INDONESIAN GAMEPLAY "TARI LIMA SERANGKAI" AS LEADS THE LOCAL CULTURE CONTENT

Dwi Agnes Natalia Bangun *, Naomi Haswanto **

* dwiagnesnatalia@gmail.com ** naomidkv@yahoo.co.id Institute Technology of Bandung (ITB), Indonesia

Abstract: The development of technology and way of modern life has driven people away from their own customs and traditions. People now prefer to be a modern society rather than a traditional one because they want to be considered as modern person. They absorb and adopt foreign culture and slowly leave their own local culture. They apply new traditions and values which they think more appropriate with the present condition. Without their knowledge, they slowly lose their original identity.

Indonesia is rich in culture since it is an archipelago country. The genuine identity of Indonesia is supposed to stick with its tradition and custom from each culture in every province. But in reality, most Indonesian, especially young generation, think that learning the culture is an an old-fashioned and an out-of-date stuff. If this situation is left as it is, in the near future, there is a huge possibility that Indonesia would have no identity at all.

Since Indonesian people are not aware of this condition, then there is must be a solution that can approach them. One of the methods is by using the technology like game. As a modern device, game can be a bridge between people and local culture. With the great game design and suitable way of communication, it can mix the culture education and entertainment at once. The game play can be packaged as attractive as possible so it could grow the interest of the learning culture itself. People will also play it without feeling forced.

The use of game as the tool of combination between modern and traditional culture can both preserve the custom itself while keep up with modern life. People can enjoy the entertainment offered by modern life while learning more about their tradition and custom. Through game, the interest feeling can be lead to a proud feeling of being the citizen of the country which has so many cultures. When the player can interpret and comprehend the local culture values, they will eventually go back in committing the traditions and customs to their real life.

This research will cover the area of design and anthropology. The design study covers the game's visual communication design aspects while the anthropology leads to the local culture content. The outcome is aimed to formulate a game with attractive game play and useful content for preserving local culture purpose.

Key words: Design, Culture, Game

1. Introduction

The development of information and communication technologies, such as television, telephone, and internet, can quickly embrace the local culture. They are not only embrace, but also can affect and even alter elements of the local culture. This technological developments mark a transition period in which the customs are beginning to be abandoned and replaced by a more free procedure and is considered more appropriate to the conditions in the present and future. People now want to be seen as a modern society that is free to choose which value systems they want to embrace. To anticipate these conditions, we have to make a bridge that connect the modern life with the local culture. A bridge where people can still enjoy the entertainment offered by modern life while learning the traditions and customs.

Game can be that bridge. By converting the local culture content into a gameplay, game becomes a product local culture's way of learning. The use of games as a combination between traditional and modern culture can sustain the customs itself and also maintaining the life of modern society. Through game, the feeling of attraction can develop a sense of ethnicity as an identity value and can be driven into proud feeling of citizens of a country with so many cultures. When players are able to interpret and understand the values of the local culture, they will eventually apply the traditions and customs into their real lives.

As an example for this effort in preserving culture and tradition through entertainment media/game media, the study would be based on the culture of Batak Karo tribe (known as Karonese) from North Sumatra, Indonesia. Cultural elements are translated into attractive educational cultural information so that players would gain knowledge while playing. At this stage, the culture can be simulated through multimedia design so that people get an idea of the culture.

As mentioned earlier, the similar condition also impact the overcast on indigenous culture of Karonese and may cause the loss of national identity in a matter of years. Therefore, the preservation of culture is very important. Cultural values as national identity should be maintained so that the identity and character of the nation can be found in the culture. By looking at the background above, the question then arises: How to create an attractive gameplay that contains educational information of Karonese culture so players could gain knowledge while playing?

One of the approach to the Karonese young people to know and understand the cultural issues of Karonese which occurs in the change transition periode (the change of traditional society into a modern society) and create an educational game about the Karonese culture. The effort is to develop the Karo cultural content into an attractive gameplay so that it becomes a product or Karonese kinship way of learning culture, to connect modern life with the local culture.

As one of the cultural preservation efforts, this culture educational game have identity elements that is owned by Karonese culture. Identity elements that are inherent in this educational game design will make this game as potency to restore the national identity. The cultural elements, such as language, knowledge systems, social organization, kinship systems, equipment, livelihood, religion, and the arts that are alive and carried out by the Karonese, are elaborated into the gameplay. This game has cultural focus, the kinship theme that is appointed into the main gameplay. In addition, this game contains a cultural ethos that can be felt in the gameplay. This research is an action research that led to the problem solution research through a design or product.

Educational games about culture is also able to provide suggestions and to persuade players' subjective perception that culture is a positive thing. These feelings are then aimed into a feeling of pride and admiration of the nation's culture that stimulates interest in learning culture. This game can also boost the beauty factor/element, in this case, the beauty of form, color, sound, or motion associated with the cultural elements.

2. Methodology

There are three steps of methodology in this research, they are:

1. Data Collection

All data needed in this research obtained from literature studies, observation, dan interview.

a. Literature Studies

Data related to the game design are collected by studying Karonese dan game design literatures. Through this process, the game content and the storytelling are built.

b. Observation

The observation to Karonese culture involve the traditional wedding ceremony, traditional clothing, traditional house will be developed for game content and visual asset reference. The observation to several Karonese dance video as analyzing material for the gesture of the dancer. Observation to similar game was being done as well as analyzing material that involve interaction concept, such as gameplay, leveling, navigation, and visual concept.

c. Interview

Data were also obtained from interviews with Karonese dancer and Karonese culture expert about the Karonese dance movements, the philosophy of Karonese dance, and Karonese music. There are also interviews with young Karonese as well to know what they want to learn from this Karonese dance game, their visual preferences, and their habits.

2. Data Analysis

The data result from the literature studies, observation, dan interview will be analyze to get the content dan visual concept. This data analyze will be applied into the gameplay and the storyline.

a. Data analyze for content

This data include the pattern of rhythm game design for the navigation, leveling system and how-to-play the game itself, and the Karonese culture for the culture content to build the storyline.

b. Data analyze for visual

The data include the sprite data of the dancing movement, the game environment, design character, and the game interfaces.

3. Designing Process

The game was designed through these processes:

a. The making of visual asset

All visual assets needed were sketched first to get the shapes and lines that represent the Karonese. Then, visual assest were traced into vector form using Adobe Illustrator. As for the visual assets created for the this game are game sprites, game characters, game environments, icons, buttons, logos.

b. Layout

After all the visual assets was completed, those assets were layout into the game interface, like the main menu, menu selection stage and level, gameplay, and others. The interface layout can be a reference for programmer in preparing the layout of the game through the language of the program interface.

c. Programming

The materials for the design of the game in the form of visual assets sprite game, menu buttons, text then handed over to the programmer so that the game can be played.

d. Testing and Evaluation

After the game can be played, it is necessary to test the game by a game tester to see the response of the player and to get feedback in the form of criticism and suggestions as an evaluation. Through this evaluation materials, games continue to be refined to meet the target.

This research is using scientific theories in anthropology, focusing to one of the ethnic / tribal groups in Indonesia as a pilot. The results of this study will obtain data about the cultural elements of the tribe / ethnic in the form of:

- a. Ideas, values, norms, and rules.
- b. Activities and patterned action of human in society.
- c. Objects of human creation.

2.1 Gameplay Concept

Based on the acquired data, the gameplay would be based on:

a. Games as a complex of ideas, values, norms, and rules

The idea begins with the natural thought of a man which is abstract and intangible. This idea will be developed through the process of brainstorming, sketching, and the discussion and then becomes a game that has playing rules, conflicts, and the scoring systems.

b. Games as an activity and patterned action

Game makes an individual interact with other people and the game itself. Playing games can be a repetitive and patterned activity, for example, while waiting for someone, and when there is spare time.

c. Games as objects of human creation

Game is definitely a man's work that can be seen and played. Game produced into a variety of shapes such as arcade games, console games, and computer games.

2.2 Research Stages

- a. The transformation of the cultural elements into a two-dimensional image that is applied to the game character, background / setting of the game world, and storytelling.
- b. The translation of the cultural elements into cultural informations that are educative yet exciting so players would gain knowledge while playing.
- c. The simulation of cultural data through multimedia design methods.

3. Creative Study Process

3.1 Batak Karo Culture in Indonesia

Karo tribe is one of sub-variants in the Batak tribes (the other are Toba, Simalungun, Mandailing, and Pakpak/Dairi) from North Sumatra, Indonesia. Karo tribe embraces patrilineal and matrilineal lineage which later formed the identity of the indigenous Karo. Indigenous identity is manifested in *merga/beru* (clan of the father) and *bere-bere* (clan of the mother) that is regulated in a kinship pattern called *rakut sitelu*, the three familial bond, either by consanguinity or affinity for the marriage relationship. The system of *rakut sitelu* organize the order of Karonese social life in many aspects of life. It also regulate leadership level in the Karonese family, organize the division of labor, and determine the rights and obligations in society, in every ceremonies, law, economics, and politics.

Merga/Beru, which is the indigenous identity of Karonese, have a major role in determining the kinship of *rakut sitelu. Merga/Beru* is composed of five main *merga*, known as *merga silima*, namely: Karo-karo, Ginting, Tarin, Sembiring, and Perangin-angin. Each main *merga* has *submerga* and every Karonese have one of these *submerga*. This *merga* is acquired hereditary. For boys, it is called *merga*, while for girls, it is called *beru*. Karonese also brought *merga* from his mother, called *bere-bere*, and although this *merga* is not passed down to children and grandchildren, it has an important role in determining the position of Karonese in their society. When the two men or two women have the same *merga*, they will be called as *ersenina*. But, when men and women have same *merga*, they will be called as *ersenina* and they are prohibited from marriage, because they are still considered as the descendants of the father. For those whose marriage consist of man who has the same *bere-bere* with woman's *merga*, they will be called as *erimpal*.

Rakut sitelu itself split Karo kinship into three ties, namely *kalimbubu, anak beru*, and *sembuyak/senina*. Each party has a duty and responsibility that must be executed according the position/bonds they hold.

a. Kalimbubu

Kalimbubu is the party that drives woman to be married by certain family. This party has responsibility to give suggestions / advice in family discussion. They will become the middle party when *anak beru* have any conflict. They are the symbol of the supremacy of family honor.

b. Anak beru

Anak beru is the party that receive woman that will be married by their son. This party has an important role in every Karonese custom event. They set the course of the customary discussion, prepare food and equipment for the custom event, and overcome all the event's expenses.

c. Sembuyak/Senina

Sembuyak / senina is the sibling of the same descendant in the boundary that is still clearly known, such as

sibling from one father/mother, a grandfather/grandmother, a great-grandson, and so on. *Sembuyak* has the task of leading the customary deliberation and prevent any disputes when the customary deliberation discusses about works that have to be execured by *anak beru*.

3.2 Karo Art

Karo art is one aspect that can sustain Karonese culture. Unlike other ethnic groups, some of the Karo art is not an art that is just for entertaining, but also an integral part in Karo kinship pattern. Karo art accompanies Karo traditional occasions such as religious ceremonies, weddings, funerals, and other traditional activities. Some of these Karo art are dance, music, and sound art.

One of those Karo art that must be learned by all people without exception is the Karonese dance. An expert Karonese dancer, Narika Tarigan, even said that the Karonese woman can marry if they were able to dance well. This is because dance is a reflection of Karonese personality. The whole dance gesture contains philosophical meanings that show the real character of the Karo.

Karonese dance can not be danced recklessly, there in the proper procedures dance. One mistake of making hand motion can make a different meaning. Therefore, Karonese need to understand every hand placement procedures and the right gestures in dancing Karo. According to Julian P. Limbeng (2009), an ethnomusicologist, Karonese dance has several functions, namely the appreciation of aesthetic, emotional disclosure, entertainment, communication, symbolic function, bodily reactions, related to social norms, endorsement of social institutions or social status, cultural continuity, community integration, and education.

3.3 Lima Serangkai Dance

Lima Serangkai dance is a dance developed from five styles contained in Karo music, commonly referred to *cak-cak*. It also represent the five Karo songs or also called *gendang* (song name). *Gendang* itself has several meaning in Karo culture; it is a musical instrument, genre of music, type of song or composition, musical ensemble, and a ceremony / events.

In Lima Serangkai dance, there are five *gendang* (genre and song), namely: *gendang morah-morah, gendang perakut, gendang sipajok, gendang patam-patam, and gendang kabangkiung*. From the five *gendang* that is played as Lima Serangkai dance background music, there can be seen the flow of Karonese traditional dance, ranging from slow tempo (*morah-morah*) to fast tempo (*patam-patam*) as the climax of the dance.

3.4 Gesture Meaning in Lima Serangkai Dance

Lima Serangkai dance tells the story of social interaction of Karonese young people. The five *gendang* in this dance means the relationship journey process from acquaintance to marriage. The meaning in dance Lima Serangkai, namely:

a. Morah-morah

This dance trains Karonese to wear traditional clothes by their selves. This movement also means that the Karonese is mature and able to live independently. Gestures of the women dancers that slowly rise means the young couple begin to see (observe) the opposite gender, followed by the thought and consideration to get acquainted (*ertutur*) with them.

b. Perakut

This movement means that the young couple became acquainted with each other. They introduce themselves by asking each other indigenous identity (*ertutur*). This is very important for the Karonese because the relationship can be intimate through family greeting. Young couple of Karonese is allowed to have a special relationship (dating), except when they have the same *merga*.

c. Patam-patam

In this movement the young couple begin to know each other more deeply until finally they have a special relationship (dating). For the people of Karo, everything they want to do should be considered first, in order to prepare for better account for all of their actions.

d. Sipajok

Just as people are dating, there are enticements between men and women. This movement tells the seductions in the relationship. It can also be interpreted as a demand for a more serious relationship (marriage).

e. Kabangkiung

In this movement the young couple had agreed to have more serious relationship in marriage. The man must ask permission from the parents of the woman. This movement also tells man's families visit to the woman families and vice versa.

3.5 Gendang Lima Sendalenen, Karonese Musical Instrument that Accompany Lima Serangkai Dance

Karonese have some type of music used in traditional art. There is a musical instrument played together (ensemble), others played a single (solo). Karo people refer to this as *gendang*. There are several genres of traditional music Karo, among which Gendang Lima Sendalanen and Gendang Tiga Sendalanen. This term is determined from the number of instruments used in the music ensemble Karo, for example Gendang Lima Sendalanen is a term used for traditional musical ensemble comprised of five Karonese musical instruments, namely sarune, gendang singanaki, gendang singindungi, penganak, and gung. While Gendang Tiga Sendalanen only used three instruments, namely kulcapi, keteng-keteng, and bowls. Lima Serangkai dance usually accompanied by Gendang Lima Sendalanen. This also led to the naming of Lima Serangkai dance, since it uses ensemble of five instruments.

3.6 Android Platform Concept

Mobile Operation System	1Q12 Unit Shipments	1Q12 Market Share	1Q11 Unit Shipments	1Q11 Market Share	Year-over- Year Change
Android	89.9	59.0%	36.7	36.1%	145.0%
IOS	35.1	23.0%	18.6	18.3%	88.7%
Symbian	10.4	6.8%	26.4	26.0%	-60.6%
Blackberry OS	9.7	6.4%	13.8	13.6%	-29.7%
Linux	3.5	2.3%	3.2	3.1%	9.4%
Windows Phone 7/					
Windows Nobie	3.3	2.2%	2.6	2.6%	26.9%
Other	0.4	0.3%	0.3	0.3%	33.3%
Total	152.3	100.0%	101.6	100.0%	49.9%

Table 1. Smartphone Sale Data from IDC Worlwide 2012

Data from IDC Worldwide Mobile Phone Tracker shows that Android has dominated 59 % of the international market share in 2012, an increase of approximately 26% from the previous year. Andy Rubin, Senior Vice President of Mobile at Google, said in Mobile World Congress that the activation of mobile devices based on Android has reached 900,000 per day. This number increased from 500,000 activation per day in June 2011 and 850,000 at the end of February 2013 yesterday. This statement is supported by data from IDC which show that Android sales now accounts for 80% of all smartphone sales in the world. The number of sales is far outselling iOS, Symbian, Blackberry, Linux, Windows Phone 7, and other operating systems.

Based on the data above, we chose to develop the game on the Android operating system as one of the effective ways to introduce and teach the art of dance Karo culture to the wider community. With strong branding and exciting gameplay, this game will be successful in the Android market.

3.7 Inspiring Games Pattern: Osu! Tatakae! Ouendan! and Dance Dance Revolution

Rhythm game Osu! Tatakae! Ouendan! is one of the exciting rhythm game with interactive and unique comic digital storytelling and challenging level mission that motivates players to keep playing until the end. Conflicts that are presented within each mission is alive and fresh because each story is not far from the day-to-day human life. Gameplay with its shrinking hitbox pattern has inspired many other rhythm games. Therefore, the storytelling system and the shrinking hitbox pattern in this game is the inspiration for the author to design the Karonese dance game. While the inspiration from Dance Dance Revolution game is in the leveling system, level structure is determined at the beginning and the player can select the appropriate level of ability. If the player failed in a game, they can just recite it.

4. Study Result and Discussion

4.1 Creatice Concept

Game Communication Concept

Methods of communication that is used in Karonese dance game concept is persuasive communication method. This communication method is more suitable for Karonese young people today. They need to be persuaded, not forced, to learn the art of dance culture Karo. Their interest should be developed first before getting to the stage of change opinions, attitudes, and behaviors.

Persuasive communication concepts can be applied in the gameplay through a series of stories in each stage, missions that must be carried out in each level, and the reward and punishment systems. This will invite players to participate in games and overcome the complexity of the gameplay so that they could respect the culture of Karonese dance art voluntarily without their awareness. This appreciate feeling can arise a sense of pride and awe that led to the change of opinions, attitudes, and even behavior of young people Karo.

Game Concept

Games as an alternative media that can be used as a Karonese dance learning media. Game has an image fun and entertaining media. Therefore through the stimulus, such as motion, images, sounds, and text used in games, dance Karo can be converted into an entertaining game while still having proportion of education that can be accepted by Karonese young people without any coercion.

Rhyhtm Game Concept

Rhythm game is one of the short-term effort that can be achieved to introduce Karo dance culture to the wider community in general and to teach Karonese dance movements to the youth of Karonese. Through rhythm game, players are taught first to recognize and learn the rhythm of the music Karo. This is the first step in learning the Karonese dance movements, because the rhythm of traditional music different from the general music. Once the player is able to follow the rhythm of the music, then the players are invited to follow the Karonese dance groove in the game. Rhythm games are also chosen because it is relaxing and fun, not tied to a particular mission, and can make the player easily become addicted .

a. Fullscreen Covered Interface Concept

To show the whole dance movements from head to toe, it need a broad and free area of the screen so that the dancer movements can be displayed clearly. Interface design that can be applied to this rhythm game is fullscreen covered interface. The purpose is that the field feels more spacious and free so that players are not gfixated to the game track, and be more flexible to follow the notes and hitbox according to the dancer movemens.

b. Shrinking Hitbox Concept

To see the animated dancers, the player's view should be led to follow the animation motion. The gameplay layout should not focus on one area only, but also spread across the area of the screen, according to the flow of motion of the animated dancers. In this case, note and hitbox design patterns that are used for gameplay is based on shrinking hitbox pattern. Note will be set to spread, following the rhythm of the music and following the movements of the dancer's arm. Then hitbox, in the form of radar, will appear (from large to small) around each note, and the player must press the right note when it fits the hitbox.

4.2 Design Concept

Tari Lima Serangkai Dance Game Design Concept

Lima Serangkai dance game is made in three languages: English, Indonesian and Karo. This game can be played by more than one person, so as to trigger the competition to achieve a higher score, and even funnier if the game is played together. As a rhythm game, game instructions are given clearly. Instructions is given at the beginning of the game so that players get an idea of the procedure game. The instruction will be made in a special interface, for informing on how to play a rhythm game.

The difficulty level of the game is the structure that must be maintained. The goal is to maintain the interest of players so that they do not get bored playing as the game continues to challenge. Therefore, there will be clear structure in every level where the level of difficulty continues to rise and challenge players.

Bonus in the game can motivate players to keep playing. The existence of storytelling can also make the game more fun and gives the unity element in the game. In this case, the design of Lima Serangkai dance game will adopt the concept of bonuses and storytelling to increase the player's interest.

a. Game Title and Logo

The Lima Serangkai dance game title is "*Inganta Landek*". It derives from Karonese language which means place where we dance.



Figure 1. Logo Game

b. Game Structure

This game can be played by one player, both men and women. Because the dance movements for men and women are different, then this game is made in two characters, male and female. Players can choose to play as a boy or a girl, and the whole story and gameplay will follow his/her choice.

Each character both have the same five stages (phases) that must be passed in order to complete the entire game. This five stages is taken from five dance movements in Lima Serangkai dance, namely *morah-morah stage*, *stage perakut*, *stage patam-pata*, *stage sipajok and stage kabangkiung*. Each stage has a main storyline derived from the philosophical meaning of each Lima Serangkai dance movement. Each stage has five levels, which means the total level in Karo dance game is 25 levels.

Players play using their finger tap to perform various actions according to hitmarks that appears on the screen with the shrinking hitbox pattern. Hitmark patterns used are single hitmark and phrases hitmark. Players can get 100 score when they have precise hitmark tap, 50 score when they almost hit the hitmark, and 0 (zero) if the hitmark is missed.

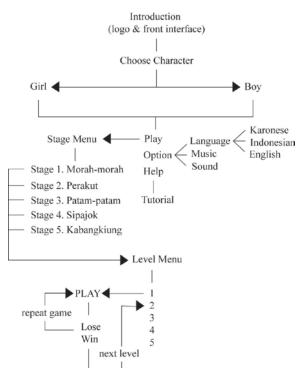


Figure 2. Game Mapping

c. Character Design

The character design is adopted from the physical character of Karonese who have wavy hair, big eyes and a square-shaped face with Karonese traditional clothes.



Figure 3. Main Character

d. Culture Content

In every stage, there are stories with culture content, in texts and images. This storyline represents the philosophy of Lima Serangkai Dance. They are designed in *swipe mode* and only appear in the beginning of every stage. There will be some clickable hints that show the meaning of each Karonese terms and another cultural information.



Figure 5. Culture Content in Storyline

e. Interface Design

There are main menu interface, stage menu interface, level menu interface, and storytelling interface. Inside the storytelling interface, there will be educational information about Karo culture. In addition, to support the storytelling, there are mission stage interface consists of challenges in every level that will support the stories and make the game interesting.



Figure 4. Front Interface



Figure 5. Main Menu Interface



Figure 6. Storytelling Interface



Figure 7. Mission Stage Interface

Level



Figure 6. Storytelling Interface



Figure 7. Mission Stage Interface

f. Audio dan Sound effect

The music background and sound effects used in this game are the typical Karonese traditional music. It is audio and music produced by the gendang Lima Sendalanen from five Karonese musical instrument.

5. Conclusion

Rhythm game is genre chosen for the Lima Serangkai dance game, because there is dance simulation in the rhythm game that shows the movements in the Lima Serangkai dance. In addition, players can also learn the Karonese music rhythm through music beats Karo in the game.

Rhythm game in Lima Serangkai dance acts as an entertainment media that contains education (edutainment) representing the culture, atmosphere, characters, and dance of Karo tribe. By the attractive gameplay based on the visual preferences of young people and the good packaging of Karonese learning culture content, the abstract concept like Lima Serangkai dance's philosophy can be embodied in the concept of game storytelling. Even the Five Serangkai dance movement can be duplicated into animation in gameplay.

The cultural elements of Karonese can be maintained through the use of original Karonese music, Karonese ornament application, the color of Karo, Karo traditional houses and clothes in the game that tells the Karonese custom events and life habits. These elements create the Karonese atmosphere in the Five Serangkai dance game. Therefore, everyone will be able to know and learn about the culture of Karo through an entertaining gameplay.

6. References

- Ginting, Seridah R. 2011. Deskriptif Tari Lima Serangkai pada Masyarakat Karo. Skripsi Program Sarjana Fakultas Sastra. Universitas Sumatera Utara.
- [2] Oxland, Kevin. 2004. Gameplay and Design. Addison-Wesley.
- [3] Peng, Philip. 2011. Designing Rhythm game Interfaces for Touchscreen Devices. University of Pennsylvania.
- [4] Prinst, Darwin. 2004. Adat Karo. Jakarta

Website

- Krause, Kevin. 2012. Android Reaches 59 Percent Share of International Smartphone Market, According to IDC. http://phandroid.com/2012/05/24/android-reaches-59-percent-share-of-international-smartphonemarket-according-to-idc/ (Downloaded: March 5, 2013, 10:37 AM)
- [2] Siadi, Karo. 2011. Seni Drama dan Musik Karo. http://karosiadi.blogspot.com/2011/11/seni-drama-danmusik-karo-bagian-4.html (Downloaded: March 5, 2013, 10:38 AM)
- [3] Torres, Ricardo. 2005. Osu! Tatakae! Ouendan! Import Preview. http://asia.gamespot.com/osu-tatakaeouendan/previews/ossu-tatakae-ouendan-import-preview-6132078/ (Diunduh: 5 Maret 2013 pukul 10:39)