Table 2.1 Understanding the Domain of Reflection ...........................................25
Table 2.2 Promotion of Reflection through Prominent Strategies .................35
Table 2.3 Comparison between Reflective Writing and Descriptive Writing ........................................................................................................52
Table 2.4 Graphic Primitives and their Specificities ........................................60
Table 4.1 Distribution of sample ...................................................................122
Table 4.2 Details of Six Subgroups of Pupils Selected for Focus Group Discussion ........................................................................123
Table 4.3 Details of Analytical Supports and Techniques Employed for Data Collection .................................................................................125
Table 4.4 Knowledge Dimensions of the Revised Bloom’s Taxonomy ..........130
Table 4.5 Mapping of Items onto Taxonomy Table ........................................132
Table 4.6 Checklist for the Rubric ..................................................................137
Table 4.7 Developmental Levels of Rubric .....................................................140
Table 4.8 Activational Dimensions of Reflective Thinking .........................147
Table 5.1 Details of Opinions of Teachers Regarding the Functional Dimensions of Mathematically Proficient Learner (Item No. 3) ..........198
Table 5.2 Challenges and Impediments in Actualizing Mathematical Proficiency-Teacher’s Responses .........................................................201
Table 5.3 Details of Suggestions for Optimizing Mathematical Thinking Scenario ..............................................................................................202
Table 5.4 Details Regarding the Facilitators and Constraints in Practicing PBL, Reflective Journaling and Thinking Maps ....................................205
Table 5.5 Observation and Ratings of Design Qualities of the Select Designs .................................................................................................209
Table 5.6 Data and Results of the Test of significance of the Mean Pre test Scores of Achievement between Experimental I and Control Group .................................................................214
Table 5.7 Data and Results of the Test of Significance of the Mean Post test Scores of Achievement between Experimental I and Control Group ..............................................................................215
Table 5.8 Summary of ANCOVA of Pre test and Post test Achievement Scores in the Experimental I and Control Groups for Total Sample ..............................................................................217
Table 5.9 Summary of ANCOVA of Pre test and Post test Scores in the Experimental and Control Groups for Urban Sub Sample ...............217
Table 5.10 Summary of ANCOVA of Pre test and Post test Scores in the Experimental and Control Groups of Rural Sub Sample ....................218
Table 5.11 Summary of ANCOVA of the Pre test and Post test Scores in the Experimental and Control Groups of Male Sub Sample ..........................................................218
Table 5.12 Summary of ANCOVA of Pre test and Post test Scores in the Experimental and Control Groups of Female Sub Sample ..........................................................218
Table 5.13 Adjusted Mean of the Post test Scores of Experimental Group for Total Sample, Locale wise and Gender wise Sub Samples..........................................................219
Table 5.14 Data and Results of the Test of Significance of the Mean Pre test Scores of Reflective Thinking Levels between Experimental I and Control Groups .....................................223
Table 5.15 Data and Results of the Test of Significance of the Mean Post test Scores of Reflective Thinking Levels between Experimental I and Control Groups .....................................224
Table 5.16 Summary of ANCOVA of Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Total Sample ........................................226
Table 5.17 Summary of ANCOVA of Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Urban Sub Sample ........................................226
Table 5.18 Summary of ANCOVA of Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Rural Sub Sample ........................................226
Table 5.19 Summary of ANCOVA of Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Male Sub Sample ........................................227
Table 5.20 Summary of ANCOVA of Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Female Sub Sample ........................................227
Table 5.21 Adjusted Mean of the Post test Scores of Experimental Group for Total Sample, Locale wise and Gender wise Sub Sample ..........................................................228
Table 5.22 Percentage of Pupils under Novice, Basic, Proficient and Advanced Levels of Performance of Control Group ........................................230
Table 5.23 Percentage of Pupils under Novice, Basic, Proficient and Advanced Levels of Performance of Experimental Group I ........................................232

Table 5.25 Data and Results of the Test of Significance of the Mean Pre test Scores of Achievement between Experimental II and Control Group ..................................................239

Table 5.26 Data and Results of the Test of Significance of the Mean Post test Scores of Achievement between Experimental II and Control Group .................................................240

Table 5.27 Summary of ANCOVA of Pre test and Post test Achievement Stores in the Experimental II and Control Groups for Total Sample ..................................................242

Table 5.28 Summary of ANCOVA of Pre test and Post test Achievement Stores in the Experimental II and Control Groups for Urban Sub Sample .................................................242

Table 5.29 Summary of ANCOVA of Pre test and Post test Achievement Stores in the Experimental II and Control Groups for Rural Sub Sample .................................................242

Table 5.30 Summary of ANCOVA of Pre test and Post test Achievement Stores in the Experimental II and Control Groups for Male Sample ..................................................243

Table 5.31 Summary of ANCOVA of Pre test and Post test Achievement Stores in the Experimental II and Control Groups for Female Sample ..................................................243

Table 5.32 Adjusted Mean of the Post test Scores of Experimental Group for Total Sample, Locale wise and Gender wise Sub Samples ..................................................244

Table 5.33 Data and Results of the Test of Significance of the Mean Pre test Scores of Reflective Thinking Levels between Experimental II and Control Group ..........................248

Table 5.34 Data and Results of the Test of Significance of the Mean Post test scores of Reflective Thinking Levels between Experimental Group II and Control Group ..........................249

Table 5.35 Summary of ANCOVA Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Total Sample ..........................250

Table 5.36 Summary of ANCOVA Pre test and Post test Scores of Level of Reflective Thinking in the Experimental II and Control Groups for Urban Sub Sample ..........................251

Table 5.37 Summary of ANCOVA Pre test and Post test Scores of Level of Reflective Thinking in the Experimental and Control Groups for Rural Sub Sample ..........................251
Table 5.38 Summary of ANCOVA Pre test and Post test Scores of Level of Reflective Thinking in the Experimental II and Control Groups for Male Sub Sample ................................................251

Table 5.39 Summary of ANCOVA Pre test and Post test Scores of Level of Reflective Thinking in the Experimental II and Control Groups for Female Sub Sample .............................................252

Table 5.40 Adjusted Mean of the Post test Scores of Experimental Group II for Total Sample, Locale wise and Gender wise Sub Sample .........................................................................................253

Table 5.41 Percentage of Pupils under Novice, Basic, Proficient and Advanced Levels of Performance of Experimental Group II ............................................ 254

Table 5.42 Self Evaluation of the Appropriateness of Problem Based Learning Strategy towards Proliferating Reflectivity of Secondary School Pupils ............................................258

Table 5.43 Data and Results of the Test of Significance of the Mean Pre test Scores of Achievement between Experimental III and Control Groups ...................................................261

Table 5.44 Data and Results of the Test of Significance of the Mean Post test Scores of Achievement between Experimental III and Control Groups ........................................................................262

Table 5.45 Summary of ANCOVA of Pre test and Post test Achievement Scores in the Experimental III and Control Group for Total Sample .................................................................264

Table 5.46 Summary of ANCOVA of Pre test and Post test Achievement Scores in the Experimental III and Control Group for Urban Sub Sample .................................................................264

Table 5.47 Summary of ANCOVA of Pre test and Post test Achievement Scores in the Experimental III and Control Group for Rural Sub Sample ................................................................265

Table 5.48 Summary of ANCOVA of Pre test and Post test Achievement Scores in the Experimental III and Control Group for Male Sub Sample .................................................................265

Table 5.49 Summary of ANCOVA of Pre test and Post test Achievement Scores in the Experimental III and Control Group for Female Sub Sample ................................................................265

Table 5.50 Adjusted Mean of the Post test Scores of Experimental Group for Total Sample, Locale wise and Gender wise Sub Samples .........................................................................................266

Table 5.51 Data and Results of the Test of significance of the Mean Pre test Scores of Reflective Thinking levels between Experimental III and Control Group ...................................................270
Table 5.52 Data and Results of the Test of Significance of the Mean Post test Scores of Reflective Thinking Levels between Experimental III and Control Group

Table 5.53 Summary of ANCOVA of Pre test and Post test Scores of Levels of Reflective Thinking in the Experimental and Control Group for Total Sample

Table 5.54 Summary of ANCOVA of Pre test and Post test Scores of Levels of Reflective Thinking in the Experimental III and Control Group for Urban Sub Sample

Table 5.55 Summary of ANCOVA of Pre test and Post test Scores of Levels of Reflective Thinking in the Experimental III and Control Group for Rural Sub Sample

Table 5.56 Summary of ANCOVA of Pre test and Post test Scores of Levels of Reflective Thinking in the Experimental III and Control Group for Male Sub Sample

Table 5.57 Summary of ANCOVA of Pre test and Post test Scores of Levels of Reflective Thinking in the Experimental III and Control Group for Female Sub Sample

Table 5.58 Adjusted mean of the Post test Scores of Experimental Group III for Total Sample, Locale wise and Gender wise Sub Samples

Table 5.59 Percentage of Pupils under Novice, Basic, Proficient and Advanced Levels of Performance of Experimental Group III

Table 5.60 Self Evaluation of the Suitability of Thinking Map Strategy towards Proliferating Reflectivity of Secondary School Pupils

Table 5.61 Data and Results of Predicted Quartiles of Achievement Scores of Experimental Group I

Table 5.62 Data and Results of Predicted Quartiles of Level of Reflective Thinking Scores of Experimental Group I

Table 5.63 Data and Results of Predicted Quartiles of Achievement of Experimental Group II

Table 5.64 Data and Results of Predicted Quartiles of Reflective Thinking Level Scores of Experimental Group II

Table 5.65 Data and Results of Predicted Quartiles of Achievements Scores of Experimental Group III

Table 5.66 Data and Results of Predicted Quartiles of Level of Reflective Thinking of Experimental Group III

Table 6.1 Consolidated Results of Predicted Quartiles of the Select Three Experimental Groups