

## REALITY AND CHALLENGES OF MALAYSIAN DIGITAL TRADITIONAL GAMES

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### Abstract

Malaysian Traditional Games used to be a choice for leisure activities. Various versions of them have been digitized to compete in game industry. However, due to its lacking, modern contemporary games have overtook the traditional games as leisure activities. This article focuses on investigating what are the realities of the digital version of Malaysian Traditional Games, the consequences of it and what are the challenges to game industry. Series of survey have been conducted involving 550 respondents to confirm the phenomenon among the millennials. Study revealed the current preference among gamers, number of contributing factors that attract them to play and drive them hook to the games. Findings suggested challenges to key-players in producing Malaysian version of digital games that can stand out of the crowd of game industry.

Keywords: Digital traditional games, Traditional games preservation, Games engagement.

### 1. Introduction

Traditional games (TG) of a nation are unique and usually reflected strong sense of the community. It is a classic game of strategy and great game for family. Although TG are considered old, it has a very humane education role for the learning process of an individual. Misbach [1] in Setiawan [2] claimed that TG can naturally stimulate various aspects learning; motoric skill, cognitive skill, emotional, language, social, spiritual, ecological, and moral.

TG used to be a choice for leisure activities. TG being played not only for fun and leisure activities, but it is also beneficial for learning process. People of different ages maintain to play games due to the pleasure and motivation they derive in them.

Nowadays TG are developed on various types of platforms which allow people to play using digital devices. Digital traditional games (DTG) are the outcomes of efforts made to attract young generations with the intention to preserve, cultivate, conserve, and protect national heritage. Although many efforts are made including the digitization of the traditional games, these efforts are yet to success. Sustainable engagement in digital traditional games can preserve country's cultural heritage. However, despite such importance, digital traditional games are far less popular than the digital contemporary games.

In the past few decades, modern games have overtook the traditional game as leisure activities. In Indonesia, young generations are less attracted to it due to several reasons. Despite this lack of interest, another four factors are; lack of knowledge in the games, the environment no longer permits the activity for TG involving outdoor activities to be conducted freely, difficulty in forming a children group in urban areas, and because of the growths of technology [2].

Digital game has found to be effectively used to provoke interest as well as teaching domain knowledge, strengthen engagement, information processing, problem-solving, social development and finally to increase academic abilities [3]. Computer games often involve problem solving thus requires brain power [4]. Computer game-based learning has the ability to engage and motivate learners. However, some researchers claimed that theory of learning and engagement typically fails to consider game engagement theory [6]. A good game always has components and rules. Good criteria could be integrated in games; game rules, goal, dynamic, chance to win, and competition. While basic criteria are common experience, equality, freedom, and activity have no impact on reality [7].

Due to the advancement of technology, younger generations are more attached and engaged to contemporary digital games [8]. It is now become a main concern on how to get gamers among young generations to get engaged to DTG. Understanding why people keep engaging to digital games is something unrevealed. Why makes games so addictive is very subjective and hard to dismantle. Prensky [5] listed twelve characteristics that can make computer games engaging. The games should be fun (gives enjoyment and pleasure), games should be a form of play (gives players intense and passionate involvement), games should have rules (gives player structure in playing), games should have goals (gives players motivation), games should be in interactive form, games should be adaptive (gives players flow while playing), games should have outcomes and feedback (gives player learning), games should have win states (gives players ego gratification), games should have conflict/ competition/ challenge/ opposition (gives player adrenaline challenge), games should have problem solving (will spark players' creativity), games should have interaction (allow social groups among players), and games should have representation and story (gives players emotion while playing).

Based on the issues discussed, a preliminary investigation is needed to confirm the trend. The organization of this article as follows; section II discusses preservation works of Traditional Games. Examples and current scenarios of Malaysian Digital Traditional games are covered in Section III. Discussions on preliminary investigations are presented and thoroughly discussed in Section IV. Finally, conclusion and discussions on future works of the study are covered in section V.

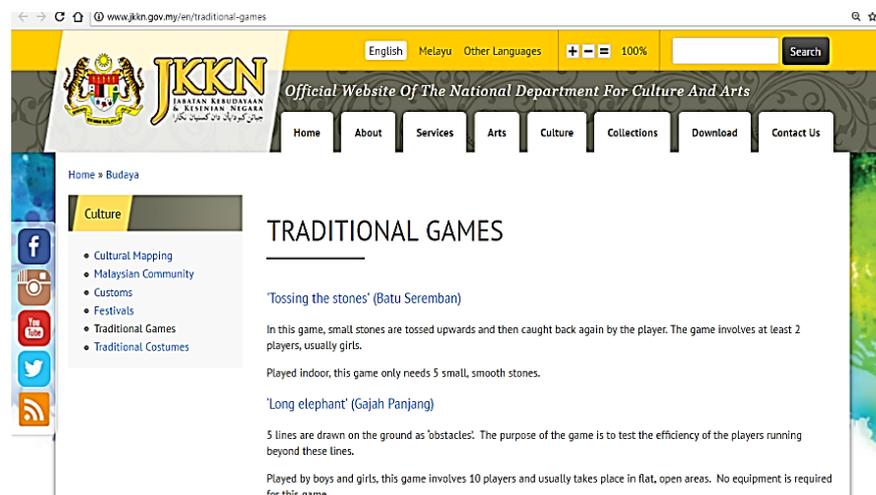
## 2. Preservation Works of Traditional Games

Barwick [9] cited that Deegan and Tanner defined preservation as the continuous process of creating and maintaining the best environment possible for the storage and/or use of an artefact to prevent damage or degradation and to enable it to live as long a lifetime as possible. These processes are necessary because they claimed that culture is at constant risk. Without positive action, and the continuous processes of preservation, important information and resources might damage, destroyed or lost.

Important artefacts to be preserved are our national heritage, and one of it are our traditional games. In Malaysia, there are lots of intentions and efforts are made to attract young generations with traditional games by promoting, preserving and cultivating cultural games using myriad mediums such as books, e-books, blogs, social media and portals.

Ministry of Tourism has taken effort and play their important role by promoting Malaysian traditional games to tourist. One of the best examples is International Kite Festival at Pasir Gudang, Johor. The event managed to attract kite-enthusiasts from all over the world the game to take part in the competition. It is considered a successful event because it managed to let the world know about our international event and at the same time promoting Malaysia and our traditional games to the world.

Government through the National Department for Culture and Arts (JKKN) and National Heritage Department (JWN) are using their portal to channel information regarding traditional games as the effort to cultivate, conserve, preserve and protect national heritage for younger generations through their portal, including traditional games. Official websites of JKKN and National Heritage Department are shown in Fig. 1 and Fig. 2 respectively.



**Fig 1. Official website of JKKN.**

Although there is a special section of their websites promoting Malaysian Traditional games, the info provided is very limited, incomplete, and misleading. Although there are many traditional games in Malaysia from different races and

ethnicity, only few games are listed. Information provided in the websites are not attractive, hence defeating the purpose of promoting and attracting attentions of the young generations. Only text-based information provided in the official website of JKKN, while for National Heritage Department, combination of text and graphics are used. This is still insufficient in promoting our TG and making the efforts of preserving TG a success.

It would be better if videos of the games are embedded together with the text-based information. Early discussion with a staff from National Heritage Department agreed that having digital version of the games will help the effort. The challenge is to design and develop games that can attract players and get them hooked to the games.

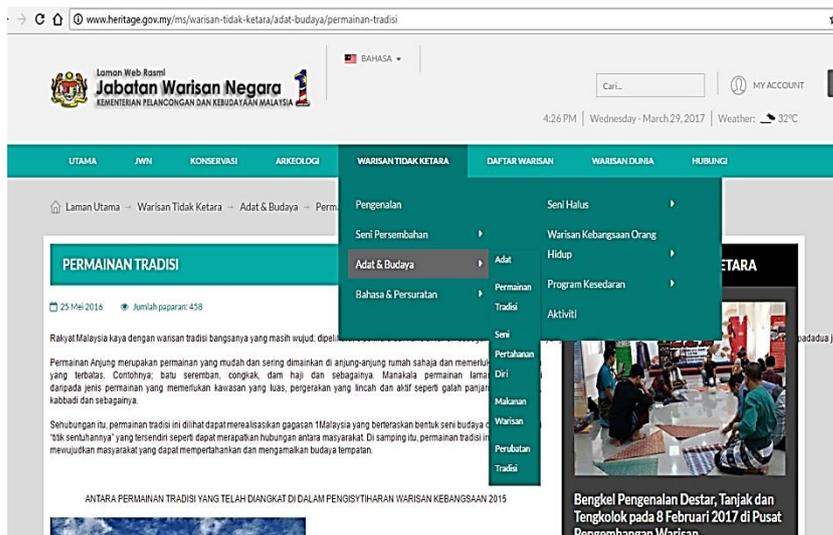


Fig 2. Official website of National Heritage Department.

Digitizing Malaysian traditional games can be seen as one of the efforts in preserving our national heritage. By having digital version of TGs embedded on these websites for promotion purpose, people can easily download it on their gadgets and other electronic devices. With this effort, people all around the world can be exposed to Malaysian traditional games.

### 3. Malaysian Digital Traditional Games

Due to the fact that traditional games are gradually going extinct, the digital version came to being in order to enable people to play it on different platforms and devices at their convenience. Some Malaysian Traditional Games have been digitized as one of the preservation efforts. Most of them can be downloaded for free. Lipandes Studios is among Mobile Gaming Developers who actively developed mobile games especially for Android™ platform. Since publishing their first Android game, they have got more than one million installs on Google Play™ store.

Three most popular Malaysian Digital Games (based on the download frequency) are Dam Haji, Congkak, and Dam Kapit.

**Dam Haji:** It is claimed as the best Malaysian traditional board game by its developer. The name of the game comes from the promoted piece which is known as "Haji". Dam Haji is a two-player traditional board game and one of the Checkers/Draughts variations. The objective is similar to the standard Checkers/Draughts, which to capture all opponent's pieces or to force the opponent to have no more legal moves. It can be played either using 8x8 (24 pieces), 10x10 (40 pieces) or 12x12 (30 pieces) board sizes [10].

**Congkak:** Congkak is a traditional cultural game used to be played by women during Malay ancient times. It is known as a game of wit between two players. In the old time, the game was played by digging up holes in the ground. Each player will have seven holes in a row with one large hole at their left end respectively called "home". Each hole will consist of seven "buah" often made of pebbles, tamarind seeds or even shells. As Congkak evolved, people used a wooden board mimicking the holes on the ground. Known as a game of strategy, Congkak involves counters or pieces being moved on a surface or board according to a set of rules. Congkak helps improve the kid's calculation skills among other benefits.

**Dam Kapit:** this game is normally played by two players on the same board (board size can be 8x8, 10x10 or more) but the starting position is more similar to Chess. The game rules are simple. Each piece can only move horizontally or vertically, forward or backward in any number of empty squares, but it cannot jump over the opponent's pieces (similar to Rook's (castle) movements in Chess). The objective is to capture all opponent's pieces or to force the opponent to have no more legal moves just like in Checkers. A player can capture the opponent's pieces by creating a 'kapit' position. A 'kapit' position can be formed either by making the opponent's piece(s) trapped in between the player's pieces or by putting the player's piece(s) in between the opponent's pieces. The player can make more than one 'kapit' position in a single move if possible [10].

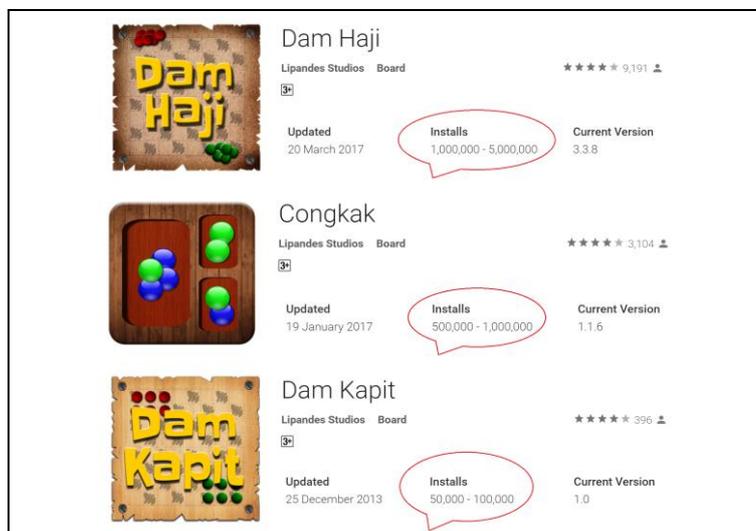


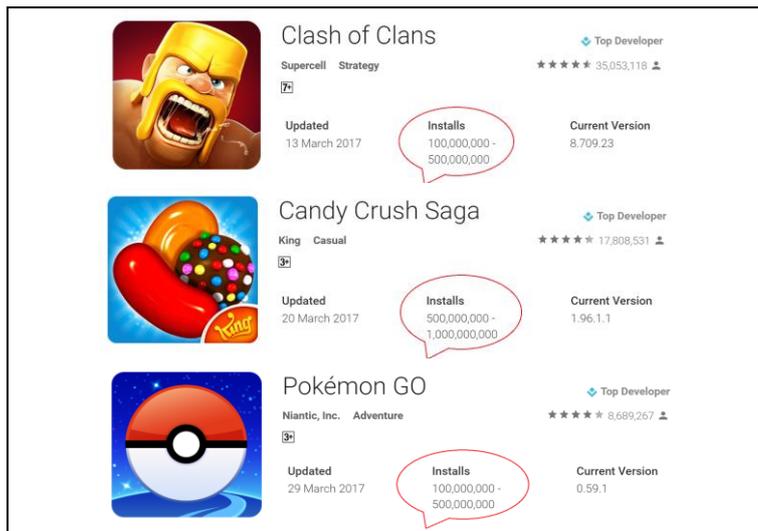
Fig. 3. Download frequency for Dam Haji, Congkak and Dam Kapit.

Although these three games are among the top in its category, they are far less popular compared to modern contemporary games (CG). Taking download frequency for three top games of both genres as the first dimension to compare, technically contemporary games are way popular than the traditional games. Figure 3 shows the download frequency for these three games recorded on 30<sup>th</sup> March 2017 from Google Play store.

Dam Haji as the most popular Malaysian Traditional games on Google Play store has been downloaded and installed up to 5,000,000 times and been reviewed by 9,191 downloaders. Congkak, the second popular game has been downloaded and installed up to 1,000,000 times. Another version of checkers, Dam Kapit has been downloaded up to 1,000,000 times and been reviewed by only 396 downloaders.

In comparison, download frequency for modern digital games revealed a big gap with higher numbers. Fig. 4 shows the download frequency for the three top games recorded on 30<sup>th</sup> March 2017 from Google Play store.

Clash of Clans for example has been downloaded and installed up to 500,000,000 times and been reviewed by 35,053,118 downloaders. Candy Crush Saga has been downloaded and installed up to 1,000,000,000 times. Although has been initially released in in July 2016, Pokemon Go quickly became a global phenomenon and has been downloaded up to 500,000,000 and been reviewed by 8,689,267 downloaders. Niantic Inc, which is the developer of Pokemon Go has proudly announced recently that the application has been downloaded installed for 650 million times.



**Fig. 4. Download frequency for Clash of Clans, Candy Crush Saga, and Pokemon Go.**

The statistics show how contemporary version is more popular than the traditional version due to many factors. Hence, further investigation is needed to confirm the trend.

#### 4. Preliminary Investigation

Series of survey involving 550 respondents among the millennials have been conducted to confirm the claim that Malaysian digital traditional games are far less popular compared to contemporary version. Six games, three from each genre have been used; Dam Haji, Congkak, Dam Kapit, Clash of Clans, Candy Crush Saga, and Pokemon Go.

Respondents were given a chance to play the games especially the ones of traditional genre since some of the respondent never played or even tried it before. Combination of in depth interview and survey were used. Self-constructed and validated questionnaire were used for the later part.

Three scopes of the investigation were looking at the reality and challenges of digital traditional games in Malaysia. Investigation were focusing on popularity of the games among the target group, the pulling factors that influenced and attracted gamers to the preferred games, and factors that make players hook to the games. Table 1 shows demographics of the respondents. Respondents are selected from the millennials group, whose age group is between 18 to 27 years old, the group who actively involved with digital games.

**Table 1. Demographics.**

No.	Group	Number of Respondents	Background
1	A	70	Media Technology & Creative Industry
2	B	60	IT, Business, Law
3	C	80	IT, Business, Law
4	D	40	Technology Video
5	E	40	IT, Business, Law
6	F	60	IT
7	G	80	IT and MM
8	H	40	IT and MM
9	I	80	IT and MM

First part of the investigation confirmed the claim on the preferences and popularity of the games. Statistic shows that majority of the respondents prefers contemporary games over traditional version. 75.3% of them have installed games of their preferred genre in their gadgets. Among the games installed are Candy Crush Saga, Clash of Clan, and Subway surfer with percentage of 49%, 22%, and 44% respectively as shown in Table 2.

**Table 2. Games preferences.**

No.	Genre	%	Games installed
1	CG	73.3	Candy Crush Saga (49%), Clash of Clans (22%), Subway surfer (44%)
2	DTG	26.7	Snakes & Ladder King, Sudoku, Word search

On the other hand, the rest of the respondents have installed some traditional digital games in their gadgets, such as Snakes & Ladder King, Sudoku, and Word search. Unfortunately, none Malaysian traditional digital games are chosen to be installed in their gadgets.

From the interview, contributing factors that attracted people to play games are discovered. Some chose the game because a sense of history of the game and its reputation. Some people integrate game into their part of life because they enjoy the game's features. Table 3 shows list of contributing factors which have been sorted based on the rank.

Challenge is the most important factor as player's intention when playing games is to challenge themselves, either competing with their own self or with other players.

**Table 3. Contributing factors to game preferences.**

<b>Factors</b>	<b>Formalization</b>
Challenge	<i>Cl</i>
Attractive interface (graphics, animation, music)	<i>Int</i>
Curiosity	<i>Cu</i>
Rewards	<i>Rew</i>
Linked to social media	<i>SMed</i>
Uniqueness	<i>Uq</i>
Friends' Recommendation	<i>Rec</i>
Simplicity	<i>Sp</i>
Learning skill	<i>LS</i>
Trending	<i>Tr</i>

More levels which constantly updated in contemporary games attracted players the most. However, cost does not influence gamers as they can easily download plenty of games for free from the internet.

Out of ten main factors, traditional version lacking most of it, except for uniqueness. This become a challenge to game designers, as they must think about many ideas and ways to satisfy game players as many game companies keep producing different type of games with added value features and elements to attract more players and support their products.

Another concern of the investigation is regarding the factors that keep players hooked to the games. Findings revealed eight factors (as shown in Table 4), which some of them are the same factors which discussed earlier.

**Table 4. Factors that make player to keep playing.**

	<b>Factors</b>	<b>Formalization</b>
1	Challenge	<i>Cl</i>
2	Updated – more levels added	<i>Up</i>
3	Curiosity	<i>Cu</i>
4	Fun	<i>Fu</i>
5	Rewards	<i>Rew</i>
6	Usable	<i>Us</i>
7	Accomplishment	<i>Acc</i>

84% of respondents claimed that CG is more engaging compared to DTG due to the various features they have over DTG. More levels and challenges are provided in CG compared to DTG. With more levels, players are encouraged to explore and have perseverance, feel motivated and create desire to compete with other players (score board linked to social media friends).

For DTG, taking Congkak for example. It has few levels, less motivating features that can influence the gamers engaged with it. No rewards and social networking to enable gamers to view other's scores. Players will just play the same thing iteratively and will drive them bored.

Gamers claimed that they are never bored of CG such as Candy Crush Saga and Clash of Clan because both are always evolving with impressive updates. The developers constantly adding and updating new levels and features that the gamers never thought. It drives them to hook with the game.

## 5. Conclusions

Preliminary investigations revealed the realities of the existing DTG, thus confirmed the trend claimed. Although many efforts have been taken to preserve, promote and cultivate our DTG, they are still lacking the features which player are looking for. Those traditional games are digitized as it is; no added value features included. The difference is just a platform they run on. Consequently, most players opted for CG as reported and claimed.

The challenging task now is how to incorporate all elements that can attract gamers and get them hooked to the games, as well as they hooked to CG. Combination of attractive interface, challenge, fantasy and curiosity of contemporary games makes users engaged to it [7]. For DTG to stand out of the crowd and make gamers engaged to it, it must incorporate the mentioned elements.

Hence, a standard learning model for digital traditional games is needed as a guideline for game developers to come out with attractive games that can attract millennials to play thus making them engaged to the games.

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