

CONTENTS LIST

	Page
Legalization Paper	i
Biography	ii
Abstract	iii
Acknowledgement	iv
Contents List	vi
Figures List	ix
Tables List	x
Appendix List	xii
CHAPTER I INTRODUCTION	1
1.1. Background	1
1.2. Problem Identification	4
1.3 Problem Statement	4
1.4 Problem Limitation	5
1.5 Research objectives	5
1.6 Research Benefits	6
1.7 Operational Definition	6
CHAPTER II LITERATURE REVIEW	7
2.1. Basic Principle of Learning	7
2.2. Learning Media	9
2.3. Learning Module	11
2.4. Problem Based Learning	13
2.5. Creativity	14
2.6. Colloidal System	16
2.6.1 The types of colloid	17

2.6.2 The properties of colloid	19
2.6.3 Liofil colloids and Liofob colloids	22
2.6.4 Water Treatment	23
2.6.5 Manufacture of Colloidal System	24
2.7. Conceptual Framework	26
2.8 Hypothesis	27
CHAPTER III RESEARCH METHODS	28
3.1. Overview of the Research	28
3.2. Research Location and Research Objects	28
3.3. Population and Sample	29
3.4 Research Variables	29
3.5 Research Design	30
3.6. Research Instrument	35
3.6.1 Validity Test	36
3.6.2 The Reliability	36
3.6.3 The Difficulty Level	37
3.6.4 Different Index	37
3.7 Data analysis techniques	38
3.7.1 Descriptive analysis	39
3.7.2 Inferential Analysis	40
3.7.2.1. Normality Test	40
3.7.2.2 Homogeneity Test	41
3.7.2.3 Normalized gain	41
3.7.2.4 Hypothesis Testing	41
3.7.3 Correlation Analysis Statistic	42
CHAPTER IV RESULT AND DISCUSSION	44
4.1 Survey of High School Chemistry Text Book	44

4.2 Analysis of High School Chemistry Text Book	44
4.3 The Development of Interactive Learning Module	54
4.4 Analysis of Instrument	56
4.4.1 Validity Test	56
4.4.2 Reliability Test	57
4.4.3 Difficulty level	57
4.4.4 Distinguish Index	57
4.5 Observation of Student's Creativity	58
4.6 Data Analysis	58
4.6.1 Normality Test	60
4.6.2 Homogeneity Test	62
4.6.3 Hypothesis Test	63
4.6.3.1 The First Hypothesis Test	63
4.6.3.2 The Second Hypothesis Test	65
4.6.3.3 The Third Hypothesis Test	66
4.6.4 Percentage of Improved Learning Outcomes (Normalized Gain)	68
4.7 Discussion	68
CHAPTER IV CONCLUSION AND SUGGESTION	73
5.1 Conclusion	73
5.2 Suggestion	74
REFERENCES	75