WANA WARRIOR GAME AS ANIMAL RESCUE CAMPAIGN MEDIA

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Indonesia is a nation which is rich of biodiversity. Various vegetation and good supporting climate make Indonesia a comfortable homeland for some species. Deforestation and illegal hunting have threatened some species. Seeing that situation, there are many ways to avoid that, one of them is using game as the media."Wana Warrior" is a game used as education media of animal saving. The concept of this game is using game as the medium for conveying the information through design and gameplay which attract the players and they can learn without they realize from the provided information. Using Agenda Setting theory, provided informationis selected important issues. Players are focused only on provided issues. The result of the research shows that "Wana Warrior" game can educate people about animal biodiversity, especially, in Indonesia.

Keyword: Animal, Indonesia, game, education, agenda setting.

I. INTRODUCTION

Indonesia is one of the richest biodiversity nations in the world. Located in the equator, Indonesia has tropical climate and tropical rain forest which has a lot of variety of animal and plants. Moreover, Indonesia has a lot of topology too, from mountain to shore, forest savanna, etc. This condition allows various unique species to adapt according to the place they live. There are 300.000 animal species or approximately 17% animal in the world compared to Indonesia's area large.[1]

In Indonesia, animal distribution is divided into 3 areas separated by 2 lines, Wallace line and Weber line. First area is located in west side of Wallace line is Asian type animal. The distribution is in Sumatera, Java, Borneo, and Bali. Between Wallace and Webber line is transitional animal type. The distribution is in Sulawesi, and islands in Nusa Tenggara, and most of the Maluku. And then, eastern Weber line is Australian type animal.[2]

Even though having rich biodiversity, Indonesia has bad reputation about endangered animal. According to IUCN (International Union for Conservation Nature) there are 184 animals' species, 119 birds, 32 reptiles, 32 amphibians in 2011.

The summary of critically endangered there are 69 species, 197 are endangered, and 539 are vulnerable.[1]

Government and some organization have doing some effort to save Indonesia's biodiversity. Efforts made by the government are making regulation, protected forest program, national park, and captive breeding for some species. In the other side, there are some NGO's are doing their activities about campaign to save the biodiversity.

However, Indonesia still has problem with the law enforcement, as a result big action is needed. Actually, government and some NGO's are doing campaign about biodiversity saving. Looking at deforestation still running quickly, the campaign seems not too effective. Unfortunately, the government project is stopped just in one event.

The campaign gave little education to people to save nature. The efforts are now working together with public figure to campaign biodiversity saving, social media, and having events with the people.

Game can be an alternative to campaign the animal and biodiversity saving. Game nowadays is the part of lifestyle. Just like the social media, game has aspect like audio and visual. For example, there are rhino Raid by WWF (World Wide Fund for Nature) campaign about rhinos saving in Africa.

The use of game as campaign media is supported by good mobile device market. In 2nd quarterof 2015, smartphone sales increased 13% with 314,5 million sales[3]. In Indonesia itself, smartphone sales increased 55%. Although it decreased 11% per-quarter, Indonesia has beenstill the biggest smartphone market in South-East Asia[4].

II. LITERATURE REVIEW

2.1 Indonesia's nature

Indonesia is one of the largest archipelago nations in the world. 2/3 of the state is sea. Indonesia is known as world's lung too because Indonesia has forests spread in almost all island. Indonesia is one of the part of the coral triangle too and it's a place to live 45% fish species in the world[1].

Even thoughhaving rich in bio diversity, Indonesia has bad record about deforestation and natural conservation. Besides Indonesia, there is Brazil which takes part in the largest deforestation rate in the world. Study by University of Maryland in the end of 2012; at 2008 to 2012 Indonesia overtook Brazil in the fastest deforestation rate. Recorded, there are 840.000 Ha forest lost in Indonesia. In the other side, Brazil, the former leader, lost 460.000 Ha. Deforestation rate is dominated by Sumatra, Kalimantan where the palm oil business running[5].

Indonesia's animal wildlife is threatened too. Beside of deforestation, illegal hunting threatens the animals. The existence of some animals like Orangutan, Sumatran rhinos, Sumatran tigers, and the others are threatened. Approximately the amount of Sumatran orangutan (*Pongo abelii*) is 14.613[6]. While Borneo orangutan is going to critically endangered[7]. Sumatran rhinos (*Dinocerorhinus sumatrensis*) is in critically endangered too with less than 100 in Way Kambas National Park, Bukit Barisan National Park, and Gunung Leuser National Park[8]. Sumatran tigers (*Pantera tigris sumatrensis*) is only 400 in Sumatera[9]. Sumatran elephant (*Elephas maximus*) which is sub-species of Asian elephants is critically endangered status. The population is threatened by over forest function and illegal hunting for their ivory[10]. In the other side, Javanese gibbons is endangered by the number of 2500[11] spread in Slamet Mountain and Dieng Plateau[12]

2.2 *Environment campaign*

Campaign according to WWF is a tool for telling information, increasing awareness andcaring, and changing behavior. Campaign is useful for telling opinion or message to society to get support from some part of people.Campaign about natural saving has been done by several organizations from government and NGO that runs in natural saving such as WWF, Greenpeace, Pro Fauna, etc. The media for campaigningis internet, seminar, action, etc.

2.3 *Media*

Messages in media in semiotic consist of mixed symbols arranged spatially and chronologically to create impression, telling idea, and give the meaning for the responder. As an example, howa producer processes the symbols and signs, and so how audience accepts and gives meaning the symbols and signs to the information they understand. In arranging information, sign raised should have clear relation to what it represents.[13]

Media has capability to arrange issues which are considered important to society. That function is mentioned as agenda setting function. Walter Lippmann, a journalist from USA formulates the agenda setting theory, and takes a look at how society doesn't take the real incident but what is in their head. The thing mentioned as pseudo environment in the other words, agenda setting theory is shaping issues in human mind[13].

There are two steps in agenda setting. First, takinggeneral issues which are considered as important issues. Then, deciding which issue, from the chosen issues, which are considered important. These two steps are important and havea relation because the information delivery process will be better and give frame about the problem[13]

Agenda setting process is 3 ways of processes. First, making priority in issues that we will discuss in media (media agenda). Second, creating public agenda. And third, realizing public agenda influence or interacting with policy maker (policy agenda). In the simple way, the first process influences the second, and the second influences the third[13].

III. RESEARCH AND METHODOLOGY

3.1 *Game development method*

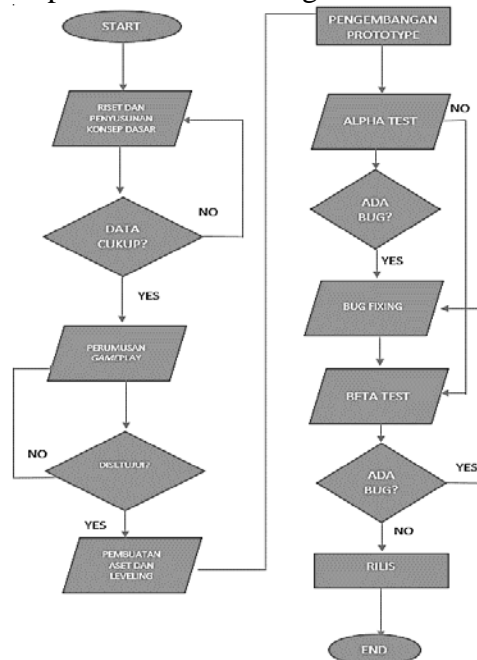Game development process is divided in some process shown in Fig. 3.1

Fig. 3.1 game development process

Game development process for *Wana Warrior* game has a purpose to develop campaign game. The theme is about wide deforestation in Indonesia.

In literature review process and data gathered, the taken theme is about the impact from the nature destroying the animal. The game is strengthened by story how nature is destroyed and how the animals save their live. The character is

based on the real characteristic in the nature. Thus, player can understand what the animal feels.

IV. RESULT AND DISCUSSION

4.1 Wana Warrior gameplay

Wana Warrior has strategy gameplay with some action in it. The information is given often every loading screen in every moving scene. *Wana Warrior* character is animal which is threatened in Indonesia. There are Orangutan, Tiger, Gibbons, Rhino, Elephant, and Deer like shown in Fig. 4.8.

Fig. 4.8. Wana Warrior

Wana Warrior has stories for each character. Started from Otan, a Sumatran Orangutan who fights to defend his homeland. Then, there is Yongki, a Sumatran elephant who is saved by Otan when he is poisoned by hunters for his ivory. After Yongki, there is Datu, a Javanese rhino, who is almost killed because he accidentally enters human's house for food. Then, there is Bappu, a Javanese gibbon who is dying after his child is caught by hunters. Finally, story of Harimo, Sumatran tiger, and Sambar, Sambar deer, whichis almost killed when Harimo is trying to hunt Sambar.

There are some features in *Wana Warrior*.Fig 4.10 shows all features. There are Warrior scene containing character information and story. Player can level up and read character characteristic. Then in the item shop, player can buy items to help them in game. And then in the upgrade

center,player can upgrade base and raiseSP to improve the game.

Fig. 4.9Wana Warrior features

In the gameplay, player has to fight the enemy by summoning the character. The winner is the first who destroys enemy base first. Gameplay is shown by Fig. 4.10.

Fig. 4.10 Gameplay in-game

Loading screen, Fig. 4.11, always pop-up every scene move. In loading scene, here is the simple information given, and information is frequently given and simple. So, player will learn unwittingly.
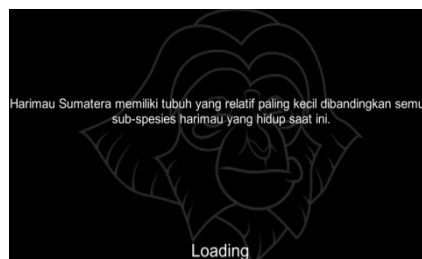

Fig. 4.11. Loading screen

4.2 Game assets

Wana Warrior assets are including button, character, environment, GUI, and other supporting assets. The assets made by spritesheet technique. Assets environment is based on real condition in Indonesia nature

especially in Sumatra. Main character assets shown by Fig. 4.12and the enemy character shown by fig 4.13

Fig. 4.12 Main character

Fig. 4.13Enemy character

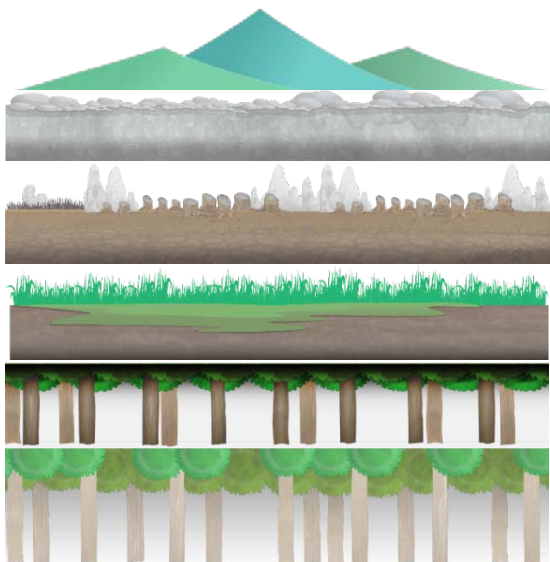Game setting is in Sumatera. To build the environment using some sprite shown inFig 4.14.

Fig. 4.14 Spritesheet environment

4.3 Testing

To prove how *Wana Warrior* has impact to people, a test was held to the same respondent from the game design. This test examined respondent's knowledge about Indonesia animal biodiversity, respondent's respond about game design and story. This test had purpose to find out if the game could deliver messages about Indonesia animal biodiversity to players. Respondent was given some questions; there were 10

problems from the pre-test than given again in post-test and some question about the game. The result is shown in table 4.1. Data show the result of the 10 problems about respondent's knowledge on Indonesia's animal. There were24 respondents whose increasing score. The respondents whose increasing score more than 6 were noted from 15 to 26 respondents. This result showed that*Wana Warrior* had good impact as campaign media for animal rescue.

Table 4.1 Test result

Responden	1	2	3	4	5	6	7	8	9	10
Pre-test	6	5	7	5.5	6	6	1.5	8	4.5	6
Post-test	7.5	5.5	8	5.5	6	6	5	8	4	7

Responden	11	12	13	14	15	16	17	18	19	20
Pre-test	5	5	8.5	8.5	2	7	7	7.5	6	4
Post-test	7.5	6.5	7	7	1.5	9	9	7	8	6

Responden	21	22	23	24	25	26	27	28	29	30
Pre-test	4.5	5	5.5	3.5	9	6.5	8.5	8.5	6.5	5
Post-test	8.5	10	9	9	10	10	9	9	10	8

Responden	31	32	33	34	35		N	Pr>6	Po>6	
Pre-test	6.5	6.5	7	7.5	5.5		24	16	27	
Post-test	10	9	7	8	6.5					

N = Jumlah responden yang mengalami kenaikan nilai pre-test dibanding post-test,
Pr=Nilai pre-test,
Po=Nilai Post-test

V. CONCLUSION

Wana Warrior game is a game made as education media for animal rescue. In the process of data gathering, the result showed that users had tendency to get info from media which hadgraphical characteristic, easy to understand, and intensive. In brief, *Wana Warrior* gives education material by that way.

Wana Warrior game is designed by mixing some elements, game and agenda setting theory. Using of this method is with adopted agenda setting theory, so player learning with no feel they are learning. Game implementation in mobile devices has purpose to cut off the distance between game and player, and can be played everywhere. So, the more player play the game, the more they are learning following by their awareness to animal rescue.

Generally, *Wana Warrior* game is made with familiar genre. So a player doesn't feel

strange with the gameplay. *Wana Warrior* game is designed to be finished not in a short time. So with gameplay design, player can modify their troops as they wish. In the other word, the story can make attachment game to player's feeling. So the message can deliver better.

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