

## TABLE OF CONTENT

<b>APPROVAL SHEET</b> .....	<b>i</b>
<b>HALAMAN PERNYATAAN ORISINALITAS</b> .....	<b>ii</b>
<b>HALAMAN PERSETUJUAN PUBLIKASI</b> .....	<b>iii</b>
<b>BIOGRAPHY</b> .....	<b>iv</b>
<b>ABSTRAK</b> .....	<b>v</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>vi</b>
<b>TABLE OF CONTENT</b> .....	<b>viii</b>
<b>LIST OF TABLE</b> .....	<b>x</b>
<b>LIST OF FIGURE</b> .....	<b>xi</b>
<b>LIST OF APPENDIX</b> .....	<b>xii</b>
<b>CHAPTER I : INTRODUCTION</b> .....	<b>1</b>
1.1 Background .....	1
1.2 Identification of problems .....	9
1.3 Limitation of problem .....	9
1.4 Formulation of the problem .....	9
1.5 Research purposes .....	10
1.6 Benefits of Research .....	10
1.7 Operational Definition .....	11
<b>CHAPTER II : LITERATURE REVIEW</b> .....	<b>12</b>
2.1 Theoretical Framework .....	12
2.1.1 Definition of Learning Mathematics .....	12
2.1.2 Learning Theory .....	13
2.1.3 Definition of Mathematics .....	16
2.1.4 Definition of Communication .....	16
2.1.5 Mathematical Communication Ability .....	17
2.1.6 Mathematics Learning Media .....	21
2.1.7 Multimedia based on Macromedia Flash .....	23
2.1.8 Theory Social Arithmetic .....	28
2.2 Mathematical Communication Relations With Macromedia Flash .....	30
2.3 Relevant Research .....	31

2.4 Conceptual Framework .....	31
2.5 Research Hypothesis .....	32
<b>CHAPTER III : RESEARCH METHODOLOGY.....</b>	<b>33</b>
3.1 Time and location of Research .....	33
3.2 Population and Sample.....	33
3.3 Research Type And Design.....	33
3.3.1 Types Of Research .....	33
3.3.2 Research Design.....	33
3.4 Research Instrument.....	34
3.5 Evaluation instrument .....	36
3.6 Research procedure .....	39
3.7 Data Analysis Technique .....	41
3.7.1 Analysis Test.....	41
3.7.2 Hypothesis Testing.....	42
3.8 Statistical Hypotheses .....	45
<b>CHAPTER IV : RESEARCH FINDING AND DISCUSSION.....</b>	<b>46</b>
4.1 Description of Research Results Data .....	46
4.2 Data analysis .....	57
4.2.1 Normality Test .....	57
4.2.2 Homogeneity Test .....	58
4.2.3 Hypothesis using t test .....	59
4.3 Discussions.....	61
4.4 Research Limitations.....	64
<b>CHAPTER V : CONCLUSION AND SUGGESTION.....</b>	<b>65</b>
5.1 Conclusion .....	65
5.2 Suggestion.....	65
<b>REFERENCES.....</b>	<b>67</b>