TABLE OF CONTENT

Ratification Sheet i
Biogrpahy ii
Abstract iii
Acknowledgment iv
Table of Content vi
List of figure ix
List of table x
List of Appendix xi
CHAPTER I INTRODUCTION 1
1.1 Research Background 1
1.2 Problem Identification 5
1.3 Problem Limitation 5
1.4 Problem Formulation 7
1.5 Research Objective 7
1.6 Research Significanc 7
1.7 Operational Definition 8
CHAPTER II THEORITICAL REVIEW 9
2.1 Theoritical Framework 9
2.1.1. Definiton of Learning 9
2.1.2. Definition of Learning Outcome 10
2.2 Colaborative Learning Model 12
2.2.1. Definition of Collaborative Learning Model 12
2.2.2.The Syntax of Collaborative Learning Model 12
2.2.3.The Characteristics, Advantages and Disadvantages of Collaborative Learning Model 13
2.3 Lesson Study 14
2.4 Learning Media 17
2.4.1. Worksheet Media 18
2.4.2. Index Card Match Media 19
2.5 Buffer Solution 20
2.7 Conceptual Framework 25
2.8 Hypothesis 25
CHAPTER III RESEARCH METHODOLOGY 26

3.1 Research Location and Research Objective 26
3.2 Population and Sample 26
3.3 Research Variable 26
3.4 Research Design 27
3.5 Research Procedure 29
3.6 Research Instrument 31
3.7 Data Collection Technique 31
3.7.1. The Instrument of Data Collection 31
3.7.1.1. Validity Test 31
3.7.1.2. Reability Test 32
3.7.1.3. The Difficulty Level 33
3.7.1.4. Different Index of the Item Test 33
3.7.2. Data Analysis Technique 34
3.7.2.1. NormalityTest 35
3.7.2.2. Homogeneity Test 35
3.7.2.3. Hypothesis Test 35
3.7.2.4. The Increasing of Learning Outcome 36
CHAPTER IV RESULT AND DISCUSSION 37
4.1 Research Result 37
4.2 Data Analysis of Research Instrument 37
4.2.1 Validity Test 38
4.2.2 Reliability Test 38
4.2.3 Difficulty Test 38
4.2.4 Discrimination Index 39
4.3 Achievement of Research Result 39
4.3.1 Students' Learning Outcome 39
4.3.2 Normalized Gain 40
4.3.3 The Achievement of Lesson Study 40
4.4 Analysis Data 42
4.4.1 Normality Data 42
4.4.2 Homogeneity Data 42
4.4.3 Hypothesis Test 43
4.5 Discussion 44

CHAPTER V CONCLUSION AND SUGGESTION 47

REFERENCES 48