Game Asset Design As A Culture Conservation Effort Through New Media

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Abstract

Indonesia has a very rich culture, but not much is known by the wider National community, even though some are known but are slowly being forgotten because they have been defeated by technological developments. The purpose of this research is to conserve culture in Toba Batak through new media packaged in digital game technology. Through this method, it is hoped that it can indirectly introduce regional culture to its target audience, namely youth people from the millennial generation. The methods Narrative Literature Review (NLR) that used are collecting data, analyzing data, determining assets, illustrating assets (sketching, coloring), assisting with asset illustrations, revising, and finalizing 2D asset designs. This design asset is succeeded creating 6 (six) game assets design in the form of 2D illustrations of the Batak Toba culture. That is, legendary figures, traditional clothing (men and women), traditional houses, traditional weapons, traditional food, and landscapes. In the future, this asset design will be made into a 3D model to be implemented into the game engine.

Keywords: culture, new media, digital games, game assets, animation.

Abstrak

Indonesia memiliki budaya yang sangat kaya, namun tidak banyak yang diketahui oleh komunitas nasional, meski ada beberapa yang dikenal namun perlahan mulai dilupakan karena kalah oleh perkembangan teknologi. Tujuan penelitian ini untuk melakukan konservasi budaya yang ada di Batak Toba melalui media baru yang dikemas dalam teknologi permainan digital. Melalui metode ini diharapkan secara tidak langsung dapat memperkenalkan budaya daerah kepada khalayak sasarannya yaitu anak muda dari generasi milenial. Metode Narrative Literature Review (NLR) yang digunakan adalah mengumpulkan data, menganalisis data, menentukan aset, mengilustrasikan aset (membuat sketsa, mewarnai), membantu ilustrasi aset, merevisi, dan menyelesaikan desain aset 2D. Perancangan desain ini berhasil menciptakan 6 (enam) desain aset game berupa ilustrasi 2D budaya Batak Toba. Yakni, tokoh-tokoh legenda, pakaian adat (laki-laki dan perempuan), rumah adat, senjata adat, makanan tradisional, dan pemandangan alam. Selanjutnya, desain aset ini akan dibuat menjadi model 3D untuk diimplementasikan ke dalam game engine.

Kata Kunci: budaya, media baru, game digital, aset game, animasi

1. INTRODUCTION

A culture is a way of life that develops and is owned by a person or group of people and is passed down from generation to generation but is not hereditary; it can also be understood as a pattern or way of life that is developed by a group of people and then passed on to the next generation [1.2]. Indonesia is a large country and since November 17, 2022 as 38 provinces, which are spread from Sabang until Merauke, which has caused it to have extraordinary cultural diversity. There are more than 300 ethnic groups and 1,340 ethnic groups in Indonesia [3].

Culture has a very dynamic nature and will continue to experience changes from every era; it can change for the better or vice versa, and it can even experience setbacks [4.5]. In this era of the millennial generation, the incessant technological advances have caused many foreign cultural elements to enter Indonesia and be unknowingly absorbed into indigenous culture through a process of cultural diffusion, causing the millennial generation to change their views on culture customs from a regional, such as traditional houses, traditional clothing, traditional food, and others. Because of that Indonesian original culture slowly begins to decline and be forgotten.

Therefore, for the original Indonesian culture to be known for its existence, it is necessary to carry out conservation, namely efforts to preserve or protect it through regular maintenance actions to prevent damage [6, 7]. This research will carry out a form of cultural conservation where the media is adapted to the target audience, which is young people from the millennial generation. The media used is a digital game asset design, which is one part of the new media type.

New media is an interactive digital technology channel for conveying new messages or information that presents content for electronic communication that is used through computer technology and internet connections to enable everyone around the world to interact [8]. Examples and types of new media that many use today are websites and blogs, audio and video streaming, chat rooms, email, online communities, social media, mobile applications, web advertising, DVD and CD-ROM media, virtual reality environments, augmented reality, and mixed reality—the integration of digital data with phones and digital cameras. In addition, new media has the characteristics of digitization, convergence, interactivity, virtuality, and hypertextuality [9–11]. The new media continue to evolve, so that currently there are several types of new media that describe the evolution of new media, namely blogs, virtual reality, social media, online newspapers, and digital games [12–14].

In this research, the new media that is applied to carry out cultural conservation is digital games, namely to develop the use of creativity and design by making characters and other objects attractive so as to encourage interaction between the user and the characters [15.16]. By conducting research on what culture exists in the Batak Toba and how to apply the visual design of that culture to the design of game assets.

The selection of Toba Batak cultural location objects highlighted in this research was adjusted to the needs of the agency where the researcher worked (National Research and Innovation Agency-BRIN). This activity is a small part of a large research to highlight all cultures in Indonesia. On this occasion, researchers were assigned to highlight Toba Batak culture, while many other researchers were assigned to highlight themes from cultures in other regions in Indonesia.

Each researcher has the right to choose an area in Indonesia to design game assets based on the cultural characteristics of that area. The Batak Toba are one of the Batak tribes that inhabit most of the west and east coasts of North Sumatra. This tribe is one of the largest ethnic groups in Indonesia.

Through the design of this game asset, it is hoped that it will be able to introduce Indonesian original culture to young people from the millennial generation, where the lifestyle of this generation spends more time in front of a computer screen or mobile device, so that the delivery of cultural education packaged into digital games will be able to attract attention and interest when compared to the old media (conventional) [17].

2. RESEARCH METHODS

This research start begins with determining location of the area whose culture will be raised as a research theme, then collects data on Batak Toba culture from various literary sources (literature review) using the narrative literature reviews (NLR) method, that is conducting a literature review of previous research results which are arranged in narrative form to then be used as a reference in creating asset image designs [18], performs data analysis from the results of the literature review, determining assets, creating asset illustrations (sketch and coloring), revisions, and final 2D asset designs (Refer figure 1).
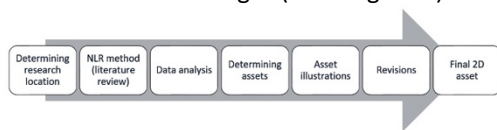

Figure 1. Research process flow

3. RESULTS AND DISCUSSION

Determining the research location was carried out with a focus on Toba Batak culture as the area where to created design game assets. The choice of location is based on the division of tasks from where the researcher works (National Research and Innovation Agency-BRIN).

The narrative literature review (NLR) method was used for a literature review, which is a way of tracing a topic or research issue through collecting data by reading literature from books, journals, and other published documents for further analysis according to the data requirements of the research objectives [19]. Data was collected by searching documents on the internet that used the Google search engine with the keywords culture and North Sumatra. So that initial data was collected in the form of eight ethnicities that became cultures in North Sumatra, namely: Batak Pakpak, Batak Karo, Batak Toba, Batak Simalungun, Batak Mandailing, Batak Angkola/Pesisir, Nias, and Malay [20-21].

Data analysis: to make the topic more specific, one of the eight existing cultures was chosen again, so that the Batak Toba culture was chosen as the topic of this research, while the other seven cultures were assigned to researchers from other teams. Then a more in-depth analysis was carried out to research culture in the Toba Batak tribe, so that it was successfully identified for six Batak Toba cultures, namely: folklore figures (legends), traditional clothing, traditional houses, traditional weapons, traditional food, and landscapes (places typical of the Batak Toba tribe) [21-26].

Determining assets is an advanced stage of data analysis that is carried out in more depth on the existing culture in order to imagine visual forms and make illustrations into game assets. This research is limited to collecting data on assets and character designs, while the type of game to be developed will only be determined in further research. These cultures are:

1) Folklore Characters
   Sibontar Mudar, is a folklore from the Batak Toba in the Bakkara area, Humbahas. Sibontar Mudar means white blood, this story is often called princess white blood. Sibontar Mudar (White Blood) is a folklore that tells of a human daughter (Sibontar Mudar) who is loved by a kind of demonic human who is immune to all torments, named master Sodungdangon.

2) Traditional clothes
   Batak Toba traditional clothing is made of ulos cloth or traditional woven cloth, from top to bottom. The upper part of the traditional men's clothing is called ampe-ampe and the lower part is called singkot. Meanwhile for women, the upper part is hoba-hoba and the lower part is haen.

3) Traditional houses
   The Batak Toba traditional house, known as Rumah Bolon, has a rectangular shape with a model like a stilt house, has a height from the ground about 1.75 meters from the ground, has a ladder located in the middle of the house. The inside of Ruma Bolon is a large and open empty space with no rooms. This traditional house is supported by pillars in every corner of the house including the floor, has a roof that is curved like a horse saddle on the front and back.

4) Traditional weapon
   Piso gading is a traditional weapon for people from Toba region, but this weapon can only be owned by a king. Shaped sword with a slightly curved, has a very sharp blade, and a very deadly poison. Currently stored piso gading relics of the Batak Toba King from the 19th century.

5) Traditional food

There are have several traditional typical foods of the Batak Toba culture, including: Dali Ni Horbo, made from buffalo milk which is compressed so that it is shaped like tofu, has a slightly bitter taste but is distinctive and unique. Mie Gomak, made from stick noodles boiled in coconut milk, yellow sauce, and boiled eggs added, is also known as Batak spaghetti, because it has a distinctive Batak Toba taste. Naniura, a dish made from cut and scaled raw tuna and then cooked without fire, served with a splash of lime juice and spices such as andaliman, shallots, garlic and kecombrang.

6) Landscape (Typical places of the Toba Batak tribe)

Lake Toba (Tao Toba), is a large natural lake in Indonesia located in the caldera of Mount Supervolkan, has a length of 100 kilometers (62 mi), a width of 30 kilometers (19 mi), and a depth of 508 meters (1,667 ft). Located in the center of the northern island of Sumatra with a surface elevation of about 900 meters (2,953 ft). It extends from 2.88°N 98.52°E to 2.35°N 99.1°E. This lake is the largest lake in Indonesia and the largest volcanic lake in the world.

Draft Illustration, in the form of a rough sketch made using Clip Studio Paint, which is special software for making digital comics, illustrations, and 2D animation. In making this sketch, researcher don't include much detail on the object being drawn and only draw a few silhouettes, and then make line art to make it look neater. The final result of this illustration draft is then saved in a clip file format and also exported into JPG and PNG file formats. The results of the process of making this illustration draft are shown in figures 2 through 7.

Figure 2. Sketch of folklore character

Figure 3. Sketch of traditional clothes for men and women
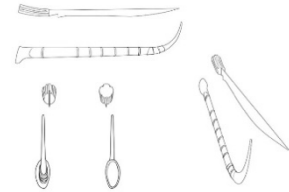

Figure 4. Sketch Traditional houses

Figure 5. Sketch traditional weapon

Figure 6. Sketch Traditional food

Figure 7. Sketch Landscape (Typical places of the Toba Batak tribe)

Illustration revision is a phase taken to improve the design of an illustration draft by making minor changes and adding alternative or variation drafts so as to produce the maximum illustration draft. It can be continued for the final design phases.
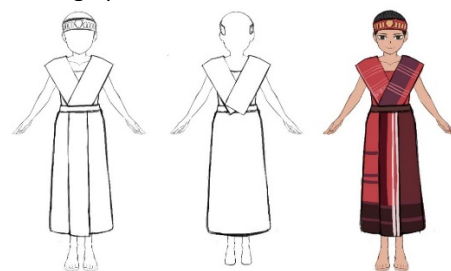

Figure 8. Example revision process illustration

The author could explain more why the visual style is realistyc or anime style in order to match with the justify the researc motive. The final 2D asset designs in this research are six (six) assets in the form of 2D illustrations of the

Batak Toba culture, that is, folklore characters, traditional clothes (male and female), traditional houses, traditional weapons, traditional food, and landscapes.

1) The final designs for folklore characters consist of four views, namely left side, right side, front, and back, without additional isometric models. As seen in figure 9.

Figure 9. Final design of folklore characters

2) The final design for Batak Toba traditional clothing consists of five views on the right side, left side, front, and back, plus isometry. As in figure 10.

Figure 10. Final Design of traditional clothes

3) The final design of the traditional house of the Batak Toba tribe, namely the traditional house of Jabu Bolon, consists of five views, namely the left side, right side, front, and back, as well as additional models with perspectives and motifs for the sides of the house. As in figure 11.
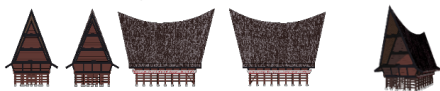

Figure 11. Final design of traditional houses

4) The final design for traditional weapon models only consists of four views, namely side, front, back, and one isometric model. As shown in figure 12.

Figure 12. Final design of traditional weapon

5) For the final design of the traditional food model, only three illustrations were created, namely the illustrations for the Dali Ni Horbo, Mie Gomak, and Nainura models. These three models were only made for one view. As shown in figure 13.

Figure 13. Final design of traditional food

6) The final Lake Toba landscape design is just one landscape illustration with reference to the original photo. As shown in Figure 14.

Figure 14. Final design of Landscape

4. CONCLUSIONS

Based on the division of labor from the office of the institution where the researcher works, the research area is determined (National Research and Innovation Agency-BRIN). With an emphasis on Toba Batak culture as a producing area for game design material, the research location was chosen. To create a game asset design as an effort to conserve culture through new media, it is necessary to make a good plan, which starts with determining which regional culture will be used, conducting literature studies to collect data from the regional culture, and conducting an analysis of the collected data. have been collected, determine the assets to be used, make a visualization of these assets in the form of sketches, carry out the revision process, and the final phase is to make the final design of the assets in 2 dimensions. After successfully creating a game asset design in 2 dimensions (2D), in the next process, it can be used to create 3 dimensional (3D) assets, which are then implemented into the game engine. Through this type of new media, it is hoped that it can attract the

millennial generation to be able to get to know various types of culture that exist in Indonesia, so that in the end, it can become one of the tools to be used for cultural conservation.

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