## Page **Table title** no. 1.1 Taxonomy Table (Two-Dimensional Matrix) 18 3.1 Item pool for CATS 86 3.2 Blue print of CATS for pilot study 89 3.3 Scores of Students in the CATS for pilot study 92 3.4 Item Analysis Values for Cognitive Ability Test for Science (CATS) 95 3.5 Blue print for the final draft of CATS 99 3.6 Item pool for Creativity Test for Science (CTS) 100 4.1 Mean, SD and N values of achievement in CATS of students 103 4.2: Levene's Test for Equality of Variances 104 4.3: Summary of 2X2X3 Factorial Design ANOVA of Achievement in CATS of 105 Students 4.4: Duncan's Multiple Range Test for CATS 106 4.5: Gender-wise and Medium of Instruction-wise mean scores of Achievement in 107 CATS 4.6: Gender-wise and Type of School-wise mean scores of Achievement in CATS 108 4.7: Levene's Test for Equality of Variances 108 4.8: Summary of 2X2X3 Factorial Design ANOVA of Achievement in Chemistry 109 of Students 4.9: Duncan's Multiple Range Test for Chemistry 110 4.10: Gender-wise and Medium of Instruction-wise mean scores of Achievement 111 in Chemistry 4.11: Gender-wise and Type of School-wise mean scores of Achievement in 112 Chemistry 4.12: Levene's Test for Equality of Variances 112 4.13: Effect of Gender, Medium of Instruction, Type of School and Their 113

## LIST OF TABLES

Interactions on Scores in Physics of Physics	
4.14: Medium of Instruction-wise Mean Achievement Scores in Physics	114
4.15: Duncan's Multiple Range Test for Physics	114
4.16: Gender-wise and Medium of Instruction-wise mean scores of Achievement	115
in Physics	
4.17: Gender-wise and Type of School-wise mean scores of Achievement in	116
Physics	
4.18: Levene's Test for Equality of Variances	116
4.19: Effect of Gender, Medium of Instruction, Type of School and Their	117
Interactions on Scores in Biology of CATS	
4.20: Medium of Instruction-wise Mean Achievement Scores in Biology	118
4.21: Duncan's Multiple Range Test for Biology	118
4.22: Gender-wise and Medium of Instruction-wise mean scores of Achievement	119
in Physics	
4.23: Gender-wise and Type of School-wise mean scores of Achievement in	120
Biology	
4.24: Mean Achievement scores of students for each level of CATS	121
4.25: Achievement of Students for Remember level	121
4.26: Achievement of Students for Understand level	122
4.27: Achievement of Students for Apply level	124
4.28: Achievement of Students for Analyze level	125
4.29: Achievement of Students for Evaluate level	126
4.30 Summary of Type of school-wise Significance of Differences	127
4.31 Summary of Significance of Differences for each level of CATS	128
4.32: Correlation coefficient between students Achievement in CATS and	129
Academic Achievement in Science	
4.33: Correlation coefficient between Achievement in CATS and Academic	129
Achievement in Science of Male Students	
4.34: Correlation coefficient between Achievement in CATS and Academic	130

Achievement in Science of Female Students	
4.35: Correlation coefficient between Achievement in CATS and Academic	
Achievement in Science of Students of English medium schools	
4.36: Correlation coefficient between Achievement in CATS and Academic	131
Achievement in Science of Students of Gujarati medium schools	
4.37: Correlation coefficient between Achievement in CATS and Academic	132
Achievement in Science of Students of Government schools	
4.38: Correlation coefficient between Achievement in CATS and Academic	132
Achievement in Science of Students of Grant-in-aid schools	
4.39: Correlation coefficient between Achievement in CATS and Academic	133
Achievement in Science of Students of Private schools	
4.40: Values of Correlation coefficient between Achievement in CATS and	133
Academic Achievement in Science of Students	
4.41: Frequency and Percentage of Respondents to CTS	135

## LIST OF FIGURES

Figure Title	Page No.
1.1 Bloom's Original Taxonomy	13
1.2 Bloom's Revised Taxonomy	17

## LIST OF APPENDICES

Appendices No.	Content	
Appendix A	Draft of CATS for Pilot Study (English)	i
Appendix B	Draft of CATS for Pilot Study (Gujarati)	xxxvii
Appendix C	Draft of CTS for Pilot Study (English)	lxxi
Appendix D	Draft of CTS for Pilot Study (Gujarati)	lxxiv
Appendix E	Raw Data for Computing Split Half Reliability for Pilot	lxxvii

	Study	
Appendix F	Final Draft of CATS (English)	lxxxi
Appendix G	Final Draft of CATS (Gujarati)	cxiii
Appendix H	Final Draft of CTS (English)	cxliii
Appendix I	Final Draft of CTS (Gujarati)	cxliv
Appendix J	List of Experts	cxlv
Appendix K	Letter to DEO	cxlvi
Appendix L	Permission Letter from DEO to Schools	cxlvii