

## TABLE OF CONTENTS

### CHAPTER 1: INTRODUCTION

1.1 Background .....	1
1.2 Statement of Problem .....	1
1.3 Purpose of the Study .....	3
1.4 Research Questions .....	3
1.5 Significance of the Study .....	4
1.6 Delimitation of the Study .....	5
1.6.1 Nature and size of the subjects .....	5
1.6.2 Lesson content design and test excerpt design .....	6
1.6.3 Other issue .....	6
1.7 Definition of Terms .....	7
1.7.1 Thinking skills .....	7
1.7.2 Higher order thinking skills .....	8
1.7.3 Sight-reading .....	10
1.7.4 Middle-C position on piano keyboard .....	11
1.8 Summary .....	11

### CHAPTER 2: LITERATURE REVIEW

2.1 Introduction .....	12
2.2 Definition of Thinking Skills .....	12
2.2.1 Objectives and Philosophies of Teaching Thinking Skills .....	17
2.2.2 Curriculum of Thinking Skills in Academic and Music Teaching .....	19
2.2.3 Conclusion of Thinking Skills .....	22
2.3 Higher Order Thinking Skills .....	23

2.3.1 Definition of higher order thinking skills .....	23
2.3.2 Higher order thinking and lower order thinking .....	26
2.3.3 Cognitive taxonomies .....	28
2.3.3.1 Bloom’s taxonomy .....	28
2.3.3.2 Marzano’s Taxonomy .....	34
2.3.3.3 Integrated thinking model .....	39
2.3.3.4 Development of Higher Order Thinking Skills .....	41
2.3.3.5 Conclusion of Taxonomies and Thinking Levels .....	43
2.3.4 Higher Order Skills in Different Dimensions .....	44
2.3.4.1 Higher-Order thinking as transfer .....	44
2.3.4.2 Higher Order Thinking as Critical Thinking .....	45
2.3.4.3 Higher Order as Problem Solving .....	47
2.3.5 Summary of Higher Order Thinking Skills .....	49
2.4 Children’s Mental Development .....	50
2.5 Higher Order Thinking Involved in Music Curriculum .....	54
2.6 Introduction to Sight Reading Skill .....	55
2.6.1 Definition of Sight Reading .....	55
2.6.2 Overview of Piano Sight-reading Methods .....	57
2.6.3 Eye-Hand Movement – Visual Input of Sight Reading .....	58
2.6.4 Chunking in Sight Reading .....	59
2.6.5 The Effect of Chunking Tonal Patterns in Sight-Reading .....	59
2.6.6 Conclusion of Sight Reading Skill .....	60
2.7 Higher Order Thinking Skills in Sight Reading Skills .....	61
2.7.1 Higher Order Thinking Skills Versus Visual .....	63
2.7.2 Higher Order Thinking Skills versus Chunking .....	66
2.7.3 Memory Plays Role in Sight Reading .....	67

2.7.4 Conclusion of Higher Order Thinking Skills in Sight Reading .....	69
2.8 Other Sight Reading Approaches .....	70
2.9 Summary .....	72
CHAPTER 3: METHODOLOGY	
3.1 Overview of Methodology .....	74
3.2 Research Methodology .....	75
3.2.1 Research design .....	76
3.2.2 Observation .....	78
3.3 Field Work .....	80
3.3.1 Pilot study .....	80
3.3.2 In fieldwork .....	83
3.3.2.1 Procedure of teaching and observations .....	83
3.3.3 Data collection .....	84
3.3.4 Data analysis .....	84
3.3.4.1 Triangulation of data analysis .....	84
3.4 Participants .....	86
3.4.1 Criteria of selecting participants .....	87
3.4.2 Description of primary participants .....	89
3.4.2.1 Angeline .....	89
3.4.2.2 Afiq .....	90
3.4.2.3 Loke Shin Yi .....	91
3.4.2.4 Mitilan .....	91
3.4.3 Secondary participants .....	92
3.5 Review of Lessons .....	93
3.5.1 Objective of the lessons .....	93
3.5.2 Thinking skills involved of each lessons .....	94

3.5.3 Materials in each lesson and sight-reading sessions .....	95
3.5.4 Designation of sight-reading pretest and posttest content .....	95
3.5.5 Procedure of the teachings of each lesson .....	96
3.5.6 Duration of each lesson .....	97
3.6 Summary .....	99

## CHAPTER 4: ANALYSIS OF DATA AND FINDINGS

4.1 Analysis Reading Guides .....	100
4.2 Students Commitment and Manipulation in the Lessons .....	102
4.2.1 Commitment observation criteria .....	103
4.2.1.2 Commitment observation .....	103
4.2.1.3 Summary of commitment observation .....	106
4.2.2 Manipulation observation criteria .....	107
4.2.2.1 Manipulation observation .....	108
4.2.2.2 Summary of manipulation observation .....	111
4.2.3 Conclusions of commitment and manipulation observation .....	112
4.3 Role and Function of Higher Order Thinking Skills .....	113
4.3.1 Analyze .....	114
4.3.1.1 Lesson one .....	114
4.3.2 Evaluate .....	114
4.3.2.1 Lesson one .....	115
4.3.2.2 Lesson two .....	116
4.3.3 Critical thinking .....	116
4.3.3.1 Lesson two .....	116
4.3.4 Make decision .....	117
4.3.4.1 Lesson two .....	117
4.3.5 Coordinate .....	118

4.3.5.1 Lesson three .....	118
4.3.5.2 Lesson five .....	119
4.3.6 Problem solving .....	119
4.3.6.1 Lesson two .....	119
4.3.6.2 Lesson three .....	120
4.3.6.3 Lesson four .....	120
4.3.7 Differentiate .....	121
4.3.7.1 Lesson four .....	121
4.3.8 Combine .....	121
4.3.8.1 Lesson five .....	122
4.3.9 Conclusion of role and functions of higher order skills .....	122
4.4 Contribution of Higher Order Skills towards Sight Reading .....	124
4.4.1 Analyze in lesson one .....	125
4.4.1.1 Contribution of analyze in lesson one with examples .....	126
4.4.1.2 Outcome of analyze .....	127
4.4.2 Evaluate in lesson one .....	127
4.4.2.1 Contributions of evaluate to sight-reading with examples .....	127
4.4.3 Evaluate in lesson two .....	128
4.4.3.1 Contribution of evaluate to sight-reading with examples .....	130
4.4.3.2 Outcome of Evaluation towards lesson one and two .....	130
4.4.5 Critical thinking in lesson two .....	131
4.4.5.1 Contribution of critical thinking with examples .....	131
4.4.5.2 Outcome of critical thinking .....	132
4.4.6 Make decision in lesson two .....	132
4.4.6.1 Contribution of make decision with examples .....	132
4.4.6.2 Outcome of make decision in sight-reading .....	133

4.4.7 Coordinate in lesson three .....	133
4.4.7.1 Contributions of coordinate in lesson three with examples .....	134
4.4.8 Coordinate in lesson five .....	134
4.4.8.1 Contribution of coordination in lesson five with examples .....	134
4.4.8.2 Outcome of coordination in sight-reading .....	135
4.4.9 Problem solving in lesson two .....	135
4.4.9.1 Contribution of problem solving with examples .....	136
4.4.10 Problem solving in lesson three .....	136
4.4.10.1 Contribution of problem solving with examples .....	136
4.4.11 Problem solving in lesson four .....	137
4.4.11.1 Contribution of problem solving with examples .....	137
4.4.11.2 Outcome of problem solving in sight-reading .....	137
4.4.12 Differentiate in lesson four.....	138
4.4.12.1 Contribution of differentiate in lesson four with examples .....	138
4.4.12.2 Outcome of differentiate in sight-reading .....	139
4.4.13 Combine in lesson five .....	139
4.4.13.1 Contribution of combine in lesson five .....	140
4.4.13.2 Outcome of combine in sight-reading .....	140
4.4.14 Conclusion of contribution of higher order skills towards sight-reading .....	141
4.5 Students' Improvement in Sight-Reading after Lessons .....	142
4.5.1 Angeline's sight-reading performance before and after lessons .....	153
4.5.2 Afiq's sight-reading performance before and after lessons .....	154
4.5.3 Loke Shin Yi's sight-reading performance before and after lessons .....	155
4.5.4 Mitilan's sight-reading performance before and after lessons .....	156
4.5.5 Conclusion of students' improvement in sight-reading .....	158
4.6 Summary .....	159

## CHAPTER 5: DISCUSSIONS AND CONCLUSIONS

5.1 Review of Research Questions .....	160
5.2 Discussion .....	160
5.3 Conclusion .....	168
5.4 Suggestions for Future Research .....	168
5.5 Summary .....	169
Reference .....	170