## **CONTENT LIST**

	Page
LEGALIZATION PAGE	i
BIOGRAPHY	ii
ABSTRACT	iii
ACKNOWLEDGEMENT	iv
CONTENT LIST	vii
LIST OF FIGURE	xi
LIST OF TABLE	xii
LIST OF APPENDIX	xiii
CHAPTER I INTRODUCTION	1
1.1 Background	1
1.2 Problem Identification	7
1.3 Problem Limitation	7
1.4 Problem Formulation	7
1.5 Research Objective	8
1.6 Research Significances	8
1.7 Operational Definition	9
CHAPTER II LITERATURE STUDY	10
2.1 Definition of Teaching and Learning	10
2.1.1 Definition of Teaching	10
2.1.2 Definition of Learning	_11_
2.2 Chemistry Learning, Students' Interest and Achievement in Chemis	try 11
2.2.1 Chemistry Learning	11
2.2.2 Students' Interest	13
2.2.3 Students' Achievement	14
2.3 Learning Strategies	15
2.3.1 Inquiry Learning	15
2.3.2 Guided Inquiry	16

2.3.3 Process-oriented guided inquiry learning (POGIL)	16
2.3.4 Direct Instruction	19
2.4 Lesson Study	20
2.5 Learning Media	23
2.5.1 Worksheet Media	24
2.6 Colloidal System	24
2.6.1 Types of Colloids	25
2.6.2 The Characteristics of Colloidal System	25
2.7 Conceptual Framework	29
2.8 Hypothesis	29
CHAPTER III RESEARCH METHODOLOGY	30
3.1 Overview of The Research	30
3.2 Research Location and Research Objects	30
3.3 Population and Sample	30
3.4 Research Variable	31
3.5 Research Design	32
3.6 Research Procedures	32
3.6.1 Preparation of POGIL Strategy for the Colloidal System	32
3.6.2 Implementation of POGIL Strategy with Worksheet Media	35
Based on Lesson Study for Teaching and Learning Colloidal System	
3.7 Data Collection Technique	38
3.7.1 Research Instrument	38
3.7.2 Questionnaire Sheet	39
3.7.3 Observation Sheet	39
3.8 Test of Students' Result	39
3.8.1 Validity Test	39
3.8.2 The Reliability of Test	39
3.8.3 Difficulty Level	40
3.8.4 Different Index	40
3.9 Data Analysis Technique	40

3.9.1 Normality Test	4	0
3.9.2 Homogeneity Test	4	1
3.9.3 Normalized Gain Data (%)	4	1
3.9.4 Research Hypothesis Test	4	1

CHAPTER IV RESULTS AND DISCUSSIONS	42
4.1 Description of POGIL Strategy with Worksheet Media	42
on the Teaching of Colloidal System Based on Lesson Study	
4.2 Description of School Sample	44
4.3 The Instrument's Analysis	45
4.3.1 The Observation Sheet of Student's Interest	45
4.3.2. The Questionnaire of Student's Interest	45
4.3.3 The Validity of Evaluation Test	45
4.3.4 Reliability of Evaluation Test	46
4.3.5 Difficulty Level Test Result	46
4.3.6 Discrimination Index Test Result	46
4.4 Data of Research Result	47
4.4.1 The Result of Pretest and Posttest	47
4.4.2 The Result of Students' Interest by Observation Sheet	48
4.4.3 The Result of Students' Interest by Questionnaire	49
4.5 Data Analysis of Research Result	49
4.5.1 Normality Test	50
4.5.2 The Homogenity Test	50
4.6 Student's Achievement	51
4.6.1 Student's Achievement before Teaching Treatment	51
4.6.2 Student's Achievement after Teaching Treatment	52
4.6.3 The Gain Data	54
4.7 Student's Interest	54
4.8 Learning Analysis of Lesson Study	56
4.8.1 Lesson Study in SMAN 2 Medan	56

4.8.2 SMAN 3 Medan	58
4.8.3 SMA Swasta Raksana	60
4.9 Hypothesis Testing	62
4.9.1 Hypothesis Test of Hypothesis 1	62
4.9.2 Hypothesis Test of Hypothesis II	62
4.9.3 Hypothesis Test of Hypothesis III	63
4.10 Discussion	64
CHAPTER V CONCLUSIONS AND SUGGESTIONS	66
5.1 Conclusion	66
5.2 Suggestion	66

REFFERENCE

67