

# CONTENTS

	<b>Page</b>
<b>ABSTRACT</b>	<b>i</b>
<b>ACKNOWLEDGEMENT</b>	<b>ii</b>
<b>CONTENTS</b>	<b>iv</b>
<b>TABLE LIST</b>	<b>vi</b>
<b>FIGURE LIST</b>	<b>vii</b>
<b>APPENDIX LIST</b>	<b>viii</b>
Chapter I Introduction	
1.1. Background	1
1.2. Problem Identification	6
1.3. Problem Limitations	7
1.4. Research Questions	7
1.5. Research Objectives	8
1.6. Research Significant	9
Chapter II Theoretical Review	
2.1. Theoretical Framework	11
2.1.1. Visual Literacy Definition	13
2.1.1.1. Visual Literacy and Digital Natives	13
2.1.1.2. Visuals and Information Delivery	14
2.1.1.3. Importance of Visuals Literacy in Learning Cellular Biology Topic	15
2.1.1.4. Visual Literacy Continuum	16
2.1.1.5. Visual Literacy and Educational Objectives	17
2.1.2. Learning Styles	19
2.1.2.1. Types of Learning Styles	20
2.1.2.2. Flemming and Mills Learning Styles Model	20
2.1.2.3. Why Using VARK	22
2.1.2.4. Learning Styles and Biology Disciplines	22
2.1.2.5. How to Access Someone's Learning Styles	23
2.1.3. Student's study skills	26
2.1.3.1. Student's study skills in Biology	28
2.1.4. Gender affecting factor	29
2.2. Relevant research	31
2.3. Conceptual framework	34
2.3.1. Visual literacy skills and its relationship with learning styles	34
2.3.2. Visual literacy skills and its relationship with study skills	35
2.3.3. Visual literacy skills, study skills, learning styles and gender affecting factor	36
2.4. Research hypothesis	36
2.4.1. Verbal Hypotheses	36
2.4.1.1. Statistic Hypotheses	37

Chapter III Research Method	
3.1. Time and Location	38
3.2. Population and Sample	38
3.3. Research Type and Design	38
3.4. Research Variables	39
3.5. Operational Definitions	39
3.6. Procedure	39
3.7. Data Collection Technique	41
3.7.1. Documentation	41
3.7.2. Research Instruments	42
3.7.2.1. Visual Literacy	42
3.7.2.2. Learning Styles	43
3.7.2.2.1. Learning Styles Score Analysis	43
3.7.2.3. Study Skills	43
3.8. Instruments Trial	45
3.8.1. Instruments Validity	45
3.8.2. Reliability Test	46
3.9. Data Analysis Technique	46
3.9.1. Prerequisite Test	46
3.9.1.1. Normality test	46
3.9.1.2. Homogeneity test	47
3.9.2. Hypothesis testing	47
Chapter IV Result and Discussion	
4.1. Research Result	49
4.1.1. Validity and Reliability tests	49
4.1.2. Normality test	50
4.1.3. Homogeneity test	50
4.1.4. Student's textbook observation	50
4.1.5. Study skills result	52
4.1.6. Learning styles result	59
4.1.6.1. Learning styles of male and female students	61
4.1.7. Visual Literacy	62
4.1.7.1. Visual Literacy of Male and Female Students	62
4.1.8. Relationship between Visual Literacy and Study Skills	63
4.1.9. Relationship between Visual Literacy and Learning Styles	63
4.1.10. Contribution Study Skills components to Visual Literacy Variable	64
4.2. Discussion	64
4.3. Limitation	71
Chapter V Conclusion, implication, suggestion	
5.1. Conclusion	72
5.2. Implication	73
5.3. Suggestion	73
References	74
Appendix	84