

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1
1.1 Research Background.....	1
1.2 Problem Identification.....	2
1.3 Scope & Limitations	7
1.4 Research Questions	9
1.5 Research Objective	9
1.6 Research Benefits.....	10
1.7 Thesis Outline	11
CHAPTER II: THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESIS	13
2.1 Theoretical Description	13
2.1.1 Math Anxiety	13
2.1.2 Math Academic Achievement	16
2.1.3. Lo-Fi Music	20
2.2 Relevant Researches.....	23
2.2.1 The Impact of Music on Anxiety and Cognitive Performance	23
2.3 Framework of Thinking.....	26
2.3.1 Differences Between Experimental Group and Control Group as a Main Effect	27
2.3.2 Differences Between Pre-Test and Post-Test as a Simple Effect	28
2.3.3 Interaction Effects Between Groups and Pre-Test & Post Tests	29
2.4 Research Hypothesis	29
CHAPTER III: RESEARCH METHODOLOGY.....	30
3.1 Research Plan.....	30
3.1.1. Statistical Framework for Experimental Research.....	33
3.2 Time, Place and Research Subject	34
3.2.1. Timeline.....	34

3.2.3. Research Subject	36
3.3 Research Procedure.....	36
3.4 Population and Sampling.....	38
3.5 Data Collection Method	39
3.5.1 Quantitative Data Collection	40
3.5.1.1 Dependent Variable Instruments.....	40
3.5.2 Qualitative Data Collection	61
3.6 Internal Validity Control.....	62
3.7 Data Analysis	71
3.8 Statistical Hypothesis	76
CHAPTER IV: RESULTS AND DISCUSSION.....	77
4.1 Data Description	77
4.1.1. Demographic Data	77
4.1.2. Math Anxiety (MA) Scores	78
4.1.3. Academic Achievement (AA) Scores	78
4.1.4. Additional Data for Existing Quantitative Research.....	78
4.2 Analysis Requirement Testing.....	81
4.2.1 Normality.....	81
4.2.2 Homogeneity.....	81
4.3 Hypothesis Testing.....	81
4.3.2. N-Gain Calculations and Results	89
4.4. Discussion.....	96
4.5 Research Limitations.....	100
CHAPTER V: CONCLUSION, IMPLICATIONS, AND SUGGESTIONS	102
5.1 Conclusion	102
5.1.1. Math Anxiety and General Anxiety in Learning	102
5.1.2. Indirect Effects and Classroom Environment	103
5.2 Implications	104
5.2.1. Implications for Educational Practice	104

5.2.2. Implications for Addressing Math Anxiety	105
5.2.4. Implications for Future Research	107
5.2.5. Implications for Classroom Design and Teacher Training.....	108
5.3 Suggestions	108



LIST OF FIGURES

Figure 2.1	19
Figure 2.2	26
Figure 3.1	33
Figure 4.1	77
Figure 4.2	78
Figure 4.3	79



LIST OF TABLES

Table 1.1.....	5
Table 3.1.....	45
Table 3.2.....	47
Table 3.3.....	49
Table 3.4.....	50
Table 3.5.....	53
Table 3.6.....	57
Table 3.7.....	58
Table 3.8.....	63
Table 3.9.....	64
Table 3.10.....	67
Table 3.11.....	71
Table 4.1.....	80
Table 4.2.....	82
Table 4.3.....	86
Table 4.4.....	89

LIST OF APPENDIX

APPENDIX	A
Preliminary Survey Data (Student Responses).....	A
Interview Transcripts	NN
Mood Journal.....	KKK
Pre-Test & Post Test Surveys (AA).....	PPPP

