CONTENT

	page	
Legitimation Sheet	i	
Biography	ii	
Abstract	iii	
Preface	iv	
Contents		
List of Figure		
List of Table		
List of Appendix		
CHAPTER I INTRODUCTION		
1.1. Background		
1.2. Problem Identification		
1.3. Problem Limitation		
1.4. Problem Formulation		
1.5. Research Objective		
1.6. Research Benefit		
CHAPTER II LITERATURE REVIEW	7	
2.1. Theoretical Study	7	
2.1.1. Understanding of Learning, Teaching and learning outcomes	7	
2.1.1.1. Understanding of Learning	7	
2.1.1.2. Understanding of Teaching	8	
2.1.1.3. Understanding of Learning Outcomes	8	
2.1.2. Cooperative Learning Model Group Investigation Type	9	
2.1.2.1. Model of Learning Definition	9	
2.1.2.2. Definition of Cooperetive Learning	10	
2.1.2.3. Group Investigation	12	
2.1.3. Contextual Teaching and Learning Approach	13	
2.1.3.1. Learning Approach	13	

2.1.3.2.	Understanding of Contextual Teaching Learning Approach	14
2.1.3.3.	Why Contextual Approach Being Option	19
2.1.4.	Conventional Learning Model	19
2.2.	Subject Matter	21
2.2.1.	Vibration And Wave	21
2.2.1.1.	Vibration	21
2.2.1.2.	Deviation And Amplitude	21
2.2.1.3.	Vibration Period	22
2.2.1.4.	Vibration Frequency	22
2.2.2.	Wave	23
2.2.2.1.	Mechanical Wave	23
2.2.2.2.	Electromagnetic Wave	23
2.2.2.3.	Transverse Wave	24
2.2.2.4.	Longitudinal Wave	25
2.2.2.5.	The Relationship of Period, Frequency,	
	And Wave Propagation Velocity	25
2.2.3.	Conceptual Framework	26
2.2.4.	Hypothesis	27
CHAP'	TER III RESEARCH METHOD	28
3.1.	Location and Time of Research	28
3.1.1.	Population and Sample of Research	28
3.1.2.	Population of Research	28
3.1.3.	Sample of Research	28
3.2.	Variable of Research	28
3.3.	Type and Design of Research	29
3.3.1.	Type of Research	29
3.3.2.	Design of Research	29
3.4.	Research Procedure	30
3.5.	Research Instrument	32
3.5.1	Regulation of Instrument	34

3.5.2	Validity Test	34
3.6.	Technique of Collecting Data	34
3.6.1.	Beginning Phase	34
3.6.2.	Phase Collecting Data	34
3.7.	Techniques of Data Analysis	35
3.7.1.	Calculating mean and standard deviation	35
3.7.2.	Normality Test	35
3.7.3.	Homogeneity Test Data	36
3.7.4.	Similarity Test	37
3.7.4.1.	Test of similarity mean pretest (test t both of side)	37
3.7.4.2.	Test of similarity mean posttest (test t of one side)	37
CHAP	TER IV RESULT OF RESEARCH AND DISCUSSION	39
4.1.	Result of Research	39
4.1.1.	Pre-Test Score of Students in Experiment and Control Class	40
4.1.2.	Data Analysis of Pre-Test	41
4.1.2.1.	Normality Test of Pre-Test Data	41
4.1.2.2.	Homogeneity Test of Pre-Test	42
4.1.2.3.	Hypotheses Test of Pre-Test Data	42
4.1.3.	Post-Test Score of Students in Exeriment and Control Class	43
4.1.4.	Data Analysis of Post-Test	44
4.1.4.1.	Normality Test of Post-Test Data	44
4.1.4.2.	Homogeneity Test of Post-Test	45
4.1.4.3.	Hypotheses Test of Post-Test Data	45
4.2.	Result Findings	46
4.3.	Discussion	47
CHAPTER V CONCLUSION AND SUGGESTION		
5.1.	Conclusion	48
5.2.	Suggestion	49
REFERENCES		