

TABLE OF CONTENTS

	<i>Page</i>
Motto and Dedication Sheets	<i>i</i>
Legalization Sheet	<i>ii</i>
Originality Statement Sheet	<i>iii</i>
Publication Approval Sheet	<i>iv</i>
Biography	<i>v</i>
Abstract	<i>vi</i>
Acknowledgement	<i>vii</i>
Table of Contents	<i>xi</i>
List of Figure	<i>xiv</i>
List of Tables	<i>xv</i>
List of Appendix	<i>xvii</i>
CHAPTER I. INTRODUCTION	1
1.1. Background	1
1.2. Identification of Problems	3
1.3. Limitation of Problems	4
1.4. Formulation of the Problem	4
1.5. Research Objectives	5
1.6. Research Contribution	5
1.7. Operational Definition	7
CHAPTER II. LITERATURE STUDIES	8
2.1. Theoretical Review	8
2.1.1. Definition of Learning	8
2.1.2. Chemistry in Religious Values	9
2.1.3. ADDIE Model	10
2.1.4. Learning Outcomes	12
2.1.5. Learning Motivation	12
2.1.6. Learning Media	13
2.1.7. Animation Video Media	14

2.1.8. PowToon	16
2.1.9. Chemical Bonding Materials	17
2.2. Relevant Research	25
2.3. Framework of Thinking	25
2.4. Research Hypothesis	27
CHAPTER III. RESEARCH METHODOLOGY	29
3.1. Research Method	29
3.2. Location and Time of Research	29
3.3. Population and Sample of Research	30
3.4. Research Variable	30
3.5. Research and Development Procedures	30
3.5.1. Analysis Phase	31
3.5.2. Design Stage	32
3.5.3. Development Stage	33
3.5.4. Implementation Stage	34
3.5.5. Evaluation Stage	34
3.6. Instruments of Research	35
3.7. Data Collection Techniques	37
3.8. Data Analysis Techniques	42
3.8.1. Qualitative Data Analysis Techniques	42
3.8.2. Quantitative Data Analysis Techniques	43
CHAPTER IV. RESULT AND DISCUSSION	52
4.1. Description of Research	52
4.1.1. Vision	52
4.1.2. Mission	53
4.1.3. Objectives	53
4.1.4. Learning Process	54
4.1.5. Facilities at Al Ulum Terpadu Islamic Senior High School	55
4.1.6. The Situation of Teachers and Students	55
4.2. Instrument Test Results	57

4.2.1. Validity by Lecturers and Teacher	57
4.2.2. Validity Test	57
4.2.3. Reliability Test	58
4.2.4. Difficulty Index Test	59
4.2.5. Distinguishing Power Test	60
4.3. Results of Research	61
4.3.1. Product Development of Animation Video Media (PowToon) in Chemistry Learning Based on Religious	61
4.4. Discussion of Research Results	87
4.4.1. Product Development of Animation Video Media (PowToon) in Chemistry Learning Based on Religious	88
4.4.2. Feasibility Test of Animation Video Media (PowToon) by Experts	88
4.4.3. Feasibility Test of Animation Video Media (PowToon) by Students	90
4.4.4. Students' Religiosity Level After Using Animation Video Media (PowToon)	91
4.4.5. Students Learning Outcomes on the Use of Animation Video Media (PowToon)	92
4.4.6. Students Learning Motivation on the Use of Animation Video Media (PowToon)	93
CHAPTER V. CONCLUSION AND SUGGESTION	95
5.1. Conclusion	95
5.1. Suggestion	97
BIBLIOGRAPHY	98
APPENDIX	102

LIST OF FIGURE

	<i>Page</i>
Figure 2.1. The molecular nature of matter and change	18
Figure 2.2. Single covalent bond in HCl	19
Figure 2.3. Double covalent bond at O ₂	20
Figure 2.4. Triple covalent bond at N ₂	20
Figure 2.5. Example of polarization of a covalent bond	21
Figure 2.6. Metal bond	22
Figure 2.7. Flowchart of thinking framework	27
Figure 3.1. Flowchart of media development stages with the ADDIE Model	31
Figure 4.1. Reliability test data diagram	58
Figure 4.2. Difficulty index test data diagram	59
Figure 4.3. Distinguishing power test data diagram	60
Figure 4.4. Character selection in PowToon	69
Figure 4.5. Music selection in PowToon	70
Figure 4.6. Icon selection in PowToon	70
Figure 4.7. Result of validation assessment by material expert	72
Figure 4.8. Result of validation assessment by media expert	74
Figure 4.9. Bar chart of student's religiosity level percentage results	80
Figure 4.10. Pie chart of student's religiosity level percentage results	80
Figure 4.11. Data results percentage increase in student motivation	87

LIST OF TABLES

	<i>Page</i>
Table 2.1. Electron configuration of the noble gases	17
Table 2.2. The outermost shell of a main group element that contains valence electrons (VE)	23
Table 2.3. The description of molecular shape	24
Table 3.1. Score level for media and material expert answers	38
Table 3.2. Aspects of media assessment by media experts	38
Table 3.3. Aspects of media assessment by material experts	39
Table 3.4. Score level for respondents answers	39
Table 3.5. Score level for respondents answers of religiosity	40
Table 3.6. Aspects of religious assessment by respondents	40
Table 3.7. Score level for respondents answers of learning motivation	41
Table 3.8. Aspects of learning motivation assessment by respondents	41
Table 3.9. Percentage range and qualitative program criteria for media experts and material experts	44
Table 3.10. Percentage range and qualitative program criteria for respondents	44
Table 3.11. Religiosity categorization	45
Table 3.12. Reliability criteria	48
Table 3.13. Difficulty index criteria	49
Table 3.14. Distinguishing power criteria	50
Table 4.1. Facilities of school	55
Table 4.2. List of teachers and their distribution	56
Table 4.3. Item questions validity test	57
Table 4.4. Item questions reliability test	58
Table 4.5. Item questions difficulty index test	59
Table 4.6. Item questions distinguishing power test	60
Table 4.7. Storyboard of animation video media	64
Table 4.8. Recapitulation of percent assessment by material expert	71

Table 4.9.	Recapitulation of percent assessment by media expert	73
Table 4.10.	Revision and repair by material expert	75
Table 4.11.	Revision and repair by media expert	77
Table 4.12.	Religiosity categorization	79
Table 4.13.	Results of religiosity categorization	79
Table 4.14.	Pretest and posttest results data	82
Table 4.15.	Pretest and posttest normality test results	83
Table 4.16.	Total score before and after using animation video media	84
Table 4.17.	Normality test results before and after using animation video media	85
Table 4.18.	Recapitulation of student learning motivation questionnaire results	86



LIST OF APPENDIX

		<i>Page</i>
Appendix 1.	Lesson Plan	104
Appendix 2.	Chemistry Courses Syllabus	112
Appendix 3.	Research Subject Data	127
Appendix 4.	Organizational Structure at Al Ulum Terpadu Islamic Senior High School Medan	128
Appendix 5.	Trial Question Instruments	130
Appendix 6.	Trial Question Answer Key	134
Appendix 7.	Comments and Suggestions for Trial Questions	135
Appendix 8.	Calculation Results of Test Instrument	140
Appendix 9.	Material Expert Validation Questionnaire Instrument	145
Appendix 10.	Material Expert Validation Questionnaire Instrument	148
Appendix 11.	Student Response Questionnaire Instrument	151
Appendix 12.	Student Religiosity Questionnaire Instrument	153
Appendix 13.	Student Motivation Questionnaire Instrument	155
Appendix 14.	Script of Animation Video Media	159
Appendix 15.	Material Expert Assessment Results	175
Appendix 16.	Media Expert Assessment Results	178
Appendix 17.	Media Expert and Material Expert Validation Results	181
Appendix 18.	Student Response Questionnaire Filling Sheet	183
Appendix 19.	Results of Calculation of Students' Responses to Animation Video Media	185
Appendix 20.	Student's Religiosity Questionnaire Filling Sheet	187
Appendix 21.	Students Pretest Filling Sheet	189
Appendix 22.	Students Posttest Filling Sheet	192
Appendix 23.	Student's Motivational Questionnaire Filling Sheet (Before)	195
Appendix 24.	Student's Motivational Questionnaire Filling Sheet (After)	197

Appendix 25.	Results of Calculation of Students' Religiosity to Animation Video Media	199
Appendix 26.	Results of Calculation of Student Motivation	200
Appendix 27.	Student Learning Outcomes Test Using SPSS	202
Appendix 28.	Student Learning Motivation Test Using SPSS	205
Appendix 29.	Letter of Observation Permit	208
Appendix 30.	Letter of Validation Permit	209
Appendix 31.	Letter of Research Permit	210
Appendix 32.	Letter of Validation Application	211
Appendix 33.	Letter of Recommendation (Lecturer)	212
Appendix 34.	Letter of Recommendation (Teacher)	216
Appendix 35.	Letter Has Validated at School	218
Appendix 36.	Letter Has Conducted Research at School	219
Appendix 37.	Research Implementation Documentation	220

