

Innovation in *Wayang Kulit* Storytelling using Digital Interactive Method

Muhammad Colmann Abdullah, Norfarizah Mohd Bakhir, and Mohd Shahrizal Sunar

Abstract—Technological advances enable the use of interactive interfaces in performances. This study gives a brief insight into the potential and challenges of using interactivity in recognizing characters in wayang kulit Kelantan storytelling. Besides that, this study enables them to interact with the puppet and experience Tok Dalang's (Puppet Master) techniques. Wayang kulit Kelantan is the heritage of Malaysia and symbolizes the spirit of traditional Kelantan Malay Pattani society. Tok Dalang in the 1960s are mostly illiterate, but they could imagine the fairyland and the underwater world, and has even think forward so that each story presented, has lessons and a high aesthetic value in visualizing the wayang kulit performance.

This outstanding value should be appreciated and shared with the new generations. Technological advancements should be able to bring traditions and heritage along with modernity. Technology can be applied in the learning process because there are interactive toys that allow interactions between humans and the device. By combining both the technology and heritage elements, we can now build a new simulation in presenting the narrative and the wayang kulit characters to children. By using interactivity it can give new impetus to preserve local heritage.

Index Terms—Wayang kulit *Kelantan*, interactive, motion sensor depth

1 INTRODUCTION

THE digital generation barely recognizes Wayang Kulit because they are more engage to video games.

Therefore, this study is about the conventional Wayang Kulit using new media interactivity methods, to experience the Wayang Kulit storytelling controlled by the Tok Dalang. The objective of this study is to increase the knowledge and the understanding among the digital generation on wayang kulit in an interactive approach, which is much easier, in order to enjoy wayang kulit (conventional) and interactivity (technology) both at the same time [1].

The strength of this project is the direct interaction with the user. Users are able to experience puppetry techniques operated through Tok Dalang by controlling the puppet which involves the movement of the wrist to control and move the characters in accordance to the Wayang Kulit storylines [2].

Depth motion sensor technology used in the Kinect detects the reaction of the human body which will be sent to computer software to move the 2-Dimensional Wayang Kulit character. Furthermore, new audience especially the digital generation is able to recognize the characters, lesson and Wayang Kulit Kelantan storytelling using current and modern devices with ease. In addition, they

can play puppet character and experience puppetry techniques operated by Tok Dalang [4]. By applying interactivity using the depth motion sensor techniques, it provides a positive impact to the user because the device interacts directly with an opportunity to experience the user Tok Dalang techniques through new media elements [6].

Wayang Kulit Interactive is like a game; the player will fight the enemy and continue to the next stage until they encounter the last enemy in the final stage. Wayang Kulit Interactive is a medium and in the future the storyline can be changed to suit the individual. In summary, this study uses natural elements through various digital processes to become an instrument of Wayang Kulit Interactive [5].

During the pre-production stage, a storyline is created based on the good and evil characters from a script in the Ramayana book written by Sunardi DM, 1986 [9]. Although this book is an Indonesian version but the story is substantially the same as the one used in the wayang kulit Kelantan performances, where its contents are packed with stories of the downfall of the Ayodhya state, the Dasaratha Marriage, the Birth of Dewi Sinta and Hanuman, the Rama and Sinta marriage, the Ambassador Hanuman and many more. Generally the script is shortened from main story that tells the journey between Sri Rama and Maharaja Wana. These two characters are the good and the evil character in wayang kulit Kelantan. Maharaja Wana is an arrogant king, rude, cruel and ruthless. Besides he is also full of tricks, has the ability to transform and has a wild lust. Sri Rama on the other hand, is a noble hero who was sent by the gods to save all people in the world [3].

2.1 Character Sketch

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This process is a process of sketching the characters based on a planned. Each sketched character underwent digitalization using the tracing technique (refer to the figure 1.0 and figure 1.2) and through character development a new version of Ten Heads Chief character was born refer figure 1.3 which often describes verbally by Tok Dalang, there were never a puppet version of Ten Heads Chief Character Sketch.

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Figure 1.2 Ten Heads Chief

With the use of the depth motion sensor and computer software, wayang kulit will be more attractive to the new audience where they will be able to interact with the characters.

3.1 Storyboard

Storyboard was first introduced in the animation industry in 1900 when Winsor McCay created a comic script to illustrate the story. Storyboard is important to look at the way the whole story, from brainstorming, sketching and the illustration of the whole story script. Visual storyboard is also divided into three parts namely rough pass, thumbnail and comprehensive. Storyboards can be likened to a contract or agreement for the production to be generated [13].

It helps a lot in the process of defining the specifications of each round, its position in the story, timeline, and activities that will take place and it incorporates a little bit of technical aspects, drawing, perspective, angle, camera movement and angle of view of the camera [10]. Storyboard in Wayang Kulit Interactive is intended to determine the character's fade in and fade out transition, tempo, dialogue, music and act in accordance to the level that continue the storyline.

Working from the original story idea, storyboards enable the entire production team to organize all the complicated action depicted in the script, whether being rendered for live action films, animation, or commercials. They will illustrate what action each lifted shot contains. By doing one's own storyboards carefully and thoroughly, you know exactly what is going to be done before the actual filming begins – every shot and every camera angle, along with what lighting, sets and props will be used [13].



Figure 1.0 Seri Rama and Maharaja Wana Character



Figure 1.1 Tiger, Old Man and the Ten Heads Chief Character



Scene: 7
 Duration: 0:10
 Action: (fade in) Maharaja Wana battle with Seri Rama
 Sound: Berperang
 VO: After all those disguise and tricks, finally Maharaja convert into his original look.
 Dialog: 'hahahaha, this is my real face, i am Maharaja Wana the emperor with supernatural powers and master of the four corners of the earth, now let us be your battle.

Figure 2.0 below shows the storyboard for Wayang Kulit Interactive generated by the researchers.

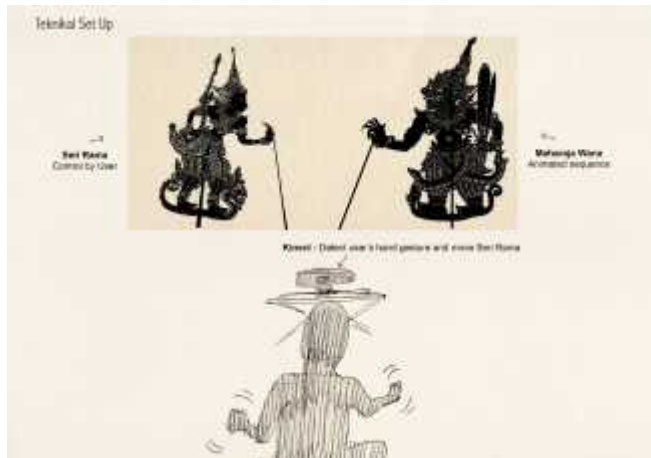
4.1 Scripting

Unity is a cross-platform game creation system that requires programming skills to enable MS_Kinect to detect hand gestures and control the 2D character sprites, which is a two-dimensional black character with joints, by following the narration of the whole story.

Maharaja Wana's character is animated using Key frames, then Unity Physics serves as a collider between the Seri Rama (MS_Kinect) and the Maharaja Wana (Animation) characters so that the user is able to control the Seri Rama character in order to continue the story.

5.1 Performance

The design of this project is inspired by the real shadow puppet show, there are frames and wayang kulit cinema screen (Kelir). In order to make the user feel and experience the conventional way of Wayang Kulit performance, a projector is used to project the images of the 2-dimensional characters onto a cinema screen. This



replaces the main light source used in the conventional wayang kulit, where the shadow of the wayang kulit characters is projected onto the cinema screen; refer to diagram 4.0 and 4.1.

Lastly the depth motion sensor is also used as a medium to detect the movement of the user's hand, thus resulting in the user's ability to control the Seri Rama character in order to continue the story [2].

Figure 4.0 Sketch of stage performances



Figure 4.1 User controlling Seri Rama with Wayang Kulit Interactive game

5 CONCLUSION

The advancement in technology enables the use of the depth motion sensor as a medium for interactivity [7]. These techniques provide an impact to the new audience to experience puppetry techniques operated by Tok Dalang by controlling the puppet through this new media element. Even though many consumers seem to enjoy the interactivity that resembles a game, but this game depends on the wisdom of Tok Dalang [4]. Interactivity distinguishes game theory from ordinary decisions, which involve a single decision maker and its main focus [8]. The game theory tries to predict the behavior of players and sometimes provide decision-making recommendations on ways in which to achieve the goal of the game [9]. Wayang Kulit Interactive has captivated the hearts of consumers with interactive elements to fight the enemy and continue the story of a puppet as Tok Dalang digital. This problem motivates the researchers to test the effectiveness of Interactive Wayang Kulit, backed with empirical evidence.

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