



## **UNDERGRADUATE THESIS**

# **DEVELOPMENT OF A BRANCHING NARRATIVE-BASED EDUCATIONAL GAME ON THE IMPACTS OF BULLYING USING UNITY**

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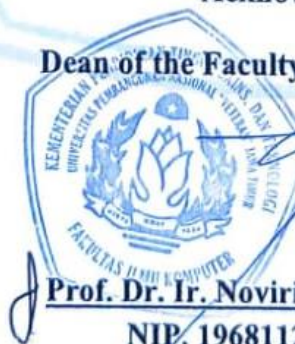
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## ABSTRACT

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Thesis Title : Development Of A Branching Narrative-Based Educational Game On The Impacts Of Bullying Using Unity

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The high prevalence of social intimidation or bullying in secondary school environments necessitates innovative preventive media that deeply engages students' affective dimensions, replacing conventional, predominantly one-way counseling models. This study proposes an interactive anti-bullying digital simulation platform built on the Unity 2D engine utilizing the Multimedia Development Life Cycle (MDLC) methodology. System reliability is reinforced by separating code logic using the Model-View-Presenter (MVP) pattern and implementing an Emotional Meter scheme powered by a Finite State Machine (FSM) algorithm to reflect real-time fluctuations in the protagonist's psychological state. Functional testing via Black Box Testing confirms that the entire navigation system and branching narrative decision mechanics operate accurately according to design specifications. Based on implementation within the test group, the N-Gain Score analysis demonstrates a significant leap in empathy comprehension, increasing from an initial pre-test average of 50.8 to 84.7 in the post-test evaluation, with a gain index of 0.70 (Moderate category). Furthermore, interaction satisfaction measured using the GUESS-18 metric achieved an average feasibility rating of 88.6%, indicating that the simulation platform is highly adaptive and satisfying for users in fostering social sensitivity toward the impacts of bullying.

**Keywords** : Interactive Simulation, MDLC, Branching Narrative, FSM, User Experience

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Surabaya, July 16, 2026

Niken Febrinikmah Siharta



## TABLE OF CONTENTS

|                                                   |             |
|---------------------------------------------------|-------------|
| <b>APPROVAL SHEET .....</b>                       | <b>iii</b>  |
| <b>APPROVAL SHEET .....</b>                       | <b>v</b>    |
| <b>STATEMENT OF ORIGINALITY .....</b>             | <b>vii</b>  |
| <b>ABSTRACT .....</b>                             | <b>ix</b>   |
| <b>ACKNOWLEDGEMENTS.....</b>                      | <b>xi</b>   |
| <b>TABLE OF CONTENTS.....</b>                     | <b>xiii</b> |
| <b>LIST OF FIGURES .....</b>                      | <b>xvii</b> |
| <b>LIST OF TABLES .....</b>                       | <b>xx</b>   |
| <b>LIST OF CODES .....</b>                        | <b>xxii</b> |
| <b>LIST OF APPENDICES .....</b>                   | <b>xxiv</b> |
| <b>CHAPTER I INTRODUCTION.....</b>                | <b>1</b>    |
| 1.1.    Background.....                           | 1           |
| 1.2.    Problem Formulation .....                 | 3           |
| 1.3.    Research Objectives.....                  | 4           |
| 1.4.    Research Benefits .....                   | 4           |
| 1.5.    Research Limitations .....                | 4           |
| <b>CHAPTER II LITERATURE REVIEW .....</b>         | <b>7</b>    |
| 2.1.    Preliminary Research.....                 | 7           |
| 2.2.    Educational Games .....                   | 10          |
| 2.3.    Bullying .....                            | 11          |
| 2.3.1.    Verbal Bullying.....                    | 11          |
| 2.3.2.    Social Bullying .....                   | 11          |
| 2.3.3.    Cyber Bullying.....                     | 12          |
| 2.3.4.    Physical Bullying.....                  | 12          |
| 2.4.    Game Based Learning (GBL) .....           | 12          |
| 2.5.    Interactive Digital Narratives (IDN)..... | 13          |

|                                                           |                                                                 |           |
|-----------------------------------------------------------|-----------------------------------------------------------------|-----------|
| 2.6.                                                      | Multimedia Development Life Cycle (MDLC) .....                  | 14        |
| 2.7.                                                      | Branching Narrative.....                                        | 15        |
| 2.8.                                                      | Model-View-Presenter (MVP).....                                 | 15        |
| 2.9.                                                      | Use Case Diagram.....                                           | 16        |
| 2.10.                                                     | Black Box Testing.....                                          | 17        |
| 2.11.                                                     | Game User Experience Satisfaction Scale 18 (GUESS 18).....      | 17        |
| 2.12.                                                     | Likert Scale .....                                              | 19        |
| 2.13.                                                     | Pre Test and Post Test.....                                     | 20        |
| 2.14.                                                     | Unity .....                                                     | 20        |
| <b>CHAPTER III SYSTEM DESIGN AND IMPLEMENTATION .....</b> |                                                                 | <b>23</b> |
| 3.1                                                       | Research Flow.....                                              | 23        |
| 3.2                                                       | Literature Study.....                                           | 24        |
| 3.3                                                       | Data Analysis and Preliminary Calculation of Case Studies ..... | 25        |
| 3.4                                                       | Game Design, Layout, and Materials.....                         | 26        |
| 3.5                                                       | Implementation .....                                            | 56        |
| 3.6                                                       | Black Box Testing.....                                          | 59        |
| 3.6.1                                                     | Main Menu and Interface System Testing .....                    | 60        |
| 3.6.2                                                     | Narrative Navigation and Dialogue System Testing.....           | 60        |
| 3.6.3                                                     | Narratives Branching System.....                                | 61        |
| 3.6.4                                                     | Emotional Meter and Mini-game Logic System Testing.....         | 61        |
| 3.6.5                                                     | Story Conclusion and Termination System Testing .....           | 62        |
| <b>CHAPTER IV RESULTS AND DISCUSSION.....</b>             |                                                                 | <b>69</b> |
| 4.1.                                                      | Game Implementation Results .....                               | 69        |
| 4.1.1.                                                    | Main Menu and Interface Layouts .....                           | 69        |
| 4.1.2.                                                    | Stage 1 Interface Layout .....                                  | 71        |
| 4.2.                                                      | Black Box Testing.....                                          | 81        |
| 4.2.1.                                                    | Main Menu and Initialization Testing.....                       | 81        |

|                                                   |                                                              |            |
|---------------------------------------------------|--------------------------------------------------------------|------------|
| 4.2.2.                                            | Dialogue and Navigation System Testing .....                 | 83         |
| 4.2.3.                                            | Branching Narrative System Testing .....                     | 86         |
| 4.2.4.                                            | Emotional Meter System Testing .....                         | 89         |
| 4.2.5.                                            | Ending and Data Logging System Testing .....                 | 92         |
| 4.3.                                              | Pre-test and Post-test Empirical Evaluation Results .....    | 94         |
| 4.4.                                              | Normalized Gain (N-Gain) Value Tracking .....                | 96         |
| 4.5.                                              | GUESS-18 User Experience Satisfaction Scale Evaluation ..... | 97         |
| <b>CHAPTER V CONCLUSIONS AND SUGGESTIONS.....</b> |                                                              | <b>100</b> |
| 5.1                                               | Conclusion .....                                             | 100        |
| 5.2                                               | Suggestions .....                                            | 100        |
| <b>BIBLIOGRAPHY .....</b>                         |                                                              | <b>102</b> |
| <b>APPENDIX.....</b>                              |                                                              | <b>106</b> |

## LIST OF FIGURES

|                                                               |    |
|---------------------------------------------------------------|----|
| Figure 2. 1 Bullying-Themed Educational Game .....            | 10 |
| Figure 2. 2 IDN in Games .....                                | 13 |
| Figure 2. 3 MDLC Methodology .....                            | 14 |
| Figure 2. 4 The Concept of Branching Narrative in Games ..... | 15 |
| Figure 2. 5 MVP Structure .....                               | 16 |
| Figure 2. 6 Unity Set Up .....                                | 21 |
| Figure 3. 1 Research Flow.....                                | 23 |
| Figure 3. 2 Introduction .....                                | 37 |
| Figure 3. 3 Player Information Layout.....                    | 37 |
| Figure 3. 4 Player's Map.....                                 | 38 |
| Figure 3. 5 Verbal Intimidation.....                          | 38 |
| Figure 3. 6 Cyber Bullying .....                              | 39 |
| Figure 3. 7 Investigation .....                               | 39 |
| Figure 3. 8 Social Judgement .....                            | 40 |
| Figure 3. 9 Physical Bullying Interface Layout .....          | 40 |
| Figure 3. 10 Triple Ending Screen Layout.....                 | 41 |
| Figure 3. 11 Gameplay Flow.....                               | 41 |
| Figure 3. 12 Stage 1 Flow .....                               | 42 |
| Figure 3. 13 Stage 2 Flow .....                               | 43 |
| Figure 3. 14 Stage 3 Flow .....                               | 44 |
| Figure 3. 15 Stage 4 Flow .....                               | 45 |
| Figure 3. 16 Stage 5 Flow .....                               | 46 |
| Figure 3. 17 Stage 6 Flow .....                               | 47 |
| Figure 3. 18 Use Case Diagram .....                           | 48 |
| Figure 3. 19 Class Diagram.....                               | 51 |
| Figure 3. 20 CDM Diagram .....                                | 52 |
| Figure 3. 21 PDM Diagram.....                                 | 53 |
| Figure 3. 22 MVP.....                                         | 59 |
| Figure 4. 1 Main Menu and Interface Layout .....              | 69 |
| Figure 4. 2 Stage Selection Interface Layout .....            | 70 |
| Figure 4. 3 Settings .....                                    | 70 |
| Figure 4. 4 Information Panel .....                           | 71 |

|                                                  |    |
|--------------------------------------------------|----|
| Figure 4. 5 Player Data Registration Form .....  | 71 |
| Figure 4. 6 Stage 1 Core Dialogue .....          | 72 |
| Figure 4. 7 Branching Choice Node Stage 1 .....  | 72 |
| Figure 4. 8 Game Paused.....                     | 73 |
| Figure 4. 9 Stage 2 Initial Dialogue .....       | 74 |
| Figure 4. 10 Mini Game Focus.....                | 74 |
| Figure 4. 11 Stage 3 Dialogue .....              | 75 |
| Figure 4. 12 Mini Game Map.....                  | 75 |
| Figure 4. 13 Stage 4 Dialogue .....              | 76 |
| Figure 4. 14 Mini Game Stage 4 .....             | 77 |
| Figure 4. 15 Stage 5 Dialogue .....              | 77 |
| Figure 4. 16 Mini Game QTE .....                 | 78 |
| Figure 4. 17 Stage 6 Dialogue .....              | 79 |
| Figure 4. 18 Counseling Validation Dialogue..... | 79 |
| Figure 4. 19 Core Educational Message.....       | 80 |
| Figure 4. 20 Cloud Data Manager.....             | 80 |

## LIST OF TABLES

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| Table 2. 1 Previous Research .....                                             | 7  |
| Table 2. 2 GUESS-18.....                                                       | 18 |
| Table 2. 3 Likert Scale Criteria .....                                         | 19 |
| Table 2. 4 Feasible Categories .....                                           | 20 |
| Table 2. 5 N-Gain Result Classification.....                                   | 20 |
| Table 3. 1 Use Case Input.....                                                 | 48 |
| Table 3. 2 Use Case Branching .....                                            | 49 |
| Table 3. 3 Use Case Evidence.....                                              | 49 |
| Table 3. 4 Use Case QTE .....                                                  | 50 |
| Table 3. 5 Use Case Panic .....                                                | 50 |
| Table 3. 6 Use Case Focus .....                                                | 51 |
| Table 3. 7 Character Assets.....                                               | 53 |
| Table 3. 8 Background Assets.....                                              | 54 |
| Table 3. 9 Story Scripts Assets.....                                           | 55 |
| Table 3. 10 Test Case 1: Main Menu and Interface System .....                  | 60 |
| Table 3. 11 Test Case 2: Narrative Navigation and Dialogue System.....         | 60 |
| Table 3. 12 Test Case 3: Narrative Branching System .....                      | 61 |
| Table 3. 13 Test Case 4: Emotional Meter and Mini-game Logic System .....      | 61 |
| Table 3. 14 Test Case 5: Story Conclusion and Termination System.....          | 62 |
| Table 3. 15 Questionnaire Item Allocation per Bullying Category .....          | 63 |
| Table 3. 16 Simulation of Pre-test and Post-test Metrics .....                 | 63 |
| Table 3. 17 Ststatement and Aspect of GUESS-18.....                            | 64 |
| Table 3. 18 Simulation of GUESS-18.....                                        | 65 |
| Table 4. 1 Test Case Results: Main Menu and Initialization.....                | 81 |
| Table 4. 2 Test Case Results: Dialogue and Navugation System .....             | 84 |
| Table 4. 3 Test Case Results: Branching Narrative System.....                  | 87 |
| Table 4. 4 Test Case Results: Emotional Meter System .....                     | 90 |
| Table 4. 5 Test Case Results: Ending and Data Logging System .....             | 92 |
| Table 4. 6 Pre and Post test result .....                                      | 95 |
| Table 4. 7 Statistical Distribution of N-Gain Categories .....                 | 97 |
| Table 4. 8 Structural GUESS-18 Feasibility Metrics per Quality Dimension ..... | 97 |

## LIST OF CODES

|                                  |    |
|----------------------------------|----|
| Code 4.1 Cloud Data Manager..... | 79 |
|----------------------------------|----|

## **LIST OF APPENDICES**

|                                                                                   |     |
|-----------------------------------------------------------------------------------|-----|
| Appendix 1 Letter of Certification of Plagiarism Check Results.....               | 106 |
| Appendix 2 Letter of Acceptance (LoA) Journal Publication.....                    | 107 |
| Appendix 3 Student participating in the educational game playtesting session..... | 108 |
| Appendix 4 Student completing the post-game evaluation questionnaire .....        | 108 |