

Modeling Digital Wayang Kulit Based on Traditional Wayang Kulit Characteristics

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ABSTRACT

Threatened with imminent extinction, Wayang Kulit (WK) or shadow play has been designated as a Masterpiece of Oral and Intangible Heritage of Humanity on 7th November 2003 by UNESCO. In an attempt to further preserve and safeguard this unique heritage of WK, this study proposes a model of a digital version of WK (DWK). We believe, by doing so, it could help in preserving the traditional WK since it can be used in other domain (such as education) apart from leisure purposes. The model takes into account the evolution and revolution of the traditional WK. Also, for each WK figure, its characteristics and functions are compared and analysed to determine its dominance in the play. This paper also proposes a feature-characteristic matrix as a part of the component of the DWK's model.

Keywords: Wayang Kulit, Digital Wayang Kulit, Wayang Kulit modelling, feature-characteristic matrix, 2D animation

I INTRODUCTION

Shadow Play is called 'Wayang Kulit' in Malaysia. Puppets, elaborately carved from cow hide (see Figure 1) and colourfully decorated are projected on a white screen. The Tok Dalang (TD) also known as the shadow puppeteer and narrator skillfully manipulate the puppets while weaving his tale on the screen (see Figure 2). Dialogues recited by TD do not have any established texts. Instead, the TD recites stories which have been orally handed down from generations with his own improvisation.

merely as an entertainment but more importantly it functioned as a vehicle for the transmission of norms and values and as an intermediary between the real and the nether worlds. Moral values are easier to absorb in the form of parables, which is why WK flourished in the villages (*kampung*).



Figure 2. Pak Majid (TD) Staging Wayang Kulit

Ghouse (2009) clearly stated in his book "that traditional theatre (refers to WK) has been neglected and a few have succumbed to this neglect and died a natural death". One of the fall-off factors of this traditional culture is the process of modernization. Cinemas, CDs, videotape recorders have conquered the space that was once used for WK. Furthermore, actions taken by a state in Malaysia that bans several traditional performances like performing arts of WK (as in Figure 2), Menora, and Mak Yong, has worsened the situation. WK performances were prohibited on the grounds that the storylines and some rituals are non-Islamic.

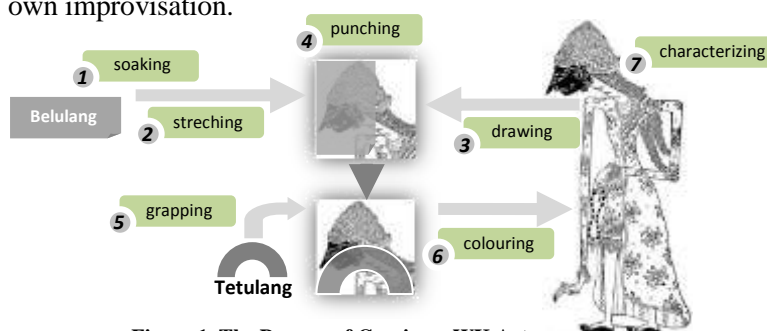


Figure 1. The Process of Carving a WK Actor

WK is well-known performing arts. It is a symbol and heritage to the Malay society in Malaysia. It was once fairly widespread, that the WK served not

It is clear that with the current situation and the level of support in Malaysia, WK Malaysia is unlikely to last long without some kind of strong

official support (Yusof, 2006). It augurs well, for the local entertainment industry, that recently the ministry of Arts and Culture has added Heritage (*Warisan*), to the functions of the ministry (Ghani, 2011).

Digitizing WK is also an important step. It is needed be taken to preserve this art or heritage from slowly vanishing. WK needs new alternative in the media output, to be digitalized into the e-world and to be watched on the computer screen or cinema (Ghouse, 2009).

In doing so, we need a proper digital WK (DWK) model to assist the traditional WK to migrate to the digital form. With the intention of providing required guidelines and models, especially in the local culture environment, the concept of two dimensions DWK (2D-DWK) is proposed.

By analyzing the traditional WK this paper describes the factors and components involved in modeling the DWK. Specifically, the analysis is scoped into five major aspects namely (1) the background of WK and 2D animation, (2) the characteristics of traditional WK, (3) the evolution and revolution of WK, (4) the feature-characteristic matrix of WK, and (5) the prominent components to be selected and connected into 2D WK.

II THE HISTORY OF TRADITIONAL WAYANG KULIT

In Malaysia, WK has been flourishing in Kelantan. It is an east coast state of Malay Peninsula bordering Thailand. WK is the earliest form of theatrical art in the Southeast Asian countries. According to Amat (2010), WK is believed to be originated in Cambodia and reached Malaysia via the Southern Thailand. It existed in Cambodia, Laos, and Thailand approximately a thousand years ago. WK in Malaysia has been around for 300 to 400 years. Based on historical records, in 1834, WK was performed in the palace of the first Malay King who ruled the state of Kelantan 200 years ago (Jabatan Warisan Negara, 2012) as shown in Figure 3.



Figure 3. The Timeline, Showing Malaysia Traditional WK's Origin

It is the characteristic of Malaysia WK that the puppets are decorated and their vivid colors are reflected on the screen. The story is a Malay adaptation of the "Ramayana", the Indian classical epic in which the characters are called in slightly different names from those of Ramayana.

The main character is *Ramayana*, and his wife *Sita Dewi*, his brother *Laksamana*, and *Hanuman* appeared on the stage to endure series of turmoils by *Maharaja Wana* in the *Ramayana* adventure story (see Figure 4).



Figure 4. Main Characters in Traditional WK

III THE EVOLUTION & REVOLUTION OF TWK AND DWK

The **evolution** of Malaysia traditional WK began with the Wayang Kulit Siam (WKS), practiced principally in the north-eastern state of Kelantan as well as in the Patani region of southern Thailand. WKS was performed in the Kelantanese-Patani dialect. Repertoire was largely based on the Malay oral and literary versions of the ancient Hindu epic, the *Ramayana*, which tells the adventures of *Seri Rama* and his consort *Siti Dewi*.

The **revolution** of WK is defined as a major step in improving the arts and the medium of performing. One of the revolutions considered in the study is the animation technique of performing arts. In our DWK model the animation technique taken into account is silhouette animation. Traditionally, the technique used is a form of cut out animation, involving a frame-by-frame cutout movement of shapes. This technique has been used since 1940s in Eastern Europe.

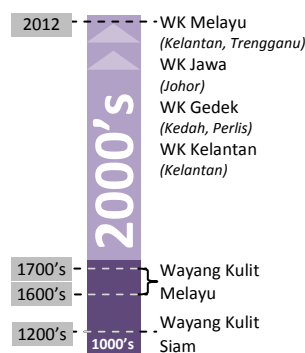


Figure 5a. The WK Evolution

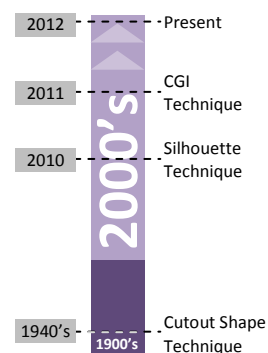


Figure 5b. The DWK Revolution

Table 1. Characteristics Comparison between Traditional WK and 2D DWK

WAYANG KULIT MELAYU			
No.	Category	Traditional	2D (DWK)
1.	Graphics design	a. Symbolized unity b. Aesthetic value c. Texture and craft puppets realistic	a. Modelling puppet more sharp b. Color more stand out c. Manipulated puppets
2.	Animation	a. Linear movement b. Slow movement c. Free movement	a. Replay animation b. Fast movement c. Shadow distortion d. Limited movement
3.	Cinematography	a. Real-life motion action	a. Frame-by-frame motion action
4.	Audio	a. Spontaneous narration b. More entertaining and phenomenal c. Orchestra creates mood d. Real time synch.	a. Programmed narration b. Controlled sound c. Can be edited d. Added special effects e. Synch. beforehand (narrator and music)
5.	Realism	a. Staging & flat drape b. Visual effects (swing the oil lamp) c. Real life environment	a. Flat screen shadow with colors b. Visual effects (use keyframes) c. Virtual environment

With the emergent of latest computer technology and software applications, this technique has improved. Silhouette animation is now used to give feelings of ‘wayang kulit’ but in a digital version. The usage of this technique not only preserves our ancestors’ oral history but also introduces our Malaysian WK in a digital form to the world (Woods, 2010). This is supported by Ghani (2011), in his research using computer graphic imaginary (CGI) technique in WK Kelantan (see Figure 5 a and b).

IV CHARACTERISTICS COMPARISON

In terms of WK characteristics, traditional WK and DWK (2 Dimension) are compared according to the following categories – graphics design, animation, cinematography, audio, and realism. Table 1 summarises the comparison.

Major differences that can be modeled are the graphics design of WK actors, real-time animation that can be repeated, audio synchronization, and the visual effects’ technology (See Figure 6).

Table 2. Feature-characteristics Matrix of WK Actors

FEATURE CHARACTERISTICS	TYPES OF CHARACTERS																														
	Ramayana	Hanuman Kera Putih	Sita Dewi	Maharaja Wana	Dewa Kertapati	Bayang Germa	Maharisi	Wak Long	Pak Dogol	Laksamana	Mahaguru	Raja	Raden	Beta	Ai Kiew	Bayang Germa	Ai Nunul	Ai Muang	Gergasi	Permaisuri	Raja Kurang Sa-40	Garuda	Semar	Ai Tong	Samad	Diah	Eteng	Wak Ya	Said	Raden Lakpalembang	
1 Humor (<i>jenaka</i>) a.(Othman, 2004), c.(Ashan, 2012), d.(PSPN, 2012), e.(KKK, 2005), f.(aman, 2011), g.(Johnson, 2011)	-	-	-	-	-	-	-	c	d	-	-	-	-	-	a	-	a	a	-	-	-	-	g	a	d	d	d	e	e	-	
2 Dull (<i>badoh</i>) a.(Othman, 2004)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 Wickedness (<i>jahat</i>) a.(Othman, 2004), b.(Amat, 1994), h.(IB, 2006)	-	-	-	b	-	h	-	-	-	-	-	-	-	a	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-	-
4 Gruff (<i>bengis</i>) a.(Othman, 2004)	-	-	-	-	-	-	-	-	-	-	-	-	-	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Kindly (<i>baik hati</i>) a.(Othman, 2004), b.(Amat, 1994), e.(KKK, 2005), h.(IB, 2006)	b	b	b	-	h	-	b	-	-	b	a	a	h	-	-	-	-	-	-	a	b	b	-	-	-	-	-	-	-	-	-
6 Intelligent (<i>bijaksana</i>) a.(Othman, 2004), b.(Amat, 1994), e.(KKK, 2005), f.(aman 2011), h.(IB, 2004)	b	h	b	-	h	-	b	-	-	b	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Skillful (<i>mahir</i>) b.(Amat, 1994), h.(IB, 2006)	b	b	-	-	h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Envy (<i>iri hati, dengki</i>) b.(Amat, 1994), h.(IB, 2006)	-	-	-	b	-	h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Deceive (<i>penipu</i>) b.(Amat, 1994)	-	-	-	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Ferocious (<i>ganas</i>) e.(KKK, 2005), f.(aman, 2011)	-	-	-	e	-	h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Loyal (<i>setia</i>) e.(KKK, 2005), f.(aman, 2011), h.(IB, 2004)	-	-	e	-	-	-	-	-	-	-	-	-	h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Gallant (<i>gagah</i>) e.(KKK, 2005), f.(aman, 2011), h.(IB, 2004)	e	e	-	-	h	h	-	-	-	-	-	-	-	-	-	h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 Brave (<i>berani</i>) e.(KKK, 2005), f.(aman, 2011), h.(IB, 2004)	e	e	-	-	h	h	-	-	-	-	-	-	-	-	-	h	-	-	-	-	-	-	-	-	-	-	-	-	-	-	h
Total	12	11	8	5	5	5	4	4	4	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

A. Feature-characteristics Matrix of WK Actors

Each WK actor has its own feature or behaviour. Such behaviour is mapped into a feature-characteristics matrix as shown in **Table 2**. There are 30 actors and 13 characteristics identified altogether ((Othman, 2004), (Amat, 1994), (Ashan, 2012), (PSPN, 2012), (KKK, 2005), (Aman, 2011), (Johnson, 2011), (IB, 2006)). The matrix serves as a DWK repository where references are made in designing each actor. Graphics used to represent each actor must match the identified characteristics.

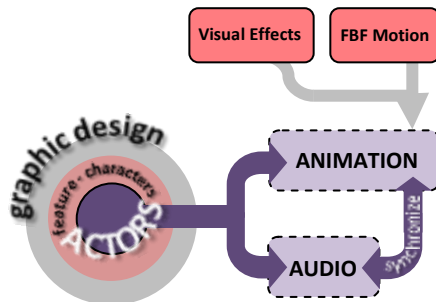


Figure 6. The DWK (2D) Model

B. The Results: Prominent Actors of WK in 2D (DWK)

Out of 30 actors mentioned in the literature, it is evident from the matrix (Table 2) that only 10 actors are prominent, i.e. mentioned in at least 3 or more literature. Others are mentioned only once or twice. These 10 actors are Ramayana, Hanuman Kera Putih, Sita Dewi, Maharaja Wana, Dewa Kartepati, Bayang Gerna, Maharisi, Wak Long, Pak Dogol, and Laksamana.

V CONCLUSION & DISCUSSION

The convergence between 2D digital (DWK) and traditional WK is an alternative approach to maintain the precious heritage of the country. This approach might bring back the interest of our younger generation in WK. However, converting the traditional WK into DWK need a proper model that can maintain the traditional values in WK, as well as preserving our national heritage. The DWK model developed based on literature and comparison table is shown in this paper. For designing the DWK, we also propose a feature-characteristics matrix which visualizes the characteristics of the 10 prominent actors of

traditional WK. This is crucial as the DWK relies heavily on the designers' understanding of the traditional WK actors, their characteristics and values to be delivered to the audience in WK performing arts.

Such understanding can be used to further apply DWK into various domains such as education, tourism, and business; on top of the existing application in the entertainment industry. New media can be a great vehicle in conveying the traditional value. It is hoped that this work contributes to traditional WK as well as DWK, in a way that WK will not lose its function as a mean of transferring positive values in contemporary context and using new delivery media.

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