

TABLE OF CONTENT

VALIDITY SHEET	i
ORIGINALITY STATEMENT PAGE	ii
APPROVAL PAGE FOR PUBLICATION OF FINAL THESIS FOR ACADEMIC PURPOSES	iii
BIOGRAPHY	iv
ABSTRACT	v
FOREWORD	vi
TABLE OF CONTENT	ix
LIST OF PICTURE	xii
LIST OF TABLE	xiii
LIST OF APPENDIX	xiv
CHAPTER I INTRODUCTION	1
1.1. Background	1
1.2. problem identification	4
1.3. Scope	5
1.4. Problem Limitation	5
1.5. Problem Formulation.....	5
1.6. Research Objectives	6
1.7. Research Benefits	6
CHAPTER II LITERATURE REVIEW	7
2.1. Theoretical Framework	7
2.1.1. Learning Model	7
2.1.2. Inquiry Learning Model	7
2.1.3. Conventional Learning.....	13
2.1.4. Differentiated learning	14
2.1.5. Learning Style	16
2.1.6. TPACK.....	17
2.1.7. Student Motivation.....	20
2.1.8. Students' Problem Solving Ability	23
2.2. Subject Matter	26
2.2.1. Light Waves	
.....	26

2.3. Relevant Research	44
2.4. Framework	45
2.5. Hypothesis	46
CHAPTER III RESEARCH METHODS.....	48
3.1. Location and time of research	48
3.2. Research Population and Sample	48
3.2.1. Research Population	48
3.2.2. Sample Research	48
3.3. Research design and Variables	48
3.3.1. Research design	48
3.3.2. Research Variables	49
3.4. Operational Definition.....	49
3.5. Research Instruments	50
3.5.1. Learning Style Questionnaire Instruments	50
3.5.2. Physics Learning Motivation Questionnaire	52
3.5.3. Problem Solving Ability Instrument	53
3.5.4. Student Response to Learning Implementation	54
3.6. Test Validity	55
3.6.1. Content Validity	55
3.7. Data Collection Technique.....	70
3.7.1. Observation	70
3.7.2. Problem Solving Ability.....	70
3.7.3. Questionnaire	71
3.8. Procedure.....	71
3.8.1. Initial Stage (preparation and planning).....	71
3.8.2. Implementation Stage.....	71
3.8.3. Final Stage of Research.....	72
3.9. Analysis Data	74
3.9.1. Normality Test.....	74
3.9.2. Data Homogeneity Test.....	74
3.9.3. N-Gain Test	75
3.9.4. Hypothesis Test.....	75

CHAPTER IV RESULTS AND DISCUSSION	81
4.1. Research Results	81
4.1.1. Description of research results	81
4.1.2. Description of Pretest data for Experimental and Control Classes	81
4.1.3. Description of posttest data of Experimental Class and Control Class..	81
4.2. Data analysis	82
4.2.1. Pretest Data Normality Test	82
4.2.2. Posttest Data Normality Test.....	83
4.2.3. Data Homogeneity Test.....	83
4.2.4. N-gain Test.....	84
4.3. Hypothesis Test.....	85
4.3.1. Hypothesis Test of Pretest Data	85
4.3.2. Hypothesis Test of Posttest Data.....	85
4.3.3. Pretest Hypothesis Test to Distinguish between students with high motivation and low motivation.....	86
4.3.4. Posttest Hypothesis Test to Differentiate Between Students with High Motivation and Low Motivation.....	86
4.3.5. ANOVA Test.....	87
4.4. Discussion.....	88
4.4.1. Hypothesis I.....	90
4.4.2. Hypothesis II	92
4.4.3. Hypothesis III.....	93
CHAPTER V CONCLUSION AND SUGGESTION	96
5.1. Conclusion.....	96
5.2. Suggestion.....	96
APPENDIX.....	101