

## LIST OF CONTENTS

<b>ABSTRACT</b> .....	<b>iv</b>
<b>PREFACE</b> .....	<b>vi</b>
<b>LIST OF CONTENTS</b> .....	<b>viii</b>
<b>CHAPTER I</b> .....	<b>1</b>
<b>PRELIMINARY</b> .....	<b>1</b>
1.1. Background .....	1
1.2. Identification of Problems .....	4
1.3. Scope .....	5
1.4. Scope of Problem .....	5
1.5. Formulation of The Problem.....	5
1.6. Research Purposes .....	6
1.7. Benefits of Research.....	6
<b>CHAPTER II</b> .....	<b>7</b>
<b>LITERATURE REVIEW</b> .....	<b>7</b>
2.1. Learning Media .....	7
2.1.1. Definition of Learning Media.....	7
2.1.2. Learning Media Functions.....	8
2.1.3. Types of Learning Media .....	11
2.1.4. Powtoon-Based Learning Media .....	14
2.1.4.1. Definition of Powtoon Media .....	14
2.1.4.2. Advantages and weaknesses of Powtoon Media .....	16
2.1.4.3. Powtoon Media Benefits .....	17
2.1.4.4. Powtoon Media Making Steps.....	17
2.2. Chemical Bonding Material.....	20
2.2.1. Definition of Chemical Bonding .....	20
2.2.2. Noble Gases.....	20
2.2.3. Atomic Tendency.....	21
2.2.4. Ionic Bond .....	22
2.2.5. Covalent Bond .....	23
2.2.6. Metal Bond .....	24
2.3. Relevant Research .....	25
2.4. Framework of thinking .....	26

<b>CHAPTER III</b> .....	<b>28</b>
<b>RESEARCH METHODS</b> .....	<b>28</b>
3.1. Research Location and Time.....	28
3.2. Research Sample .....	28
3.3. Types of Research .....	28
3.4. Operational Definition.....	28
3.5. Research Design .....	29
3.6. Research Procedure .....	30
3.7. Research Instruments.....	34
3.7.1. Powtoon-Based Audio Visual Media Validation Instrument .....	34
3.7.2. Chemistry Teacher Assessment Instrument.....	36
3.7.3. Student Response Instrument.....	37
<b>CHAPTER IV</b> .....	<b>40</b>
<b>RESULTS AND DISCUSSION</b> .....	<b>40</b>
4.1. Research Result .....	40
4.1.1. Define.....	40
4.1.2. Design .....	44
4.1.3. Development.....	46
4.1.3.1. Data Validation Results.....	47
4.1.3.2. Material Expert Validation .....	47
4.1.3.3. Media Expert Validation .....	48
4.1.3.4. Chemistry Teachers Validation .....	50
4.1.3.5. Revision.....	52
4.1.4. Disseminate .....	55
4.2. Discussion.....	57
<b>CHAPTER V</b> .....	<b>62</b>
<b>CONCLUSIONS AND SUGGESTIONS</b> .....	<b>62</b>
5.1. Conclusion.....	62
5.2. Suggestion.....	63
<b>REFERENCES</b> .....	<b>64</b>
<b>APPENDIXS</b> .....	<b>68</b>