

## TABLE OF CONTENT

<b>APPROVAL SHEET</b> .....	<b>i</b>
<b>ORIGINAL STATEMENT</b> .....	<b>ii</b>
<b>PUBLICATION AGREEMENT</b> .....	<b>iii</b>
<b>ABSTRACT</b> .....	<b>iv</b>
<b>PREFACE</b> .....	<b>v</b>
<b>BIBLIOGRAPHY</b> .....	<b>vi</b>
<b>TABLE OF CONTENT</b> .....	<b>vii</b>
<b>LIST OF FIGURE</b> .....	<b>ix</b>
<b>LIST OF TABLE</b> .....	<b>x</b>
<b>LIST OF APPENDIX</b> .....	<b>xi</b>
<b>CHAPTER I INTRODUCTION</b> .....	<b>1</b>
1.1. Background.....	1
1.2. Identify the Problem.....	4
1.3. Scope .....	4
1.4. Formulation of The Problem .....	4
1.5. Problem Limits .....	4
1.6. Research Objectives .....	5
1.7. Research Benefits .....	5
1.8. Operational Definition.....	5
<b>CHAPTER II LITERATURE REVIEW</b> .....	<b>7</b>
2.1. The Nature of Research Development .....	7
2.2. Learning Media .....	9
2.3. Atom Theory .....	18
2.4. Relevant research results in .....	24
<b>CHAPTER III RESEARCH METHODS</b> .....	<b>25</b>

3.1. Location and Time of Research.....	25
3.2. Subject and object of research.....	25
3.3. Research Type .....	25
3.4. Research Procedure .....	27
3.5. Data Collection.....	30
3.6. Research Instruments.....	32
3.7. Research and development procedures .....	33
<b>CHAPTER IV RESULT AND DISCUSSION.....</b>	<b>38</b>
4.1. Result of Research.....	38
4.2. Learning Outcome Data .....	50
<b>CHAPTER V .....</b>	<b>52</b>
<b>CONCLUSION.....</b>	<b>52</b>
5.1. Conclusion.....	52
5.2. Suggestion .....	52
<b>REFERENCE .....</b>	<b>54</b>
<b>APPENDIX .....</b>	<b>57</b>



## LIST OF FIGURE

<b>Figure 2.1.</b> John Dalton's Atomic Model .....	20
<b>Figure 2.2.</b> Image of atomic model J. J. Thomson .....	20
<b>Figure 2.3.</b> Image of atomic model Rutherford.....	22
<b>Figure 2.4.</b> Image of atomic model Bohr .....	23
<b>Figure 2.5.</b> Image of the atomic model of quantum mechanics .....	23
<b>Figure 4.1</b> Title View for PowerPoint based Hyperlink.....	43
<b>Figure 4.2</b> Main menu for PowerPoint based Hyperlink .....	43
<b>Figure 4.3</b> Content of Material for PowerPoint based Hyperlink .....	44
<b>Figure 4.4</b> Materi for PowerPoint based Hyperlink .....	46
<b>Figure 4.5</b> Materi Atomic Structure and The Periodic System of the Elements...47	
<b>Figure 4.6</b> Reference of Materi .....	48
<b>Figure 4.7</b> Summary of Materi.....	48
<b>Figure 4.8</b> Graphic Score Post-test.....	51

## LIST OF TABLE

<b>Table 2.1.</b> The seven types of media .....	13
<b>Table 4.1</b> Analysis of the development of learning media .....	39
<b>Table 4.2</b> Environmental analysis observation sheet .....	41
<b>Table 4.3</b> Validation Media.....	45
<b>Table 4.4</b> Validation Material.....	47
<b>Table 4.5</b> Student Response .....	49



## LIST OF APPENDIX

<b>Appendix 1</b> Observation Sheet.....	57
<b>Appendix 2</b> Interview Sheet for Educators .....	58
<b>Appendix 3</b> Learning Media Expert Validation Instrument.....	59
<b>Appendix 4</b> Chemical Material Expert Validation Instrument .....	64
<b>Appendix 5</b> Student Response Questionnaire Instrument.....	68
<b>Appendix 6</b> Evidence of Product Validation Results From Media Expert Validators .....	72
<b>Appendix 7</b> Evidence of Product Validation Results From Media Expert Validators .....	77
<b>Appendix 8</b> Evidence of Product Validation Results From Media Expert Validators Calculation.....	81
<b>Appendix 9</b> Evidence of Product Validation Results From A Chemical Material Expert Validator .....	83
<b>Appendix 10</b> Evidence Of Product Validation Results From A Chemical Material Expert Validator.....	87
<b>Appendix 11</b> Evidence of Product Validation Results From A Chemical Material Expert Validator Calculation.....	91
<b>Appendix 12</b> Student Response Instrument to Product.....	92
<b>Appendix 13</b> Post Test Question and Answer Key .....	98
<b>Appendix 14</b> Documentation .....	105
<b>Appendix 15</b> Validation Sheet Material Validation.....	108
<b>Appendix 16</b> Validation Sheet Material Validation.....	109
<b>Appendix 17</b> Validation Sheet Media Validation .....	110
<b>Appendix 18</b> Validation Sheet Material Validation.....	111