



Utilizing Digital Storytelling Structure for Developing an Electronic Traditional Game Gobak Sodor

Bambang Pudjoatmodjo ^{a,*}, Amir Hasanudin Fauzi ^b, Sazilah Salam ^c, Tio Ahmad Muluk ^d,
Dendy Syahreza Maulana ^e

^{a,c} Centre for Advanced Computing Technology (C-ACT), Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka,
^{b,d,e} School of Applied Science, Telkom University,

p031810011@student.utem.edu.my, amir_hf@tass.telkomuniversity.ac.id, sazilah@utem.edu.my, tiowiky858@gmail.com, terumi1405@gmail.com

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ABSTRACT

Gobak Sodor is a traditional game that came from Indonesia. Gobak Sodor is also known as a different name in Indonesia and Malaysia, such as Panjang tangan in Riau-Sumatra, Asing in Makassar, Galah Asin in West Java, and Galah Panjang in Malaysia. Gobak Sodor is a game that is played in two groups and has a rule that one group must prevent the opponent through the line back to back. However, Indonesia's open area has gradually reduced so that people difficult to play gobak Sodor. The loss of open land for playing Gobak Sodor and game technology advances make children slowly forget the gobak sodor. In the present time, technology is common for people to support their daily life activities. One of technology implementation form is electronic game, where peoples can play without the limitation of time and space. The electronic game also give pleasure and fun as much as conventional game activities. With the form of electronic game, this research develop a game application which implements all of the gobak sodor rules. Where the players can play the gobak sodor using their mobile device and without the trouble to play on a field or open space. Using electronic game for playing Gobak Sodor gives people satisfaction, awareness. In the hope that this will preserves the traditional game Gobak Sodor. The survey found that 80% of people have an interest to play The Gobak Sodor game.

* Corresponding author at:

Centre for Advanced Computing Technology (C-ACT), Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka,
Hang Tuah Jaya, 76100 Durian Tunggal, Melaka, Malaysia
E-mail address: p031810011@student.utem.edu.my

ORCID ID:

- First Author: 0000-0001-6040-3133
- Third Author: 0000-0003-4979-6129

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1. Introduction

A game [1][2] is an activity performed by people that involves physical and mental activities to provide pleasant conditions and comfort to those who perform it. The game activity may be performed in person or a group when playing it. Games have rules (reward and punishment) and goals in order to play it. Games also can be played by all variance of age ranges (from children to adults) [1].

In the early days, electronic games [3][4] were not invented yet. In these days, game activities were used to be played in open areas, involved full physical activities and resulted with full of enjoyment [5]. People may play the game individually or in pairs or groups. The visual representation of game activity in Figure 1 shows some traditional game in Malaysia and Indonesia that were used to be played in open areas. Malaysia and Indonesia have many traditional game in common.



Figure 1 Traditional Game Playing in Open Area [6]

Along with technology development [5] games that were originally played outdoor began to change into games that were created in electronic devices such as computers, and game consoles. The electronics game may offer a good graphical image that affects people to play the game. The game electronic game also provides the same fun and pleasure effects as game that played in open areas. Figure 2 shows an example of visual representation of a computer game.



Figure 2 3D Game [4]

The attractive graphical show in made people change their habit in-game activities; they no longer play the game activity in an open area and playinstead they playthe game on electronic devices because the electronics games may provide the same fun as playing outdoor [5].

In present-day, the open area in many countries may have reduced because people need land to build a government office, office complex, home residence, station, and other building. This situation makes people feel difficult for playing the game that needs an airy area. This situation makes people change to other media to playing a game. The alternative media for playing the game is the electronic game that may give the same pleasure effects as a game that involves physical activities and psychological pleasure.

One game that needs an airy area is Gobak Sodor [6]. Gobak Sodor is also known as a different name in Indonesia, such as Panjang tangan in Riau-Sumatra, Asing in Makassar, Galah Asin in west java. In Malaysia, the game is known as Galah Panjang [6]. Gobak Sodor is a game that is played in two groups and has a rule that one group must prevent the opponent from going through the border line back to back. The illustration of a Gobak Sodor game is shown in Figure 3.

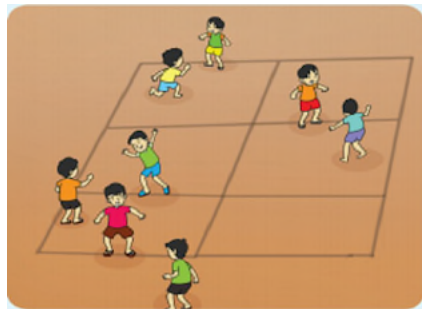


Figure 3 Gobak Sodor [6]

Gobak Sodor, in the present day, mostly, has been forgotten by people especially the young generation. Many people feel strange with Gobak Sodor. To prevent the game from being completely forgotten, the Gobak Sodor has been developed by using an alternative media via electronic games such as computer or mobile games. Postolache research [7] reported that computer games may provide players the enjoyment effects as much as playing them physically.

This presents the design of the Gobak Sodor game called Galasin. Galasin is a game that allows players to play a Gobak Sodor game electronically and has the purposes of reminding back people about the traditional game (Gobak Sodor). Game Storytelling using Three-Act Structure is used in designing the stories in the Galasin game. In addition, a Pearl Structure is also introduced to design the game level of the Galasin.

2. Discussion

2.1. Game Storytelling

Storytelling [8]-[10] is a social and cultural activity of sharing stories that have been going along humankind's history. Storytelling [9][10] is conveyed to the audience, along with improvisation such as expression, decoration, or gesture [11][12]. Many countries have their own story shared as entertainment, education, cultural preservation, or cultivation of moral values depending on the cultural characteristic [13]. Storytelling also defines as the way of people through various media to tell to form a story. There are several structure to create a story such as three act structure, pearl structure, branching structure, and modular structure [13].

The storytelling structure used for creating the game storyline is a three-act structure [14] and pearl structure [13]. The three-act form is used to describe the common thread of the game story. Furthermore, the pearl structure will be used for

designing the game level. The detail of game storytelling will mention in next section.

2.2. Three-act Structure

The three-act structure divides into three-part, namely Act 1 (Arrangement), Act 2 (Conflict), Act 3 (Resolution) [13][14]. The illustration of Three-Act Structure show in Figure 4.

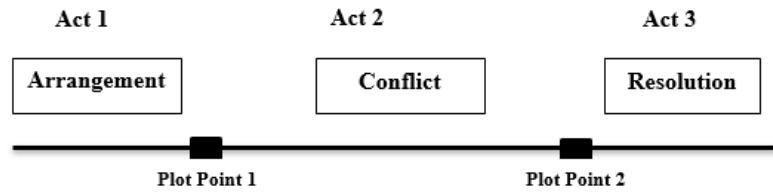


Figure 4 Three Act Structure

The common thread of the Galasin game story is the player must find angklung, who stolen by the monster music. The missing angklung need to search for use in the village party. The detail of the game story describes as follow.

1. Act-1 (The Arrangement). The main character, namely Neo (Figure 5), lives in a peaceful village. The village is full of music joy, especially angklung. The melodious voice of angklung makes the village feel peaceful and joyful. However, the peaceful village disturbs by monster music. The monster music steals some angklung (Figure 6). The villagers feel sad since the missing angklung make fails to hold the party. Neo must find the missing angklung so the villagers can hold the party.



Figure 5 Neo Character (Hero Character)

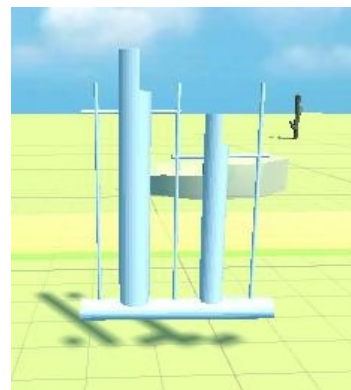


Figure 6 The Angklung

2. Act-2 (The Conflict). Neo begins to search the missing angklung after discussing it with the village elder. The village elder told the place that the angklung guard by the monster (see Figure 5Figure 7 Monster Music Character (Enemy Character) (Enemy Character)
3. Neo must go to four places to take back the missing angklung from the monster (Figure 7). That is not an easy task for Neo to take back the angklung. He must overcome the monster whose guard the angklung.



Figure 7 Monster Music Character (Enemy Character)

4. Act-3 (The Resolution). Neo goes from one place to another to fight the monster and take back the angklung. After overcoming the monster in the fourth place and take back the last angklung, Neo goes back to his village. Neo comes to his village and gives all the missing angklung to the elder village.

Furthermore, the next step after creating the common thread of game Galasin by utilizing three-act structure is design the game level. The Pearl Structure will be used to design the game level.

2.3. Pearl Structure

The pearl structure will be used to design the game level [15][16], The game level created based on the story in three act structure. There are four level in Galasin game. The rule of each level (pearl) are:

1. Each pearl (level) must overcome by the player.
2. The player must get an angklung in each pearl.
3. The player can go to the next level after collecting an angklung.
4. If the player has not completely collect the angklung so the player still can look the map on the next level. But cannot play the next level.

The diagram for the structure shows in the following Figure 8.

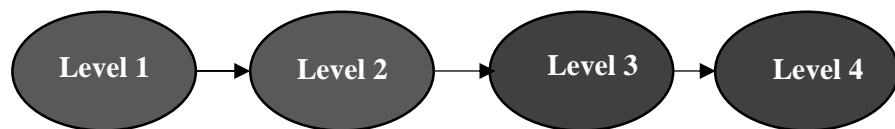


Figure 8 The Pearl Structure for The Game Level

Each pearl has a diagram that describe player must do for going to the next level. The table shows the game level design of each pearl.

Table 1 Game Level of Galasin Game

Level	Description	Goal	Obstacle	Reward / Punishment
1	Neo start to grasp the angklung from the monster music	Neo must get one angklung	There are monster music guard the angklung. The monster has a weak speed to catch neo.	Get the angklung Punishment: Game Over
2	Neo continues his journey to find an get another angklung	Neo must get another two angklung	There are monster music guards, the angklung. However, the field area has puddles, so the field is slippery.	Get the angklung Punishment: Game Over
3	Neo continues his journey to find an get another angklung	Neo must get another two angklung	There is a monster music guard, angklung. However, the field area has puddles of water and gravel, so the field conditions are slippery.	Get the angklung Punishment: Game Over
2	Neo continues his journey to find an get another angklung	Neo must get another two angklung	There is a monster music guard, angklung. However, the field area has puddles of water and more gravel, so the field conditions are slippery.	Get the angklung Punishment: Game Over

2.4. Galasin Game

From the story structure and Table 1 that was developed in the previous section, the game design was done. The following Figure 9 is a map of the game that was formed.

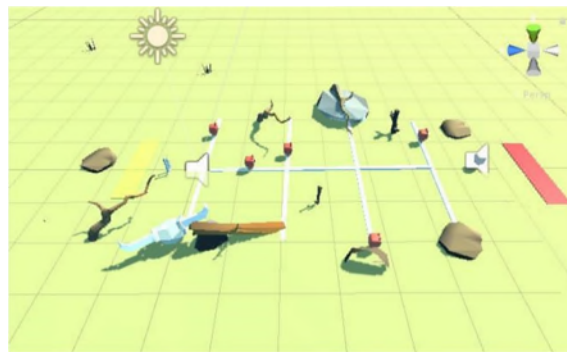


Figure 9 Game Map for each level

In each level, players will find challenges namely grasp a angklung by defeating monster through gobak sodor rule. The player must go to end line to get the angklung and go back to start line without touch by the enemy character. When playing a game, the player screen will be as follow (Figure 10).

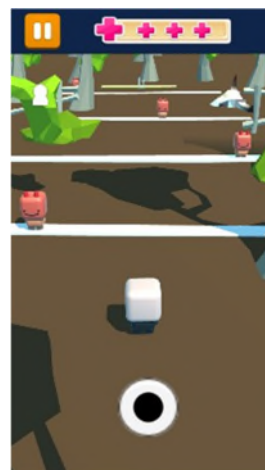


Figure 10 The player screen when playing a game

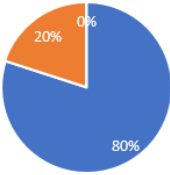
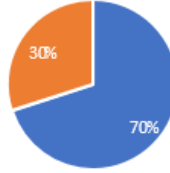
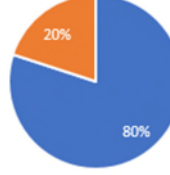
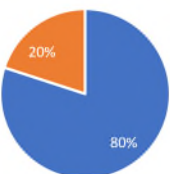
3. Results and Discussion

Thirty persons randomly selected to test the game application. Before testing, explanation is given to the tester about the game that will be played. Then anonymous tester was tested the Galasin game application. From the test results of the Gobak Sodor game, it shows that the user can play the game and feel the sensation of playing Gobak Sodor. The testing scenario are:

1. Tester given information about the galasin game such as the interface, how to play it.
2. Tester using the game application
3. Tester doing the game testing two times
4. Tester answer the questioner after testing the game.

The following item such the color, the game interface, the user interest and user expectation of the game feature are the item list to evaluate. The result of testing show on Table 2 as follow.

Table 2 The Testing Result of Game Galasin

No	Testing Item	Graphics Result	Description Result
1	The color that implement on game galasin		The result 80% shows the color has appropriate to user need
2	The game interface		The result 70% shows the game interface is interesting for the user.
3	User interest to play a game		The result 80% shows user feel interest to play a game
4.	User expectation on the game application feature		The result 80% shows the game application feature are as user expected

4. Conclusion

The conclusions of the galasin game are:

1. The Galasin is an application that can be used to represent the traditional game gobak sodor to the player.
2. The player interest to play galasin game.

3. This application is utilised to help people that do not know about the gobak sodor game.

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