

Digital Game Prototyping Using Board Game/Table Top as it's Mock Up Case Study: Taman Putroe Phang Game Project

[1] Dimas Krisna Aditya, S.I.P., M.Sn , [2] Ade Keumala Febrina., S.Ds.

Faculty of Creative Industry, Telkom University
[deedeaditya@telkomuniversity.ac.id][adetsa@yahoo.com]

Abstract: Many of the games with the Indonesian culture adaptations has been developed nowadays. Some of them are made for commercial markets and the other still developed as portfolio and also academic purposes. Some games, already had great gameplay and also had some beautifully digitalized artwork. However, in academic level games projects such as communications designs student's final projects games prototyping, they often show many errors in the process, especially at gameplay and asset's development. This circumstances happened because they (the students) lack of the knowledge about how to make a good gameplay based on narrations and always concern about how to designing the visual contents than make it have a great game. With the qualitative research methods by analyzing a games' project called *Taman Putroe Phang*, a game project which adapting the Aceh's Kingdom Romance History. Using game development theory and game design theories, this research wants to explain about how the game developed using board game/ tabletop prototyping before go to the digitalized final game design. The research purpose is to give a perspective and helps the beginner game designer to make a success game prototype using the table top mock up at the process, that shown in game's prototype.

Keyword: Games, Games' mock up, table top game, board game, Aceh's Kingdom History

INTRODUCTIONS

In the past one semester at the graphic design specialization class, especially in the final assignments of making digital-based games [in the case of Telkom University, based on UI / UX], students often experienced with the difficulties and hampered by the development of gameplay and the mechanism of the game itself. Although, they've succeed in creating the narration which adapted local cultures and folklores and have great skills in creating the artworks, still, the game mechanics often come as challenging parts when it comes to prototyping step. Due to limitations of project assignments, the students as the junior game designers seems work in rush hours, so they often find that making a gameplay can be very upsetting for them. This condition usually make the students lack to worried about how to make a working game mechanism which is consider as the most important aspects in the game designing. This circumstances are contrary to the those who make the board game/ table top projects. The researcher finds that they who make the board game are put focus on the gameplay and mechanics at first rather than the aesthetics in the surfaces.

Taman Putroe Phang, is one of the final projects that one of a well-developed game, even

tough the game still in developing progress and still in demonstration mode. The game was selected to explain in this research because the gameplay and its mechanics was adapted from the board game/ table top prototype. The game itself has the complete aspects that contains mechanics, aesthetics, narration and technology within. The game narration was adapted from Aceh History, about the roman story about Sultan Iskandar Muda and his queen, Putri Kamalliah, who known well as *Putroe Phang*.

THEORITICAL BACKGROUNDS

To analyze the game with the game theory, the research use Jesse Schell's statement which explained the four quadrants of the basic elements that build a game. The four elements are: **1) Narrations, 2) Mechanics, 3) Aesthetics and 4) Technologies.** These four elements (See figure 1), couldn't stand alone and to build a good game, they must work as a unity. Schell also emphasize that a game must have a good narration where the world buildings and characters tells using a mechanics that involve the player to interact with the technologies that giving the aesthetics touch and also the instruments to play with [Schell; 2008]. Due the limitation, he research will focus on the game's

mechanics and technologies development that had two platform models, the board game /table top prototype and the mobile game.

From Pulshiper Lewis, this research learns that to study game design development using table top mock up is much effective than making a digital mock up in video games or mobile games. There are several benefits to use the table top mock up: 1) It's more easy for beginner in order to make a game prototype, and for those who don't have any digital programing skills. It also said as the easier, cheaper and faster way to develop game mock up before move to the digital enhancements. 2) Some of the games are directly easy to modify in its table top mock up. 3) The board game/ table top mock up would convince the students for more focusing and concentrating in making gameplay not just only focusing on the surface looks. 4) It doesn't need wasted time for nonsense idea. 5) The simplicity of the board game forces the students to focusing in making a gameplay that believed as the most important aspect in a game. 6) With the table top mock up, the beginner cannot "hide" and "blaming" to the computer systems, because they have to designing the system and visual mock up manually. 7) If, the beginner game designer start the game design process with video games or mobile games, at the end, they're studying about game production process not game design process. [Pulshiper; 2012]

The research also put the recommendation from Tracy Fulteron, that describes that it's important to the amateur game designer and developer to build a board game / table top prototype as a mock up, in order to the effectiveness and efficiency that the game designer could make changes and modifications easily, because it would be difficult and complicated to modify the computer coding program and its algorithm. Furthermore, Fulteron also emphasized that either board games or electronic games need the physical prototype need for the game designers to understand more deep about the gaming principles

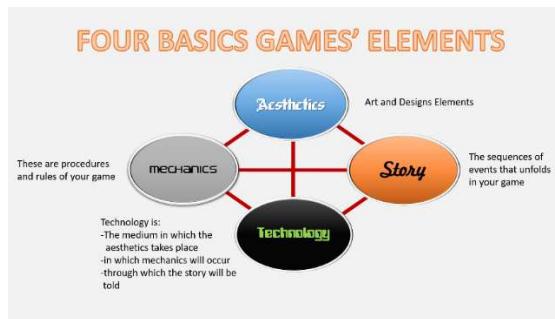


Figure 1 The Four Basic Games' Elements

Source: Dimas Krisna Aditya

RESEARCH'S METHOD

Qualitative methods are used in this research. Data collection methods that used in this research are: **1) Observation**. The research team made direct observations of the objects, visiting the Putroe Phang's Garden sites in Aceh. Furthermore, in order to design game assets, the research team also observed objects directly used as references to museums in Aceh. **2) Literacy Study**. Literacy studies are used when this study adapts narratives to the game. Some books which contains Aceh's History related to Sultan Iskandar Muda and Putroe Phang used as comparative variables and references. But, most of the literacy studies here were using some gaming theory books. **3) Questionnaire**. The questionnaire was used for the research to look forward about the target audience's preferences of the game's platform. It's about 70 correspondences in SMPN I Bandar Baru, Aceh were asked about the game's platform, the audiences' behaviors and their knowledge about the Putroe Phang's history. Numbers of experiments and the making of mock ups were conducted in finding the game mechanism that accommodates the results of data collection in the field.

RESULTS AND DISCUSSIONS

About The Game

Taman Putroe Phang mobile game (See Figure 2) was the results of the previous board game projects as the new media adaptation from the romance story between Sultan Iskandar Muda and his queen, the Putroe Phang herself. The board game prototype also the first project from the research as a part of the next step of the ethno-identity studies, to recreate the ancient or traditional narrations using a new media that would be accepted by the millennials.

The goal of the game itself is very simple than the background story of the game. All players must collect constructions materials in order to set and build structures in Putroe Phang's Garden. The winning condition of the game is being the first engineer who could build the four structures which are the garden components, as fast as possible.

Mobile Game Taman Putroe Phang is a card based strategy game on a board with digitally approach that made to card building games to smartphone media on the android platform. This card

based strategy game on a board use many supporting cards that can be used to build Putroe Phang Garden as the main goal in the game. This game takes 30 minutes to 40 minutes to complete, meanwhile the gameplay itself not too complicated and tense so it could attract the teenagers to play it. This game can also be played continuously without need to be saved into the systems. By using the Android smart phone platform as the OS with the most users in Indonesia, this game designed to be played practically and suitable for anyone, anytime.



Figure 2 The look of Taman Putroe Phang's Board Game and Mobile Game Screen
Source: Dimas Krisna Aditya

The Board Games Prototype

The key of the gameplay of the Taman Putroe Phang is the mechanics of the game that had been established in the first project, the board game prototype. The mechanics and game play also developed in several times. The first idea of the game mechanics was borrowed from Monopoly Deals card game. Due to avoid the similarity to the gameplay, the second idea, the research put the game on the hexagonal board and adding some characters as fractions and character tokens. The most complex parts from the game was to put the narration to the story. With the paper mock up the research learned that, we could have made some changes, attributes and also rules when it comes to table top mock ups.

The board game's prototype was developed from the sketch, rough paper mocks up and advanced printed prototype using digital printing for its finishing. The descriptions of the board game's project itself can see in the tables of board games' proposal below:

Table 1
Taman Putroe Phang's game concept

Title:	Taman Putroe Phang
Tagline:	“gaduh aneuk meupat jrat, gaduh hukom ngon adat pat tamita?” [The lost children may still have a grave that we can see, but if our tradition and customs are lost, where will we look for them?]
Genre:	Economic Simulations and Constructions
Pictures	
Target Audience:	12-15 years old
Played Like	<i>Monopoly, Monopoly Deal, LINE's Get Rich and Roll to Dice: The Three Kingdoms</i>
Main Goals	Be the first fraction who build the four sites of the Putroe Phang Garden

Mechanism (General)	<ol style="list-style-type: none"> 1. Two players are the minimum players' requirement. 2. At the beginning of the game each player will draw 5 random cards from the deck 3. The player roll the dice to walk and pick up the card. 4. Each player can play up to 3 cards in one turn. 5. All cards can be used as assets of exchange when placed on a player's wallet, each card that is used in transaction, will become an action card again (unless the property card remains valid as a property card and can only be used as an exchange card when the player does not have another card). 6. The player places a property card set on the board that is provided and can be seen by other players. 7. Each action card run by a player must be followed by the opponent and can only be canceled by the action card "<i>Han Ek Lon</i>". 8. The winner is the players who have managed to collect four sets of properties of different colors, or four sets of property cards of the same color. Another condition that allows players to win is when the opponent goes bankrupt / runs out of properties
Setting	Putroe Phang's Garden in Aceh
Setting References	
Key Experiences	The Winning condition that can be achieved by collecting 4 sets of properties cards to complete the Putroe Phang park. To win the game, players can be helped by using an action card that can be used by players to launch attacks, seize / exchange opposing properties and become a tools of exchange.
Similar Games	<i>Monopoly Deal, LINE's Get Rich</i>

Meanwhile, the board game's assets can be seen in Figures:



Figure 3 Taman Putroe Phang's Board Game Assets
Source: Ade Keumala F.

The Digital Enhancements

After the board game prototype of the game was finished, the research wanted to develop this game in the advance level of technology by using media that more familiar with the target audience, the

mobile games. This platform was selected considering to the fact that there are 132 million internet users in Indonesia, and the 43% people of this number are actively access social media using their smartphones, which are mostly dominated by generation z, who their activity mostly depend on gadgetry. This situation creates potential market for those who wants to designing game in mobile phone platform.

It's not difficult to transform and adapt a game from board game to the digital version, because of the similar assets used again for the digital version. There's only some minor changes applied to the cards design, especially in the card's border. The clarity of the game mechanics in the previous board game version eases the programmer for computing the gameplay to the make coding text and inputting the command flow to *Putroe Phang's* the program (See Figure 4). As the more advanced technology aspects, the project could put the narration of the

game with short animation as its opening sequences before players access the main menu of the game.

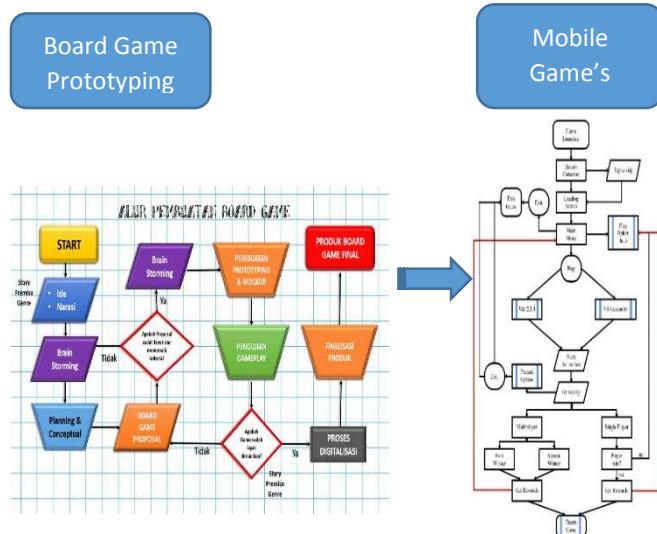


Figure 4 The process of gameplay adaptation from the table top game design's flowchart to mobile game's system

CONCLUSIONS

Although the growth of digital gaming technologies is significant to the user and game designer, it's important to the beginner level game designers for consider to making the physical mock up or the table top mock up at their design before make the digital game prototype. The physical mock up will help junior game designer to understand the gameplay and the game designing process. It's more important to understand the gameplay and focusing to how a gameplay work at first before we put the aesthetics aspect, even we have great skills in artwork.

This *Putroe Phang* game project, may be still in development and could be modified in the future, but the research wants to recommended to the students not only for students in graphic design concentration in Telkom University, more over to every student whom studies about game design to make the physical mock up, such as table top game first before developing the digital system for the game.

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