

Interactive Folklore "Malin Kundang"

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Abstrak

Masyarakat semakin terdorong oleh kemajuan ilmu pengetahuan dan teknologi untuk menggunakan dan mengembangkan capaian teknis di berbagai bidang, khususnya multimedia. Salah satu cara memanfaatkan cerita rakyat interaktif yang cocok dan menyenangkan, terutama bagi anak muda, adalah dengan menghasilkan cerita rakyat interaktif. Karena dikemas dalam dua kajian yang unik dan menarik bagi penggunanya, dimaksudkan menjadi sesuatu yang baru dan tidak membosankan dalam proses belajar dan membaca bagi anak muda. Peneliti menggunakan cerita rakyat Malin Kundang yang bersumber dari cerita rakyat Sumatera Barat dalam penelitian ini. Kisah interaktif ini dibuat dengan menggunakan basis animasi dua dimensi. Pengguna akan diberikan cerita tentang Malin Kundang dan ibunya, dari Malin Kundang muda hingga menikah dengan Malin Kundang, dalam cerita rakyat interaktif ini. Cerita rakyat interaktif ini berisi banyak narasi yang berbeda, masing-masing dengan akhir dan perkembangan cerita yang berbeda, sehingga anak-anak akan terlibat dan tidak bosan dengan alur cerita yang bervariasi dan dapat belajar dari berbagai kualitas dan karakter dalam cerita rakyat interaktif ini. Pengujian dilakukan kepada anak dengan usia 10-12 tahun untuk mengetahui apakah aplikasi ini menarik dan mudah untuk dimainkan dan mendapatkan hasil rata-rata 4,5 dari skala 1 sampai 5.

Kata kunci: Malin Kundang, Cerita Rakyat Interaktif, Permainan.

Abstract

People are increasingly encouraged by the advancement of science and technology to use and develop technical achievements in a variety of sectors, particularly multimedia. One way to make use of interactive folklore that is suitable and enjoyable, especially for youngsters, is to produce interactive folklore. Because it is packaged in two unique and fascinating studies for its users, it is intended to be something new and not dull in the process of learning and reading for youngsters. The researcher used the folklore "Malin Kundang," which is based on West Sumatra folklore, in this study. This interactive tale was created utilizing a two-dimensional animation base. Users will be provided a story of Malin Kundang and his mother, going from young Malin Kundang to married Malin Kundang, in this interactive folklore. This interactive folklore contains numerous distinct narratives, each with a different ending and story progression, so that children will be engaged and not bored by the varied storylines and may learn from the various qualities and characters in this interactive folklore. Tests were carried out on children aged 10-12 years to find out whether this application was interesting and easy to play and got an average result of 4.5 on a scale of 1 to 5.

Keywords: Malin Kundang, Interactive folklore, Game.

1. Introduction

According to the findings of the "Most Littered Nation in the World" study conducted by Central Connecticut State University (CCSU) in 2016, Indonesia ranks 60th out of 61 nations whose citizens like reading books, particularly in the elementary and secondary levels. Science and technology advancements are motivating the people to utilize and generate technical

output in a variety of sectors, particularly in the realm of multimedia. It may be used to create interactive tales that are age-appropriate and engaging, particularly for youngsters. Because it is packed in imaginative and fascinating studies for youngsters, this will be something fresh and not dull in the reading process. Since the time of our forefathers, storytelling has been one of the most common ways to impart moral precepts to people of all ages [1], spanning from

toddlers to adults. People are increasingly encouraged by the advancement of science and technology to use and create technical achievements in different disciplines, particularly in the realm of multimedia. One example of application is the creation of interactive stories that are age-appropriate and engaging for youngsters [2]. Since we can make something new and fascinating for children to read by combining these two components. It will become something fresh and not dull for children to read because it is packed in two innovative and engaging studies for children.

According to Ernest Doku, a telecom expert, nearly two million children under the age of eight already own a tablet, and one in every four British youngsters under the age of eight has started using a smart phone. [3]. Based on the above description, we intend to create an android or computer interactive narrative based on Indonesian folklore, MALIN KUNDANG as a method of learning and fascinating reading medium for children in Indonesia. The author's objective is to produce "INTERACTIVE FOLKFORE MALIN KUNDANG," an Android and computer-based interactive Indonesia folklore that will be an engaging learning and reading medium for Indonesian children that can be accessed anywhere and at any time, allowing parents to participate.

The benefits are in the following:

1. Able to become an interesting learning and media facility for Indonesia Children
2. Preserving Indonesia folklore or fairy tales among Indonesians Children.
3. The creation of an interactive application are based on Android, Mac, and Windows.
4. Increasing the creativity of Indonesia students in creating application or software that can compete in the Global Market.

2. Basic Theory

Here are some of the fundamental ideas that were employed in this application:

2.1 Interactive Story-telling

Interactive Storytelling is a new way of delivering stories that were previously provided in a narrative format utilizing technological media (one of which is Smartphone media). This is done so that users may engage with the story directly. [4]

Interactive storytelling, according to Chris Crawford, is a type of digital entertainment in which the user may affect the plot by doing actions based on orders given to the main character in the tale [5]. Meanwhile, Interactive Stories, according to Tony Caputo, are "stories told through media employing visual pictures or graphics, both moving and static."

Users in interactive tales may do more than just watch

or listen to the issue at hand; they can also actively participate and reciprocate with one another. There are four major components in interactive stories [6] :

1. Restrictions on freedom.
2. A Storyline with a Wide Range of Characters
3. Have several endings
4. A thorough knowledge of the plot

2.2 Folklore

Folklore are a form of media storytelling in which storytellers and listeners interact. Once upon a time, and they lived happily ever after are all examples of fairy tales (fairy stories), nursery tales (children's stories), or wonder tales (magic stories), all of which have the same opening and ending phrases [7].

Based on the foregoing, it may be inferred that folklore are fictional stories with imaginative components in which the events do not actually occur [8]. There are five primary categories of fairy tales:

1. Animal Tales (Fable) is a fairy tale in which pets and wild animals coexist. In this sort of tale, the animals act like people.
2. Ordinary Tales are human-created fairy tales that often tell about someone's ups and downs.
3. Jokes and anecdotes fairy tales (Jokes and Anecdotes), Is a funny fairy tale that might make you laugh.
4. Fairy tales in the form of fairy tales with a repetitive pattern, i.e. stories that have been built up a lot, and stories to play with people.
5. Imaginary worlds A fairy tale that explains the genesis of a legend in a specific place is known as folklore. In addition, there are many moral elements and teachings in this narrative.

2.3 Ren'py

Visual novels are interactive fiction works or games that are created for computers, game consoles, smartphones, and other mobile devices. Readers and application developers who wish to try their hand at making games in the style of this Visual Novel may now use the Ren'Py engine [9].

Ren'Py is a Visual Novel engine that may be used to create games and apps. Developers may utilize the Python programming language to create a Visual Novel by combining text, graphics, and audio.

Visual Novels are interactive fiction games that display novel tales in the form of static pictures (rendered in an anime style) with chat bubbles to represent each character's narration and voice. Each character in a Visual Novel may have a sound effect to make them appear alive and talkable[10].

Surprisingly, in this Visual Novel game, players can explore a variety of alternatives in order to reach the game's conclusion. In this scenario, the end-of-game tale that the players will get is determined by the decisions they make during the game.

3. Implementation

3.1 System Analysis

The folk tale "Malin Kundang" is used in this interactive narrative. The features that set this interactive tale apart from others are that the user has control over the plot that has been supplied, allowing for interaction between the user and the story. In contrast to previous digital tales that have put their consumers on a fast track.

In addition, audio is used to supplement the delivery of stories, such as background sounds, in this interactive story. A system requirements analysis is required to create this interactive tale, in which the system requirements are separated into two categories: functional requirements analysis and non-functional requirements analysis.

3.1.1 Functional Requirements

The folklore "Malin Kundang" serves as the inspiration for this interactive tale. This interactive tale allows users to engage with one other by allowing them to choose the story's path based on predefined options. This interactive narrative also includes numerous additional multimedia elements, such as photos, audio, and text, to aid in the delivery of the story.

3.1.2 Non-Functional Requirements

1. Hardware

The hardware used is as follows:

- Dell Precision 3640 PC for the production process, with CPU Intel Core i9-10900 CPU @2.80 GHz (20CPUs) GPU NVIDIA Quadro RTX 4000, RAM 32 GB, Windows 10 Pro 64-bit.
- Android smartphone as a medium for interactive stories
- Wacom Intuos Draw Graphics Tablet

2. Software

The software used is as follows:

- Ren'py is used to create applications, insert story scripts and pictures. This software can export in various platforms, one of which is Android
- Final Draft is used to create application scripts.
- Medibang Paint is used for overall character creation.

3.2 Character Design

In general, the characters developed are the characters of Little Malin Kundang, Teenage Malin Kundang, Adult Malin Kundang, Malin Kundang's Mother, and Malin Kundang's Wife.

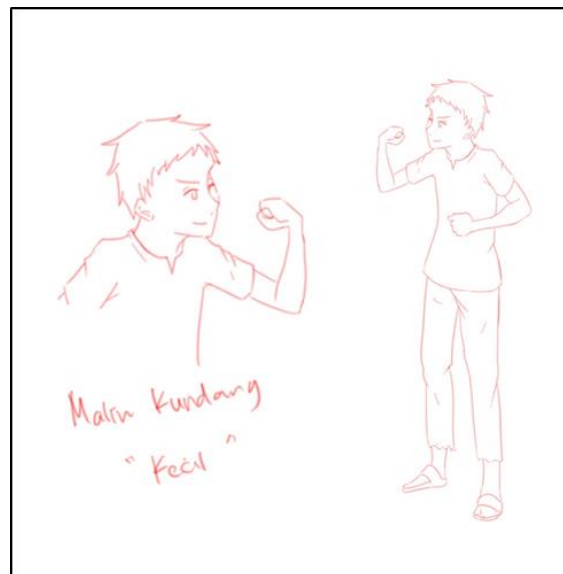


Figure 1. Little Malin Kundang

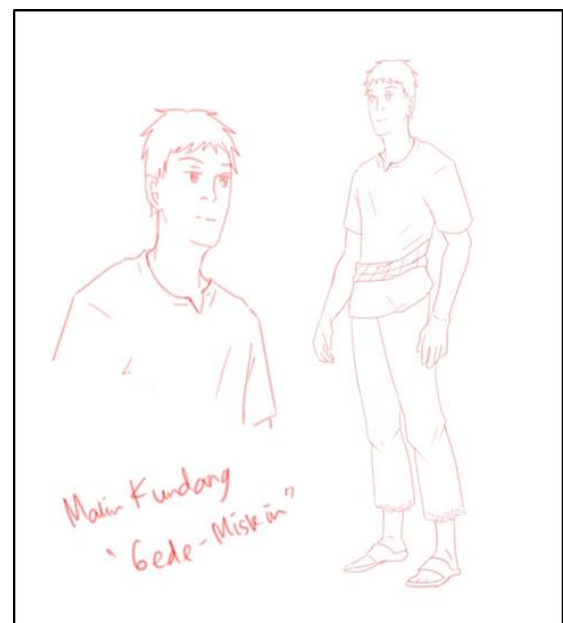


Figure 2. Teenage Malin Kundang



Figure 3. Adult Malin Kundang



Figure 4. Malin Kundang's Mother



Figure 5. Malin Kundang's Wife

The characters depicted above have already been given a design. Ship captains, wealthy merchants, and others are among the characters that will be developed shortly.

3.2 Plotting

There is a plot that has been described at this point in order to comprehend the tale. Linear, elastic, concentric, branching, nodal, and constellation are examples of narrative interactive structures. The Branching arrangement is used in this interactive narrative. This is a branching arrangement that will lead to numerous additional options, each of which has its own set of options.

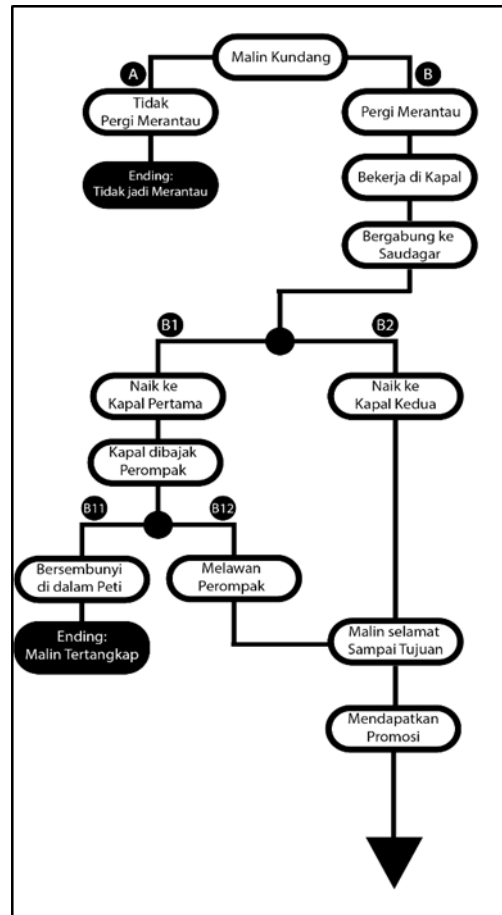


Figure 6. 1st Interactive storyline diagram “Malin Kundang”

Malin's first job is still a modest one, however this narrative is simply presented as a prologue. When Malin has grown up, the story continues. Malin requested permission from his mother to travel overseas in order to make a lot of money. There are

two alternatives available to the reader here:

- (A) Do not travel overseas
- (B) Go exploring

If the reader decides not to travel abroad (A), Malin does not travel abroad and stays in his village. If Malin selects option (B), he will leave his mother and travel overseas. When Malin wanted to travel to the other side of the world, he bargained with the ship's captain and worked on the ship for three months in order to get to the other side.

Malin traveled to the other island and worked with the Kaya Merchant after working with the Ship Captain for three months. Malin is offered two alternatives on his first day working for the Kaya Merchant, which readers can pick from:

- (B-1) Board the First Ship
- (B-2) Board the Second Ship

Malin will board the First Ship if she chooses option (B-1). His ship, however, was taken over by pirates. Malin will board the Second Ship and arrive at his destination safely if option (B-2) is chosen. There are other possibilities in section (B-1) that include:

- (B-1-1) Hiding in the Chest
- (B-1-2) Fighting the Pirates

If Malin choose (B-1-1), he will hide in the chest but will be discovered. If Malin picks (B-1-2), he will battle and defeat the Pirates. Choice (B-1-2) is also linked to the narrative of Malin arriving at his goal.

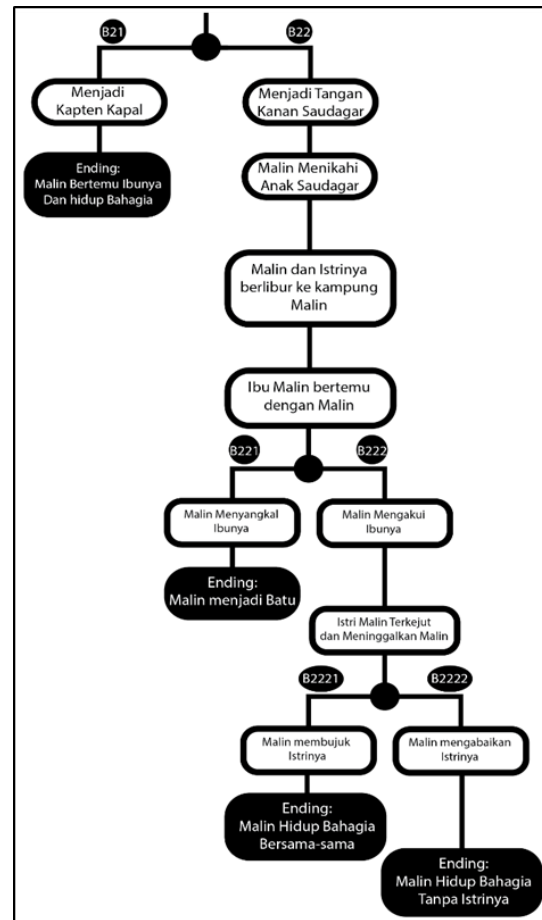


Figure 7. 2nd Interactive storyline diagram “Malin Kundang”

Malin continued to do a good job when he arrived at his destination safely, and he received a promotion or promotion. Malin has two choices in this place, which the user may choose from:

- (B-2-1) Become a Captain of a Ship.
- (B-2-2) Becoming a Merchant's Right Hand

Malin will be the Captain of the Ship in choice (B-2-1). He met his mother on a job that prompted him to sail to his hometown, and they lived happily ever after. Malin will be the merchant's right hand and marry the merchant's daughter in choice (B-2-2). Malin and his wife will spend their vacations at Malin's village while working in this role. When they arrived in Malin's village, Malin's mother recognized them and approached Malin. The user can choose between two possibilities:

- (B-2-2-1) Malin refused to acknowledge his mother.
- (B-2-2-2) Malin recognizes his mother.

Malin will reject and abandon his mother if he chooses option (B-2-2-1). However, a storm struck him on his trip, and he turned to stone.

Malin will identify his mother if he chooses (B-2-2-2). Malin's wife was taken aback and left him. Malin's mother encouraged him to approach his wife and persuade her. The user is then presented with two options:

(B-2-2-2-1) Malin managed to persuade his wife.

(B-2-2-2-2) Malin ignores his wife.

Malin will persuade his wife in option (B-2-2-2-1) so that she forgives him and they may live happily together. Malin will neglect his wife in choosing (B-2-2-2-2), allowing him to live peacefully with his mother as a wealthy man.

3.3 Developing Application

The process of creating apps that have been modified to the design is known as the implementation of this gaming application. The findings and designs that have been created can be shown after making a design.

This gaming application has numerous restrictions in terms of implementation, including:

1. This software is only available in single-player mode (one player)
2. This program is not connected to the internet or is offline.

The procedure is as follows:

1. Character implementation using CLIP STUDIO PAINT EX.
2. Creating scenes, make interaction and engagement scenes using Ren'Py.
3. Creating the user interface and conversation for every characters.
4. Implementation button and navigation.
5. Give background music for the application.

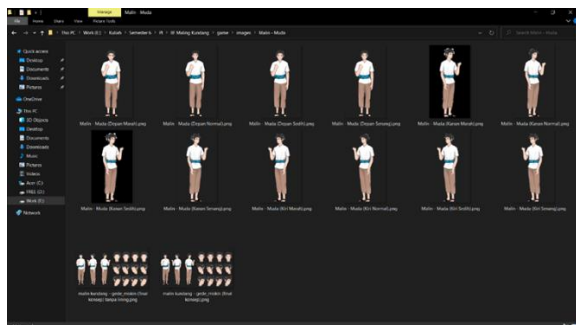


Figure 8. Character implementation using CLIP STUDIO PAINT EX

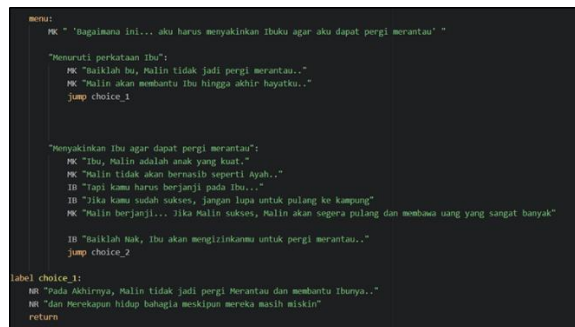


Figure 9. Creating scenes, make interaction and engagement scenes using Ren'Py

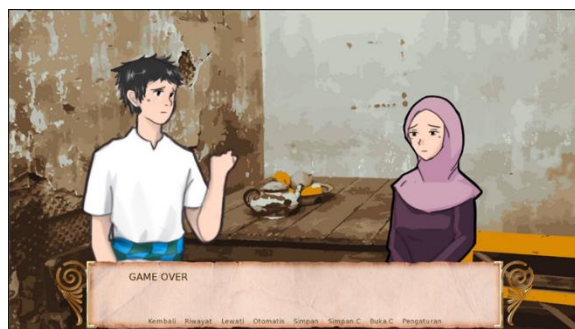


Figure 10. Creating the user interface and conversation for every characters

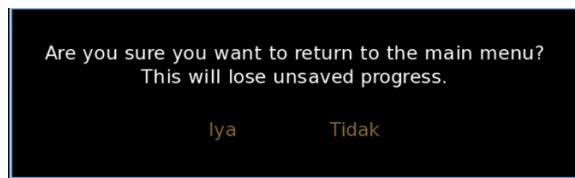


Figure 12. Implementation button and navigation

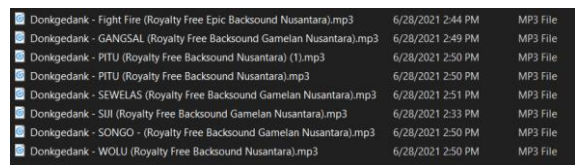


Figure 13. Give background music for the application

3.4 Testing

We test the system when the application is finished. We test all of the features that have been created and ensure that they can be used.

The development team conducted the first test, which was followed by application testing. Next, Interactive multimedia component and functioning is tested by professionals. Next step, youngsters were then

subjected to the testing process. The youngsters were then subjected to the testing process. The youngsters in our sample range in age from 10 to 12 years old and are accompanied by their parents. We inform the youngster and his parents about the application and provide them with the opportunity to test it out.

Table 1. Application Functional Testing

Functional Testing	Result
Button	Work Properly
Navigation	Work Properly
Audio	Work Properly

Table 2. Interactive Multimedia Component Testing

Multimedia Testing	Result
Image	Good
Audio	Good
Story	Good
User Interaction	Good

Table 3. Application testing by Children and Parent

Application Testing	Point
Interesting to play	4.5
Easy to use	4.6
Useful	4.2
Interactive application	4.5

4. Conclusions

This Malin Kundang interactive folklore application was designed to assist parents in providing their children with alternative learning material.

This program develops the elements of a narrative in one of Indonesia's folklores, but does not affect the substance or meaning of the folklore itself.

This interactive narrative was tested on youngsters with their parents and had a positive reaction from those who tried it.

Acknowledgment

The following is an example of an acknowledgment. (Please note that financial support should be acknowledged in the unnumbered footnote on the title page.)

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