

# Design of Gradual Contemporary Wayang Visual Character Indonesia

For Sticker Chatting And Game Applications.

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**Abstract**—UNESCO International recognition in 2003 stated that wayang is one of Indonesia's cultural heritage, but the sense of belonging for wayang is still low among the nation's next generation of Indonesia. So at this time, both of government and the educators, still working to improve the regeneration of wayang knowledge and recognition for the young nation and the world, including through game application. In this study, the researchers created a contemporary virtual character of wayang, and will be inserted as a character sticker chatting and game application. This wayang virtual characters can be used as tools for reintroduction to young people around the world. This method will be conducted by researchers include depictions classification of facial expressions of emotion, collaborate with simplified visual approach, to obtain the corresponding visual characteristics of the wayang virtual characters. Researchers also used visual basic character as a prototype for contemporary form deformation, so it can be applied to the target games application and communication functions.

**Keywords**—contemporary wayang; visual character; sticker chatting; game application; regeneration and reintroduction.

## I. INTRODUCTION

The Minister of Culture and Tourism; I Gede Ardika state that the United Nations Educational, Scientific and Cultural Organization (UNESCO) has recognized the wayang as a world master piece of oral and intangible heritage of humanity since 7 November 2003, where the ownership of Wayang Purwa officially belong to the art and culture of Indonesia[1]. Therefore, researchers conducted a preliminary study of this research is aimed to explore and deforming the contemporary visual of wayang visual character, in order to match the target of Indonesia's young generation and world. But the problem is the lack of a sense of ownership of artistic and cultural heritage of this wayang in the younger generation of Indonesia. For example, the number of spectators interested in watching a wayang show, from year to year always experience a lot of deterioration[2]. It may concludes the lack form and visual adaptation that compete with the media in these days. In order to answer this situation, the researchers created a new contemporary virtual character of wayang, and plan to insert the results as a character sticker chatting and/or game application. This wayang virtual characters can be used as tools for reintroduction to young people around the world.

The results of this research hopefully are also supporting and developing wayang visual character in science, technology and also in socio-cultural field; as follows: in terms of support to science: the process and the results will help the future generation to know and apply the wayang visual characters in their communications and game characters, so it can be loved back as one of the cultural richness of Indonesia. In terms of support for the technology: the importance of choosing the appropriate media (which is game and chatting) for the visual characters result, it has to have a present value, and should be as part of everyday life in young generation. In terms of support for the social and cultural: the process and the results of this study, can be as a tool in a visual approach in expression and communication for becoming the part of the cultural identity of the younger generation of Indonesia, and does not rule out the possibility to develop into a new culture.



Fig. 1. Visualization of wayang purwa by Museum Wayang.

To sort out the representation category of emotion and personality to be made on a sticker on this study, researchers also look and study the distribution of categories of emotion and personality. For the category of emotion, the researchers chose the category emotion of Daniel Goleman[3]; which classify emotions into 8 categories; namely: happy, angry, sad, surprise, contempt, fear, disgust, and shame. For the category of personality, the researchers chose Florence Littauer[4] belong to the book "Personality Plus"; Littauer personality split into

four categories; namely: sanguinis / promoter, melancholy / analyzer, kholerik / controller, and plegmatis / supporter.

For the visualization of characters, researchers conducted a visual exploration of the expression proposed by Joe Navarro[5]; a retired FBI and is known as a reader expressions. Navaro clarify movement in the facial expressions reveal the expression and / or certain emotions. The results of this division is the basis for the visualization of the writer to do the sketch and manufacture sticker. The division consists visual expression of the position of the eyebrows, eyes, nose, mouth, cheeks and gestures. The results of this division is the basis of visualization for researchers to do the sketch and manufacture of visual character.

In this study, the particular value or the state of art includes three novelties as follows; First, novelty in the form, in visual deformation of visual characters wayang, to be more modern or contemporary to the target. The novelty value in this case involves the consideration process visual semiotics philosophy before simplification / stylized forms of wayang. In addition, the second novelty is also valued in the search of visual expression that has value in the contemporary social trend of the target. These novelty include deepening the visual side of the micro expression, that is the language of gesture face to expressing emotions. Then the visual character result are metaphored with visualization of characters that have been formed from the previous process. And finally, the third novelty involve the selection and use of communication and gaming media, that is close and familiar to the target [6], which refers to the attempt embodiment of the creative economy for creative workers of the nation.

## II. METHOD

Before determining method in this research, the author conducted a comparison method on some writing that has ever existed. In this case the sphere is taken topic paper also aims to reintroduce the cultural puppet. From 4 paper were analyzed, it was found several good point, however, authors feel about this research may provide better results in the reintroduction of cultural viewpoints.

For example in the writing titled: The Contribution of Shadow Puppet's Show through engaging Social Communication in Modern Society [7], which uses the method: perception and opinion; revival story and its social contribution, practitioners and educators, also self-experienced and observations. Perception and opinion method is a very good for qualitative research, with the deepening of the visual philosophy may be more pronounced. But to make it as an attempt to reintroduce a culture, considered less consideration from the perspective of the target. This is caused by the lack of consideration of the use of popular media on the target.

Another example is the writing titled: Wayang Hip Hop: Java's oldest performance tradition meets global youth culture [8], which uses the method: applying adaptations; classical contemporary problems, Javanese wisdom, and production technique, musical intersections, also an extension of the conventions into a full performance. Adaptation method is a good effort for culture introduction, where the popular media considerations for the target becomes the main thing. However,

in the application of the method, considered less consideration for the variety of the content itself. This happens because the puppet philosophy remains absolute, so it cannot be changed or modified.

In the writing titled: Wayang kulit: Digital puppetry character rigging using Maya MEL language [9], which uses the method: applying visual digital style; puppetry using manipulation and performance of digitally animated 2D or 3D figures and objects in a virtual environment. Digital media usage method is also good effort for culture introduction, visual style has begun to be changed out of the common grip which the approach has outdated. But in this paper, is considered less provide more sustainable; wherein the media used form of media is not performing daily media use targets.

Also in the writing titled: Wayang fighters: Preserving the art of wayang kulit (shadow puppets) through the game application [10], which uses the method: Gamification; provides an overview of related digitalization and interactive media using Wayang Kulit as a motivation for the development of a comprehensive. Gamification method is a better effort for culture introduction, where the realm of the story began to be modernized, as well as to reflect the target of the puppet characters in their daily lives. But the media selection as a game considered less range received target, only enthusiasts gamers will recognize the puppet, so the need to consider the wider range media.

TABLE I. OTHER METHODOLOGY COMPARISON

Other Paper Title	Methodology	Evaluation	
The Contribution of Shadow Puppet's Show through Engaging Social Communication in Modern Society	Perception and opinion; revival story and its social contribution, practitioners and educators, also self-experienced and observations.	Visual Philosophy	Yes
		Adaptation Value	No
		Daily Used Media	No
		Sustainability	No
		Range Target	Short
Wayang Hip Hop: Java's oldest performance tradition meets global youth culture	Applying adaptations; classical contemporary problems, Javanese wisdom, and production technique, musical intersections, also extension of the conventions into a full performance.	Visual Philosophy	Yes
		Adaptation Value	Yes
		Daily Used Media	No
		Sustainability	No
		Range Target	Short
Wayang kulit: Digital puppetry character rigging using Maya MEL language	Applying visual digital style; puppetry using manipulation and performance of digitally animated 2D or 3D figures and objects in a virtual environment.	Visual Philosophy	Yes
		Adaptation Value	Yes
		Daily Used Media	Yes
		Sustainability	No
		Range Target	Short
Wayang fighters: Preserving the art of wayang kulit (shadow puppets) through game application	Gamification; provides an overview of related digitalization and interaction media using Wayang Kulit as a motivation for the	Visual Philosophy	Yes
		Adaptation Value	Yes
		Daily Used Media	Yes

	development of a comprehensive.	Sustainability	Yes
		Range Target	Short

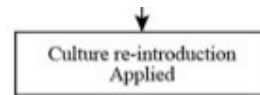
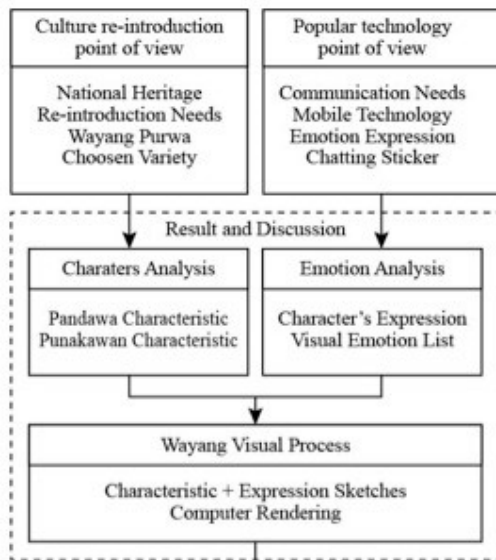
Therefore, in this research, author use visual digital style with sticker chatting or games media applied; visual analysis of the expression of the target which is applied in visual puppet. So that research results can be used as representation of emotions in everyday communication targets. So from the visual philosophy; Research will conduct an analysis of the visual characteristics of the puppet so that it maintains an appropriate visual grip, of the value of the adaptation; the authors also merge in popular expression used in chats needs of the target, the daily media selection has also been determined in the mobile media chat, so has the value of sustainability long, and the range of targets to be very broad.

TABLE II. RESEARCH METHODOLOGY

Paper Title	Methodology	Evaluation	
Design of Gradual Contemporary Wayang Visual Character Indonesia	Applying visual characters; visual analysis of the expression of the target which is applied in visual puppet. So that research results can be used as representation of emotions in everyday communication targets.	Visual Philosophy	Yes
		Adaptation Value	Yes
		Daily Used Media	Yes
		Sustainability	Yes
		Range Target	Wide

Application of visual process; was originally divided into 2 points of view: the introduction of visual culture over the selection of puppets and popular media targets. For the re-introduction, the authors review the deepening of the visual elements of distinctive character, both for the category of the Pandawa and Punakawan. Meanwhile, from the selection of the target media for reviews with visual expression. Good results puppets with the visual characteristics of this expression, back into one in the sketch sticker which is then followed by the completion of digital.

TABLE III. METHODOLOGY SITE MAP



### III. RESULT AND DISCUSSION

#### A. Emotion Analysis

In terms of semantics, the author tries to perform a visual expression with the expression proposed by Joe Navarro a retired FBI and is known as a reader expression. In his book titled: What Every Body Saying, Navarro managed to clarify the movement in the facial expressions reveal the expression and / or certain emotions. The result of this division is the basis for the visualization of the author to do the sketch and manufacture visual characters. The division consists of visual expression of the position of the eyebrows, eyes, nose, mouth, cheeks and gestures. Based on this, the authors classify positions to the needs of visual expression.

From the results of this cross, it was decided the selection of emotional expression and behavior based on the specific events of the characterizations. They were divided segmentation characterizations with emotional expression as follows: Yudhisthira - Sad expression, Bima - Happy expression, Arjuna - Angry expression, Nakula - Shocked expression, Sadewa - Paltry expression, Drupadi - expression Shame, Srikandi - Fear expression, Gatotkaca - Disgusted expression. Similarly, the segmentation division characterizations with an expression of his personality as follows: Bagong - cheerful personality (sanguine), Petruk - decisive personality (choleric), Gareng - troubled personality (melancholy), Semar - Calm personality (plagmatic).

According to Navarro, every emotion gives expression on its own. In visual terms, the authors capture the visual expression as a benchmark to represent an emotional expression of its own. As in the visual feeling sad; characterized by: eyebrows to the top, wet eyes narrowed, nose wrinkled in the middle, mouth down, cheek down, and body gestures down. For visual feeling happy; characterized by: eyebrows off upwards, eyes narrowed, nose down, mouth to the top, puffy cheeks above, and body gestures up. For visual feeling angry; characterized by: eyebrows fused in the middle, big eyes sharpened, nose wrinkled in the middle, open mouth bite, small puffy cheeks above, and body gestures forward. For visual feeling surprise; characterized by: eyebrows off upwards, dilated eye, off nose down, mouth wide open, cheek down, and body gestures to the back. For visual feeling contempt; characterized by: eyebrows one up one down, eyes narrowed, off nose down, one side of the mouth is up, one side puffy cheeks are up, and body gestures tilted to one side. For visual feeling fear; characterized by: eyebrows to the top, small dilated eye, small crimped nose in the middle, small open mouth, small cheek small down, and body gestures down. For visual feeling disgust; characterized by: eyebrows one up one down, eyes narrowed, nose wrinkled in the middle, mouth down, cheek down, and body gestures to the back. For visual feeling shame; characterized by: eyebrows in the middle, eyes closed, nose middle of a small wrinkle, mouth shut, cheek down, and body gestures down. And for visual feeling cheer; characterized by: eyebrows off upwards, eyes narrowed, nose

down, mouth smiled to the top, puffy cheeks above, and body gestures up. For visual feeling firm; characterized by: eyebrows fused in the middle, big eyes sharpened, nose wrinkled in the middle, open mouth bite, small puffy cheeks above, and body gestures forward. For visual feeling sorrow; characterized by: eyebrows to the top, wet eyes narrowed, nose wrinkled in the middle, mouth down, cheek down, and body gestures down. For visual feeling calm; characterized by: eyebrows off upwards, eyes narrowed, nose down, mouth open slightly, small puffy cheeks above, and body gestures forward.

The context of the creation of this chat, the author is divided into categories which Pandawa character emotions and expressions of Goleman, which include: happy, angry (angry), sad (sad), surprise (shock), contempt (trivial), fear (fear), and disgust (disgust). And the division's Punakawan character into the category of emotion and expression of Personality Plus belongs Littauer that includes: sanguine, melancholic, choleric, and plagmatic. Blend on the author to characterizations Pandawa (Yudhisthira, Bima, Arjuna, Nakula and Sadewa), Punakawan (Semar, Petruk, and Bagong Gareng) and Pandawa additional characters (Drupadi, Srikandi and Gatotkaca).

### B. Character Analysis

In making visual wayang analysis, the authors conducted a visual division that characterizes the characters are related, but not like the division of emotions, visual puppet unstructured, but done with a personal introduction to the previous writer about the puppet characters. In Pandawa, visual Yudistira; characterized by: first brother of Pandawa, the Pandawa's king, roll top knot hair, thinker, lawn bowl, and small and short mustache. Visual Bima; characterized by: second brother of Pandawa, the biggest and strongest in Pandawa, big mouth and teeth, big nose, bushy mustache and beard, and have sharp nails. Visual Arjuna; characterized by: third brother of Pandawa, the most handsome in Pandawa, big eye, small beard, thick eyebrows, and long vowel. Visual Nakula; characterized by: twin brother with Sadewa, similar to Sadewa, youngest in Pandawa, no mustache and beard, long bowl, and thick eyebrows. For visual Sadewa; characterized by: twin brother with Nakula, similar to Nakula, youngest in Pandawa, no mustache and beard, long bowl, and thick eyebrows.

### C. Wayang Visual Process

Author conducted with the same approach to visual style for each character. In the process of sketching, equating visual style has begun to be applied. Although visual sketches done to represent a certain emotional expression, the authors also do a visual form on components equating Navaro's expression, but in the visual process, this equation has a sharp shift in visual perception still is an integral part of the visual system; namely syntactic. In addition to sketching process, the process of digitization or vectorization is also very need to be kept equation visual style. The implemented with a variety of colors and shapes, but the visual style can be achieved with a dark-light tone similar to the variety of colors, and the visual characteristic in the lines and volumes in shape. Author is also put several characters such as face painting for Punakawan and additional text and visual elements.



Fig. 2. Sketch of Pandawa and Punakawan.

In the process of computerization, it was being done by the computer process to have vector format, so it has advantages for synchronizing with the common specification sticker format. Besides vectoring, the authors also do the coloring based on the consideration of the color of the wayang costume characters. Author also added as an accent color circle and equalization visual style sticker. With this addition, the resulting sticker chatting became easier with its implementation of the media displays chat interface. Surely this also needs the support of other such ease and clarity and legibility navigation interface in a chat application. The circle elements was also make system between all the stickers, which are called syntax in order to unite the visual style of all stickers.



Fig. 3. Visual character results of Pandawa and Punakawan.

As mentioned previously, the results and discussion of this research only to the manufacture of visual with consideration of

the best method, deepening the visual character of the puppet appropriate, as well as media selection with consideration of its function as representative of the emotions the target so that the results can be used to fit and favored targets.



Fig. 4. Visual character results for game story or intro.

With this visual characters of contemporary wayang were made. For game application, this visual characters can be

applied for: character introduction and/or story telling in between the adventure game. Also, if the game is arcade fighting mode, the best example for the this visual character can be used are like Yu Yu Hakusho Tokubetsuhen which produced in 1994. With this example game, all the wayang characters can be reintroduced, not only the character it self, but also the skill, personality (with story mode) and the story enclosure.

#### IV. CONCLUSION

The study has not been completed up to here, not all categories of expressions, emotions and personalities have been visualized, but with the same method, many kinds of this research with different variants, can also be materialized. The Author would like to suggest that for the continuation of this research in the future during the period.

For the results, this contemporary wayang stickers chat is the first step in bringing the one of Indonesian heritage to be reintroduced as the submission of expressions, emotions and personalities in chatting activity for mobile application. With the depiction corresponding to the expressions, emotions and personalities targets, the duration of use will rise. The right to represent the sticker can be a good introduction to the culture media to our society and the global community.

#### REFERENCES

- [1] Sudjarwo, Heru S., Sumari, Untung Wiyono. (2013). "Rupa & Karakter Wayang Purwa: Dewa, Ramayana, Mahabharata." Percetakan Kaki Langit Kencana: DKI Jakarta, Indonesia.
- [2] Rinardi, Haryono. (2002). "Perkumpulan Wayang Orang Ngesti Pandowo (1937-2001): Studi tentang Manajemen Seni Pertunjukan." Diakses 22 Januari 2014, dari Universitas Diponegoro Semarang, Educational Leadership and Research Website: <http://ejournal-s1.undip.ac.id/>
- [3] Goleman, Daniel, (1985). Vital Lies, "Simple Truths: The Psychology of Self Deception." Bloomsbury Publishing: London, UK.
- [4] Littauer, Florence, (2000). "Personality Plus for Parents: Understanding What Makes Your Child Tick." Baker Publishing Group: Minneapolis, USA.
- [5] Navaro, Joe. Marvin Karlins. (2008). "What Every Body is Saying." Harper Collins Publishers: NewYork, USA.
- [6] Deterding, S. (2011). "Gamification: Toward a definition." CHI Gamification Workshop Proceedings.
- [7] Wan Nor Raihan Wan Ramli. "The Contribution of Shadow Puppet's Show through Engaging Social Communication in Modern Society." Elsevier - *Procedia Social and Behavioral Sciences*, vol. 35, pp.353-360, 2012.
- [8] Varela, M.E. "Wayang Hip Hop: Java's oldest performance tradition meets global youth culture." *Scopus - Asian Theatre Journal*, Vol. 31, pp.481-504, 2014.
- [9] Ghani, D.A. "Wayang kulit: Digital puppetry character rigging using Maya MEL language." *Conference Paper in 4th International Conference on Modeling, Simulation and Applied Optimization, ICMSAO 2011.*
- [10] Ghani, D.B.A. "Wayang fighters: Preserving the art of wayang kulit (shadow puppets) through game application." *Conference Paper in 9th International Conference on Ubiquitous Information Management and Communication, ACM IMCOM 2015.*