</tr>
<tr>
<td><strong>1</strong> ABOUT THE PRESENT STUDY</td>
<td>1</td>
</tr>
<tr>
<td>1.1.0 Introduction</td>
<td>2</td>
</tr>
<tr>
<td>1.2.0 Instruction Media in Education</td>
<td>3</td>
</tr>
<tr>
<td>1.3.0 Educational Arena of Computer</td>
<td>5</td>
</tr>
<tr>
<td>1.4.0 Computers in school</td>
<td>7</td>
</tr>
<tr>
<td>1.5.0 CAI a brief overview</td>
<td>8</td>
</tr>
<tr>
<td>1.5.1 The origin of CAI</td>
<td>9</td>
</tr>
<tr>
<td>1.5.2 Historic overview of CAI</td>
<td>9</td>
</tr>
<tr>
<td>1.5.3 Types of Computer Assisted Instruction</td>
<td>10</td>
</tr>
<tr>
<td>1.5.4 Characteristics of CAI</td>
<td>13</td>
</tr>
<tr>
<td>1.5.5 Advantages and Disadvantages of CAI</td>
<td>14</td>
</tr>
<tr>
<td>1.5.6 Scope of CAI in future</td>
<td>15</td>
</tr>
<tr>
<td>1.6.0 Rationale</td>
<td>16</td>
</tr>
<tr>
<td>1.7.0 Statement of the problem</td>
<td>17</td>
</tr>
<tr>
<td>1.8.0 The terms defined</td>
<td>17</td>
</tr>
<tr>
<td>1.9.0 Objectives of the study</td>
<td>18</td>
</tr>
<tr>
<td>1.10.0 Hypothesis</td>
<td>19</td>
</tr>
<tr>
<td>1.11.0 Importance of the study</td>
<td>21</td>
</tr>
<tr>
<td>1.12.0 Limitation of the study</td>
<td>22</td>
</tr>
<tr>
<td>1.13.0 Scheme of Chapterization</td>
<td>22</td>
</tr>
<tr>
<td>1.14.0 Conclusion</td>
<td>23</td>
</tr>
</tbody>
</table>
# 2 REVIEW OF RELATED LITERATURE

2.1.0 Introduction 25

2.2.0 Review of related literature conducted in India 26
   2.2.1 Review of the related literature in SCIENCE 26
   2.2.2 Review of the related literature in GENERAL SUBJECT 36
   2.2.3 Observations of researches from India 45

2.3.0 Review of related literature conducted abroad 46
   2.3.1 Observations of researches from abroad 58

2.4.0 Implication for the present study 59

# 3 RESEARCH DESIGN AND METHODOLOGY

3.1.0 Introduction 62

3.2.0 Origin of the study 62

3.3.0 Design of the study 63

3.4.0 Variables of the study 65

3.5.0 Population of the study 65

3.6.0 Validity of the experimental design 66
   3.6.1 Internal validity 66
   3.6.2 External validity 68

3.7.0 Sample of the study 69

3.8.0 Tools for data collection 71

3.9.0 Development of the CAI package 73
   3.9.1 Stages for development of CAI package 74

3.10.0 Procedure for data collection 79

3.11.0 Statistical analysis 80

3.12.0 Conclusion 80

# 4 ANALYSIS AND INTERPRETATION OF DATA

4.1.0 Introduction 82

4.2.0 Analysis and interpretation of the obtained data through Analysis of Co-Variance 82
4.2.1 Analysis of Co Variance and interpretation of post test score of Control and experimental group by considering pre test and IQ as a Co Variable for rural area

4.2.2 Analysis of Co Variance and interpretation of post test score of Control and experimental group by considering pre test and IQ as a Co Variable for urban area

4.2.3 Analysis of Co Variance and interpretation of post test score of Control and experimental group by considering pre test and IQ as a Co Variable for rural and urban area

4.3.0 Factorial analysis and interpretation of the obtained data through Analysis of Co variance

4.3.1 2 × 2 Factorial Analysis of Co Variance and interpretation of the data for teaching method, gender by considering pre-test and IQ as a Co Variable

4.3.2 2 × 2 Factorial Analysis of Co Variance and interpretation of the data for teaching method and area by considering pre-test and IQ as a Co Variable

4.3.3 2 × 2 × 2 Factorial Analysis of Co Variance and interpretation of the data for teaching method gender and area by considering pre-test and IQ as a Co Variable

4.4.0 Analysis and interpretation of the obtained data of experimental group through Analysis of Co variance

4.4.1 Analysis of Co Variance and interpretation of post test score of Boys of the experimental group of the rural and urban area by considering pre test and IQ as a Co Variable

4.4.2 Analysis of Co Variance and interpretation of post test score of Girls of the experimental group of the rural and urban area by considering pre test and IQ as a Co Variable

4.4.3 Analysis of Co Variance and interpretation of post test score of Girls and Boys of the experimental group of the urban area by considering pre test and IQ as a Co Variable
4.4.4 Analysis of Co Variance and interpretation of post test score of Girls and Boys of the experimental group of the rural area by considering pre test and IQ as a Co Variable

4.4.5 Analysis of Co Variance and interpretation of post test score of Girls and Boys of the experimental groups by considering pre test and IQ as a Co Variable

4.4.6 Analysis of Co Variance and interpretation of post test score of the experimental groups of rural and urban area by considering pre test and IQ as a Co Variable

4.5.0 Analysis and interpretation of the opinion of the students of experimental group obtained through opinionnaire

4.5.1 Analysis and interpretation of the opinion of the students of the experimental group of rural area obtained through opinionnaire

4.5.2 Analysis and interpretation of the opinion of the students of the experimental group of urban area obtained through opinionnaire

4.5.3 Analysis and interpretation of the opinion through contingency table for the Boys and girls of the experimental groups obtained through opinionnaire

4.6.0 Conclusion

5 SUMMARY, FINDINGS, EDUCATIONAL IMPLICATIONS AND SUGGESTION

5.1.0 Introduction

5.2.0 Rationale of the study

5.3.0 Summary

5.3.1 Statement of the problem

5.3.2 Objectives of the study

5.3.3 Hypothesis

5.3.4 Population of the study

5.3.5 Sample of the study

5.3.6 Tools for data collection
5.3.7 Design of the study

5.3.8 Variables of the study

5.3.9 Statistical analysis

5.4.0 Major findings

5.4.1 Findings of the obtained data through analysis of Covariance

5.4.1.1 Findings regarding post test score of Control and experimental group by considering pre test and IQ as a Co Variable for rural area

5.4.1.2 Findings regarding post test score of Control and experimental group by considering pre test and IQ as a Co Variable for urban area

5.4.1.3 Findings regarding post test score of Control and experimental group by considering pre test and IQ as a Co Variable for rural and urban area

5.4.2 Findings of the obtained data through Factorial analysis of Analysis of Co variance

5.4.2.1 Findings regarding post test score of teaching method, gender and their interaction by considering pre test and IQ as a Co Variable

5.4.2.2 Findings regarding post test score of teaching method, area and their interaction by considering pre test and IQ as a Co Variable

5.4.2.3 Findings regarding post test score of teaching method, gender, area and their interaction by considering pre test and IQ as a Co Variable

5.4.3 Findings of the obtained data of the experimental group through analysis of Covariance

5.4.3.1 Findings regarding post test score of the boys of experimental group of urban and rural area by considering pre test score and IQ as co variable
5.4.3.2 Findings regarding post test score of the girls of experimental group of urban and rural area by considering pre test score and IQ as co variable

5.4.3.3 Findings regarding post test score of the girls and boys of experimental group of urban area by considering pre test score and IQ as co variable

5.4.3.4 Findings regarding post test score of the girls and boys of experimental group of rural area by considering pre test score and IQ as co variable

5.4.3.5 Findings regarding post test score of the girls and boys of experimental groups by considering pre test score and IQ as co variable

5.4.3.6 Findings regarding post test score of the experimental groups of rural and urban area by considering pre test score and IQ as co variable

5.4.4 Findings on the opinions of the students obtained through opinionnaire

5.4.4.1 Findings on the opinions of the students learning through Computer Assisted Instruction

5.4.4.2 Findings on the opinions of the students as per gender learning through Computer Assisted Instruction

5.5.0 Educational implications

5.6.0 Suggestion for the further study

5.7.0 Conclusion

BIBLIOGRAPHY

APPENDICES

Appendix 1: Desai Verbal and Non-verbal Group Intelligence Test
Appendix 2: Achievement Test
Appendix 3: Opinionnaire
Appendix 4: CAI Program