

Investigation of Japanese Social Games Management on Twitter: Finding the Optimal Solution

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Abstract

This study compared the game management quality across recent social games, to find possible patterns for good and bad actions regarding social game management. Seven recent game titles were chosen among many existing games. For a fair comparison of the game titles to be investigated, the selection criteria included the following: the game's inception was within four years from the start of the survey; the game genre was limited to RPGs (Role-Playing Games); the game was original (not being part of any pre-existing franchise); the game management was done on a social media platform (specifically, Twitter). Although not all social games have their own account, many major social games in Japan have their own Twitter accounts to keep the players up to date. The research employed three methods. The first method analyzed the tweets by the official Twitter accounts, to find any differences in the tweeting behavior. The second was an online survey conducted from December 10 to 15, 2021, among people in the 20–40 age group living in the Tokyo metropolitan area. The screening survey included 3,046 valid responses, while the main survey, conducted on people with experience in social games, comprised 900 responses. The third method involved interviewing social game players from those who responded to the main survey. For more detailed stories, hour-long in-depth interviews were conducted among nine individuals (men and women in the 20–40 age group) in a rental conference room in Tokyo, from January 9 to 10, 2022.

1. Introduction

Japan's first social games appeared in the 2000s, and grew rapidly within 20 years, and the number of people playing them is increasing every day. In December 2021, a questionnaire survey was conducted among adults in the 20–40 age group living in the Tokyo metropolitan area*¹. About half the respondents answered that they had played games on smartphones, which were mostly social games.

By age group, 57% of those in their 20s had experience playing social games, which was the highest among all the age groups. Social games seem to be popular among the younger generation, but more than one-third of people in their 40s have also played social games. Regarding the frequency, 62% admitted playing every day. Those who

play almost every day (5–7 days a week) account for three-fourths of the total.

Smartphone popularity is a major reason for the high playing frequency and duration spent on social games. According to the survey*¹, only 7% of people do not own a smartphone. One-third of those who own a smartphone use it for 1–3 hours, 29% for 3–6 hours, and 11% for more than 6 hours a day. Along with the extremely high ownership rate, many people use it for a long period of time within a day.

The social game market's growth has attracted the attention of many video game producers, with more video game producing companies joining this market. Although social games could be classified as a type of video game, there are some major differences between social games from "traditional" video games, which make it difficult for



pre-existing video game companies to “succeed” in this business. One major difference is the addition of “sustainability” to the evaluation axis of “successful games.” In traditional video games, players purchase games at a fixed price. But most social games adopt a “free to play” business model. Players can start playing social games without App purchases, but instead will be asked for “in-game purchases” to gain advantage in game playing. Further, most social games have frequent “updates,” such as adding new stories and characters. Thus, it is important for game producers to continuously “manage” the game correctly, for users to “pay for the game” and “play the game for a longer period.”

According to Netlab’s research (Ayashii Rinjin and Net Lab 2022), the service continuation rate tends to rise dramatically two years after the game release. According to Figure 1, about 65% of all smartphone games have ended service in the first two years of game release, but only about 14% in the third year and about 7% in the fourth year. This indicates that the game service tends to stabilize two years post-inception.

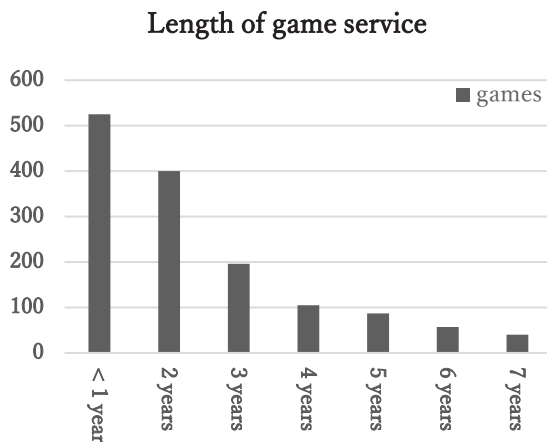


Figure 1. Relationship between game service length and service termination (Ayashii Rinjin and Net Lab 2022)

Even with an “interesting game,” there are cases where people get bored and stop playing after a few days or weeks, and there are cases where they continue playing for more than a year without paying anything. For social games, the fun of the game itself is not always directly related to the game’s sales. The “measures to reduce player withdrawal” and the quality of “real-time game management” are important factors for continuing game services.

2. Research Outline

To investigate the game management quality and to sample from over 2,000 existing social games, some conditions were set to narrow down the list. One of the major conditions included the fact that the game must be original. This is because if the game is part of a pre-existing franchise (such as Pokémon, Dragon Quest, or other famous franchise), pre-existing fans are very likely to play the game, and therefore, its success may be influenced more by the number of pre-existing fans. It will be hard to disregard the number of pre-existing fans when looking into game management and marketing strategies; original games are thus more preferable for this research. Another condition was that the game must be recent enough. This is because the social game market is growing rapidly and the number of players has increased dramatically over the past few years. It has become more competitive than earlier. Therefore, it may be considered unfair to compare recent games to games released ten years ago. Other conditions are listed in Table 1 below.

Table 1. Conditions for choosing game titles for research

Conditions
Must be original. Not a spin-off of pre-existing anime, manga franchise.
The game started service after 2017 (must be recent enough).
The genre of the game is role-playing game (RPG).
The game is developed and released in Japan, in both iOS and Android, and not on other game devices such as PC and home video game console (for simplified comparison).
The game has an existing Twitter account for research (in May 2021 when the research started).

Based on these conditions, the game titles for this research were narrowed down seven titles. To be more specific on the selection process, 538 games were released in iOS in 2017 (508 games in Android), 583 games were released in iOS in 2018 (534 games in Android), 652 games were released in iOS in 2019 (573 games in Android), and 365 games were released in iOS in 2020 (340 games in Android), (Gamewith 2017; Gamewith 2018; Gamewith 2019; Gamewith 2020). In total, 2,138 games released in iOS, and 1,955 games released in Android in this period. Out of 2,138 games released in iOS, 532 are RPGs. But within these games, only about 7% (less than 40 games) matched the conditions (is original, not a spin-off or sequel of pre-existing franchise, developed in Japan, had a twitter account, and was released in both iOS and Android). Seven

game titles were selected. The selected game titles are listed in Table 2 below. The popularity of the games (based on the number of twitter followers) was a big factor for narrowing down the titles, to get a decent number of samples in the questionnaire. For example, the game “Trinity Fantasy” had less than 100 followers following its official twitter account. Thus, it is very hard to find someone playing this game (for questionnaire sample), and the data may very inaccurate because of the lack of samples.

Table 2. List of game titles chosen for this research

Game title	Company	Year released	Service (as of Aug 2022)
Megido72	DeNA	2017	ongoing
Kotodaman	XFLAG	2018	ongoing
World Flipper	Cygames, Citail	2019	ongoing
Fight League	XFLAG	2017	ended
World End	SQUARE	2018	ended
Heroes	ENIX		
Kick-Flight	Grenge	2020	ended
Engage Souls	SQUARE ENIX	2020	ended

Besides the popularity of the game, there were some “special cases” that lead to the decision of “not choosing” the game for this research. For example, the game “Un-Kore” matched the conditions, but it was a game developed by volunteers for the purpose of spreading “health awareness”. The game “Isekai Minimal Crush” was a somewhat “dojin game” (indie game) created by youtuber and some famous Japanese personnels, and the game “Tenkuu-no-Amnesia” had a website domain of “.ch” (Switzerland), which made it difficult to determine if the company is really based in Japan. Also, the company (M-Style) seemed to be more focused on “diet Apps” and “beauty care Apps” for women, and this was the only game the company released, so it was hard to say if the company was really focused on the game management.

Also during the selection process, it was surprising to find that there are so few games that match the conditions. Many social games released after 2017 are either games produced by companies outside of Japan (such as “Genshin” from China), games based on a pre-existing franchise (such as Uma-Musume Pretty Derby and Pokemon UNITE), or indie games that either do not have a Twitter account, or has a Twitter account but not an own account. The game

management of these games are done by the companies’ Twitter accounts, which also tweet information of other games released by the same company. To achieve a more accurate result, these games and accounts were omitted from this research.

Overview of the selected games

To find the optimal solution to success, it is necessary to classify the selected games as either “more successful” or “less successful” and investigate the reason for the same. The success criteria was determined by the length of the game service. Games that continued services for more than two years were considered as more successful, and games that ended service in less than two years were considered less successful. This criterion is based on the reasons explained in the first chapter. The games that were considered more successful are “Magido72,” “Kotodaman,” and “World Flipper.” The games that were considered less successful are “World End Heroes,” “Kick-Flight,” and “Engage Souls.” The criteria of the game “Fight League” are in between the successful and less successful games. Although it continued its service for more than two years, it ended its service in the third year and thus could be disputed. The background information on the games selected for this research is listed across subsections 2.1–2.7.

2.1. Megido72

Megido72 is introduced as “an RPG that changes despair into hope,” according to its App Store description. The story takes place in three worlds, the “bright world” where angels called “Haruma” live, the “coming world” where regular human beings called “Viita” live, and the “dusk world” where demons called “Megido” live. The story starts when a teenage boy (the protagonist) who lives in the coming world meets some expelled Megidos and sets on the journey to save the worlds from “Harumagedon,” the “final war.” The protagonist uses the “Ring of Solomon” to summon Megidos and drag “photons” for ally Megidos to fight against the enemies.

The game has a “main scenario” where the player can read the story before and after defeating the enemy in each stage. The game also has “event stories” about three to four times per month, where the players can read sub-scenarios and defeat enemies in each stage. Other features of the game include challenge modes such as PvP (player versus player), multi-player event (approximately once per month

or two months, where up to 10 players can cooperate to defeat an extremely tough enemy), stronger enemy modes for singular play, treasure hunting mode (which is done automatically), and so on. One interesting fact is that all the characters (both from gacha lotteries and characters achievable through story events) are of the same “rarity.” Every character starts from the rarity of “one star” and can be trained and nurtured to a “six stars” character. Although the status varies between each character, the game balance is well preserved. Some characters are effective in one stage, and for other stages, different characters may be more suitable; thus, every character is “useful” in some way or the other. Also, according to the App Store and game review from Goziline, this game has received the excellence award from the “Japan Game Awards 2019” and was the only smartphone game that received this award in that particular year (Saitou 2019).

2.2. Kotodaman

Kyoutou Kotoba RPG Kotodaman (also known as “Kotodaman”) is introduced as “a brand-new experience RPG that fights with kotoba (Japanese term for words),” according to the App Store description. It is a game that combines RPG and word puzzle game.

In this game, players use hiragana characters to make as many combinations of words as possible, to create combo attacks against the enemies. The length of the words made and the number of words created will determine the protagonist’s power of attacks. According to an interview of Nakamura Taira (producer of Kotodaman) released by Famitsu APP, the game achieved one million downloads within the first three days of its release, two million downloads within the first week, and three million downloads on the tenth day of release (Nakameguro Meguro 2018). Mr. Nakamura thinks that the key to the success of this game was the game management done on Twitter. The official Twitter account is named “Kotodaman unei-kaigi” (Meeting of Kotodaman game management), and the account takes an extremely friendly approach to the followers of the account. For example, there was a tweet from a follower asking if the game will add voices (of voice actors) to the characters. On March 3, 2018, the official account replied to the tweet, saying if the tweet achieved more than 1,000 retweets, they would consider adding voices to the characters. In the end, the tweet achieved over 1,000 retweets, and they added voices to the characters (Nakameguro Meguro 2018). Other interesting facts are:

the game achieved first place on the App Store for the first two weeks after release without App Store Ads (with only organic players); the game often held collaboration with other franchises (for example, their first collaboration was held with the “Ultraman” franchise); and the “nakanohito” (the staff that was managing the official Twitter account) was so heavily into Twitter account management that they did not rest even on holidays for the first five months after the release of the game, and were mostly retweeting and replying to the tweets from followers (Nakameguro Meguro 2018).

2.3. World Flipper

Another game considered as successful in this research, World Flipper is introduced as a “pinball meets action RPG,” according to the App Store description. The story of this game begins with a boy (who has lost his memory) and a girl meeting a creature that claims to be a hero from another world. The boy and girl decide to help the creature on its journey to return to its home world. The boy, the girl, and the creature gain the ability to cross over to different worlds with the “World Flipper,” and their journey begins. In this game, the protagonist travels across several different fantasy worlds, meets new characters, and unravels mysteries.

This game has also released its service overseas. After the release of the game in Japan in 2019, the game was translated to traditional Chinese and released in May 2021. The global version was released in September of the same year, and the simplified Chinese version was released in October, one month after the release of global version. In the global version, languages used by countries such as The United States, European countries, Southeast Asian countries, and Korea, can be selected (Cygames 2021). According to an article released from Cygames Magazine, the possibility of the release of the game overseas was first discussed within the team in the development stage of the game before its actual release. There were two reasons motivating the overseas release. First, “pinball games” are widely known and played around the world by wide age groups. Also, there was a “retro boom” among the Asian countries at that time, and the art style of the game includes some nostalgic, retro style pixel art animation. The game was also successful in some of the countries overseas. The traditional Chinese version ranked second in the App Store’s sales ranking, ranked in single-digit numbers in Singapore, and ranked as one of the top games in the

Korean App Store (Cygames 2021). Regarding the overseas release, the team was specifically careful in paying attention to the “consumption speed” of the players from overseas countries. The consumption speed of users in Korea and the United States were particularly fast; accordingly, game updates needed to be done at a faster pace, as fast as updating the game in the same time as the Japanese version (Cygames 2021).

2.4. Fight League

Fight League is a game that ended service in approximately three years, and can be considered as somewhat successful in terms of the length of game service but not as much as the first three games introduced above. Fight League is basically a two-player tag battle RPG game. The player will team up with another player and place 10 characters on the battlefield. The fighters will attack in the direction the arrow indicates. If the attack is linked to an ally character, “chain attack” will occur. The team that defeats the opponent’s leader is the winner (Aetas 2017). The fighters are categorized into different “brands” (five brands at the start of service, and one additional brand was added near the end of service). The brand is basically the “character theme.” For example, the brand “Ju-hachiban Gai” includes characters of Japanese taste, the brand “GGG” includes characters of futuristic mechanical cyborg taste, and the brand “Athlete Creatures” includes characters of furry animals dressed up in athletic uniforms. Each player can only choose one brand to use in a battle; therefore, the combination with another player (that selects a different brand) may be crucial to the development of the battle (Aetas 2017).

The game was released not only in Japan but also overseas, including Korea, Taiwan, Hong-Kong, Macao, and Canada. The game achieved one million players (including players overseas) within eight days from the release of the game (released in June 22, 2017; achieved one million players in June 30, 2017), which is relatively a good start for social games (Aetas 2017).

2.5. World End Heroes

The game World End Heroes is introduced as a “high school boys hero x caring game,” according to the App Store description. It is the only “josei muke” (dedicated for women) game in this research. In this game, the player becomes the commander of a team of high school hero boys and helps the boys fight the enemies. The player can gather

heroes from five different high schools to a “hero training facility,” train the characters, enjoy watching their daily high schooler life, and command them in battles. The story is set in a world where 100 years ago, a meteorite strikes the planet and brought “eaters” that eat up the planet’s life. The planet is now endangered, and to fight against the enemy “eaters,” boys with special powers were needed. The boys were soon referred as “heroes.” This game has a main storyline and some event storylines, like the “Megido72.”

This game provides an offline version, even after the game service ended. Although this game would be considered as less successful according to the criteria of this research (service length of less than two years), there are some core fans and the offline version of the game seems to be part of the fan service. According to an interview of the game’s producer, planner, and designer, many efforts were put into the story and the character design of the game (Powerful Production 2020). The game was released by Square Enix, a company that is famous for fantasy games, such as Dragon Quests and Final Fantasy. It was a new challenge for the company to create a game dedicated for women. The company was mainly releasing traditional games (games that are played on gaming machines, with a business model of “one time purchase”); thus, creating a new franchise on smartphones (as social games) might be something that the company is struggling to gain experience in.

2.6. Kick-Flight

Kick-Flight is a four-on-four battle RPG. In this game, the player chooses one character from out of fourteen characters to play with, customizes the character with “discs,” and fights along with the other three team members. According to an interview answered by Mr. Kinoshita—the producer of this game—the reason for “4 players versus 4 players” instead of “3 players versus 3 players” or “2 players versus 2 players” is that after various experiments, he found that if a team had less than 4 people, and if that team had someone that is obviously not good at the game, the team would very likely turn into a bad mood. But if the team consists of 4 or more members, then the person who is not good at the game will become less obvious, and the team would less likely turn into a bad mood (Aetas 2018). He also mentioned that he is particularly careful of the “game balance” and the company (Grenge) is always working on making games in new genres, and Kick-Flight

is also a new challenge for the company. It is a game where characters can fly 360 degrees freely, which will be a new experience for many of the players (Aetas 2018).

One thing that makes this game different from the other games chosen in this research is that the gacha lottery in this game is more focused on items called “discs,” rather than the characters. Although the characters are also in a gacha lottery of the game, there are only 12 characters (right after the release of the game) to choose from, but there are many types of “discs” that can be collected from the lottery of the game. The characters can be customized using these discs, to make the ability of each player’s character unique (Aetas 2018).

2.7. Engage Souls

Engage Souls is a game described as “e-janken” (e-rock paper scissors). Similar to World End Heroes, it is a new IP (intellectual property) of the game company Square Enix. According to the developer interview, the game was originally planned as an action game, but after several tests and discussions, the developer team shifted the direction of this game to a “rock paper scissors” game (Kouyou Tsukasa 2020). The game takes place in a world where “engage battle,” a type of e-sports, is popular. To be a professional player of engage battle, one needs to get an official license. There are several play modes in this game, and one of them is the story mode (which is equivalent to training mode). There are story modes for each character, the goal of which is to raise the character’s status and ability and receive the official license of engage battle. Once the story mode is over, the character can no longer be strengthened. The only way to strengthen your character is to replay the story mode and try to gain a better result before clearing the story mode. Once the characters are trained, other modes, such as street battle mode, pro league mode (player vs player), and tournament mode (fought automatically by NPC), can be played.

Because of the nature of being a rock paper scissors game, the outcome of the battle in this game relies partially on the luck of the player. The stronger the character is trained, the better chance of winning, but it is not always the case. The developer in the interview said that they designed the game to be one where the player will not feel that they will lose even if facing an opponent character with higher status (Kouyou Tsukasa 2020). In this game, fewer playing skills are needed, but more “thinking skills” are required, such as thinking which card (rock, paper, scissors)

your opponent will most likely choose, and which card the player should choose to gain advantage. Despite the many gimmicks, the game ended service in less than one year.

Hypothesis

Based on information from previous research (Yamaguchi and Hashimoto 2013; Hayashi and Motokado 2020; Gamewith 2017; Gamewith 2018; Gamewith 2019; Gamewith 2020; Saitou 2019; Nakameguro Meguro 2018; Cygames 2021; Aetas 2017; Powerful Production 2020; Aetas 2018; Kouyou Tsukasa 2020) the following management factors may be hypothesized as the conditions for “good game management.”

1. If the official account is tweeting frequently
2. If the official account is tweeting a large variety of information
3. The number of downloads (successful advertisement)
4. The sales of the game

The sales of the games imply an obvious success, but for factors such as the frequency of tweeting and number of downloads, it is harder to tell if they are relevant to the success of the game.

3. Methods

To investigate the game management quality and to sample from over 1,000 existing social games, some conditions were set to narrow down the list.

3.1. Tweet data from the official Twitter account

Of the many existing social networking services (SNS), Twitter was selected. There are several reasons for this decision. First, it seems to be the most popular method for game management in Japan; the younger generation Japanese prefer it. Further, the “ease of data acquisition” of Twitter was higher than acquiring data from the “information” lists of the actual games. There are several tools available for tweets extraction that are very convenient for analyzing tweets. It was possible to evaluate different games on a common platform, making the comparison easier and with better clarity. Finally, the “visualization of interactions between game producers and users” was considered. Data extraction tool “Vicinitas” was used to analyze the tweets.

3.2. Player questionnaire survey

The questionnaire survey was conducted online from December 10 to 15, 2021, among adults in the 20–40 age group living in the Tokyo metropolitan area. The number of valid responses was 3,046 in the screening survey, and 900 in the main survey conducted on people with experience in social games. The main survey included 150 men and 150 women in their 20s; 150 men and 150 women in their 30s; 150 men and 150 women in their 40s.

3.3. Player interview

In-depth interviews were conducted among the respondents to the questionnaire survey, to hear more detailed stories from those who have played one or more of the seven games selected for this survey. Nine men and women in their 20s and 40s gathered for an individual one-hour interview in a rental conference room in Tokyo from January 9 to 10, 2022.

3.4. Other information and statistics

Other information and statistics necessary for this research, such as the number of downloads and sales

information, were gathered from open-source information on the Internet. Download statistics and sales predictions were obtained from Game-i.

4. Results

The results of the research are listed below. Besides the Twitter statistics and the sales and downloads statistics, the effect of game advertisements was also investigated.

4.1. Game advertisements

First, regarding the initial recognition of game titles, recommendations from friends and acquaintances contributed the most, followed by “found it myself on the internet,” viewing the game titles in App Store or Google Play Store (including store recommendation area, the rankings area, and advertisements), and viewing online advertisements (other than advertisements on the App Store or Google Play Store). Figure 2 shows how people learned about the games they were playing. The respondents selected only one answer.

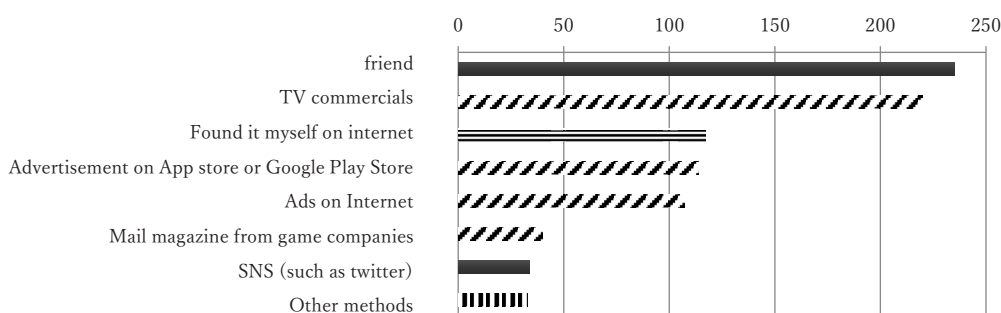


Figure 2. How people learned about the games they were playing

As to how people started playing the games, the most common reason provided by more than one-third of the respondents was that they were “recommended by friends and acquaintances.” The second most common reason was that it was their favorite franchise, which was only a little less than one-fourth of the survey target. One-sixth of the people stated that they were “attracted to the story, characters, art styles, battle systems.” Only one-ninth of the people answered that they started the game because “the game had a collaboration” and “the game had a discount campaign.” Figure 3 illustrates the reasons admitted for starting social games. The respondents selected multiple answers. The influence of the franchise was very large for social games, but the story, the art style, and the characters

also seemed to have a good amount of influence. The battle systems of the game seem to be relatively less important for reasons to start the game. This may be because people can view the characters and the art styles and read the introduction of the story on the official websites and Twitter accounts before starting the game but cannot determine if the game system (or the battle system) is fun or not until the person installs and starts playing the game. Although “holding a campaign” is near the bottom of the list, it still holds for one-ninth of the respondents. Therefore, it can be considered an easy and decent strategy for increasing players if the game company is willing to pay for advertising the game.

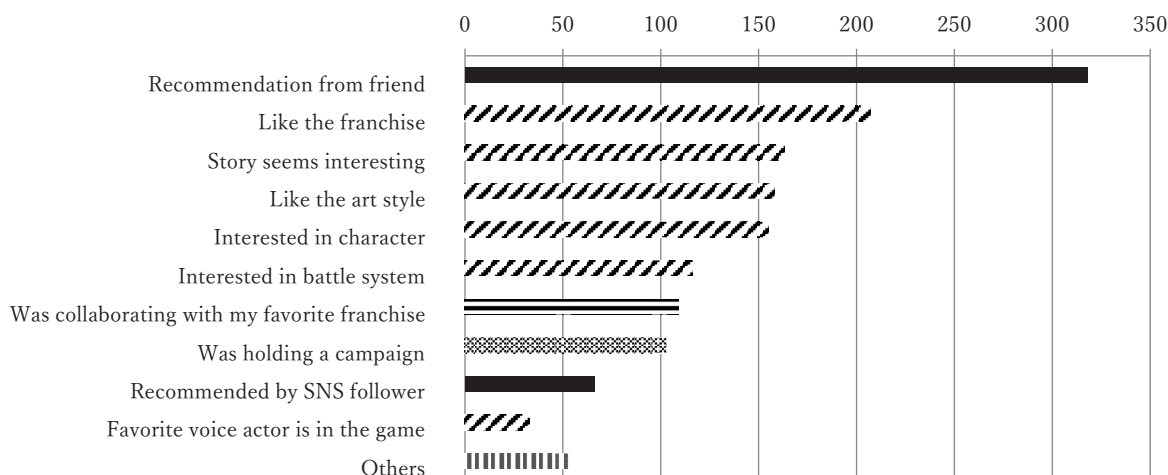


Figure 3. How People started playing social games

Aside from friends and acquaintances’ influences, the influences of the franchise’s branding and the game content, such as story, art style, and characters, are large in terms of awareness and starting the game. The game content seems to be more important in terms of grabbing the interest of potential players, and the efforts for game managements are not as important. However, for social games, it is important to prevent the players from quitting the game and hold the players’ interests if possible, for the business to succeed, which is different from one-time purchase games. A lot of the interviewees quit playing social games after three days to one month.

4.2. Game management on Twitter

Regarding game services, “providing of information to players,” is indicated by their tweeting frequency. The average number of tweets per month is shown below in Figure 4. The number of tweets for ongoing games were calculated from the average number of tweets of the latest three months. The number of tweets for the games that have ended service were calculated from the number of tweets during the middle of the game service period (except for the game “Engage Souls”. The number was calculated from the third month of service, since the game ended service in less than a year). This method was used rather than getting the average number of the entire tweeting history of the account, because official Twitter accounts seem to tweet lesser as they near the end of the game service, and this will cause the average number of tweets to decrease compared to the games that have ongoing services. But nevertheless, the ongoing games’ tweet count are relatively higher than

the count of the games that have ended service. From the players’ interviews, among those who followed the games’ official accounts, none of them took the high frequency of tweets as something negative. They effectively decided what information they need on their Twitter timelines.

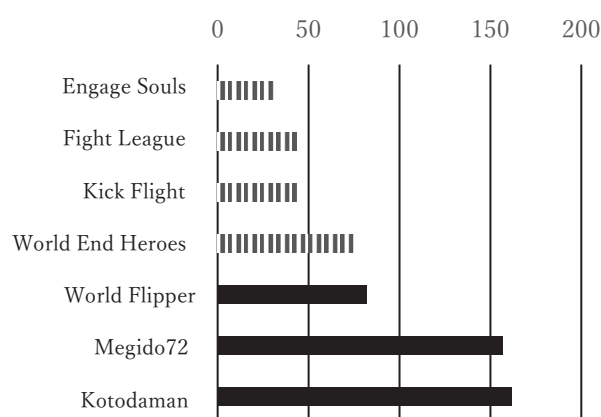


Figure 4. Official account’s average tweet count (one month)

On the information variety the game services provide, such as new characters, maintenance notification, and collaboration events, the research results show that the ongoing games’ official accounts tweet slightly more varied information than the accounts of the games that ended, but there are no clear differences among them. Besides the game Engage Souls, which did not have a lot of variety in their official account’s tweets, it is hard to connect this to how good or bad the game service was, as can be seen from Figure 5.

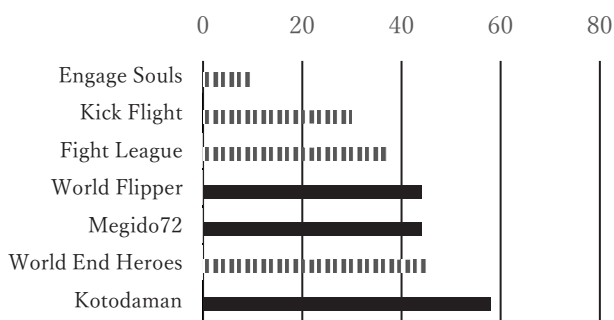


Figure 5. Official account’s variety of information

The variety of tweets for ongoing games are calculated from the average number of the types of tweets of the latest three months. The number of the types of tweets for the games that have ended service were calculated from the number of the types of tweets of the months that had the greatest number of tweets (mostly from one of the first few months after the release of the game). This calculation was done by the following rules:

- If the tweets were continued as a self-reply or tweeted continuously in a short period of time, it was counted as “1” type. For example, If the tweet for newly added characters was tweeted as “Information about newly added character (1/3),” “Information about newly

added character (2/3),” “Information about newly added character (3/3),” the three tweets were counted as “1.” But if the information about the newly added characters was tweeted on different days and the official account tweeted something else in between (such as maintenance information), then the tweets were counted separately.

- For the game maintenance information, the tweets for “advance notice of maintenance,” “maintenance ongoing,” and “end of maintenance” were counted as separate tweets (thus, the total was “3”).
- Retweets by the official account were counted as “1” if the information of the retweet is related to the game. For example, if the account of an voice actor in the game tweeted something related to the game (such as tweeting “I added some new voices in the game and it will be released in the next update”), and the official account retweeted the tweet, than the retweet was counted, because all users following the official account can view the retweet in their Twitter timelines.
- If the official account replies to other Twitter users, the replies were not counted because not all users can view the reply on their Twitter timelines, and the reply is not directed to all the followers.

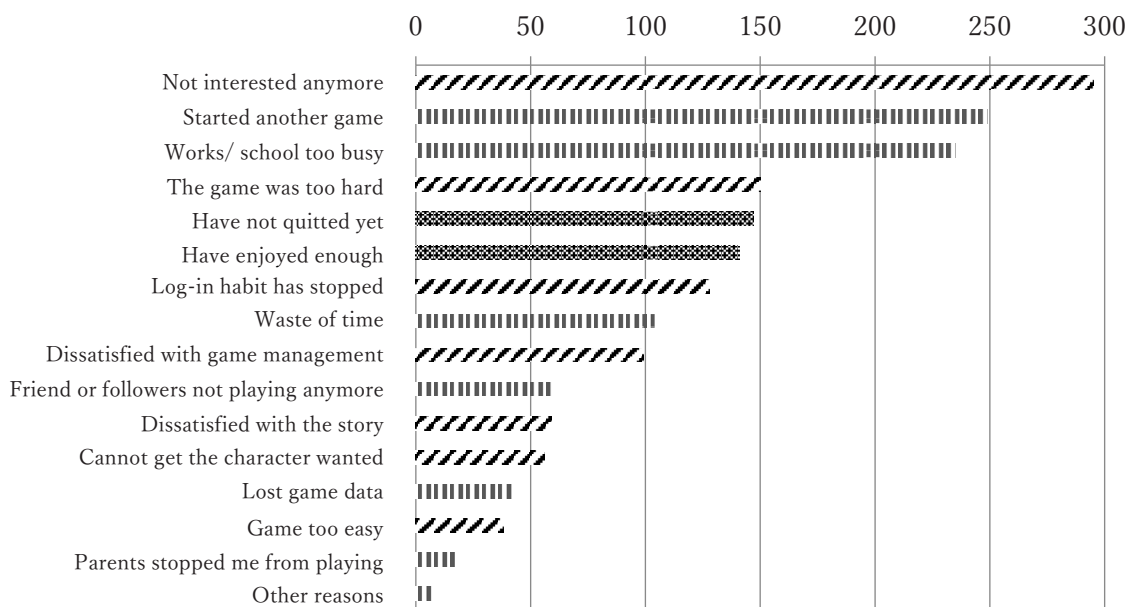


Figure 6. Reason for quitting the (social) game

For the reasons people quit playing social games, the top reasons were “lost interest,” “started playing another game,” and “got busy with work/academics/life.” The latter

two are hard to control for game developers, but one-sixth of the interviewees answered, “the game level was too hard,” and one-ninth of them said “they were not satisfied with

how the game was maintained.” These are some things the game developers could work on, and it can be assumed that the efforts of game managements could prevent users from leaving their games. Figure 6 shows the complete list of reasons for quitting social games. The respondents could

select multiple answers. The reasons that may be fixed by game managements are marked orange. The reasons that are hard to control by game managements are marked grey. Positive answers (have not quit yet/ had enjoyed enough) are marked yellow.

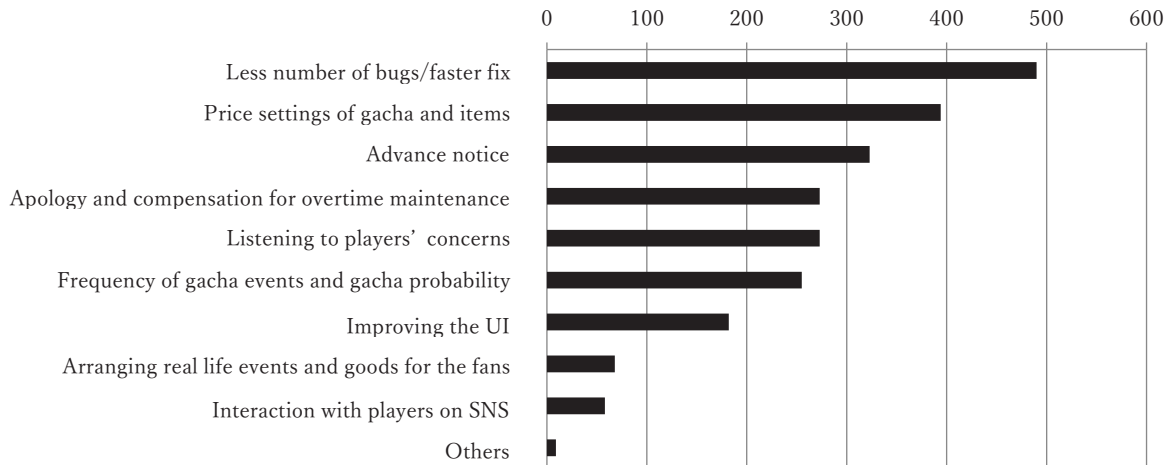


Figure 7. Crucial elements in maintaining a social game

Figure 7 depicts what people think is important in maintaining a social game. The respondents could select multiple answers. The highest was “very few bugs and fast bug fix.” Over one-third of the people stated that “the balance of in-game purchases” and “notification about events and maintenances” are also crucial. According to the in-depth interview, more than a few people answered that they cared more about knowing about occasional events in-game and maintenances in advance, rather than knowing about monthly gacha lottery routine. Only a few people answered that interaction with players on SNS are important. Replying to users or not on SNS (such as Twitter) seems to have little influence in managing and maintaining social games; therefore, it is not recommended if the human resource is limited.

4.3. Downloads and sales

Regarding the number of downloads and sales, iOS app statistics were unavailable; hence, the estimations on Google play store for android devices were used as the main reference. Download number estimations are available for some of the games on the website “Game-i,” thus, the statistics were used for those that are available. Sales estimation from the website “Game-i” was used as reference because the sales for each game were not open to the public (Game-i n.d.). Therefore, for checking the

reliability of the estimates, the numbers are compared to the numbers provided by some articles that notes the download numbers. For example, an article about the amount of pre-registration for the game “Engage Souls” stated the number as 400 thousand pre-registrations (leading to an estimate of 200 thousand for android users) (Phi 2020). But statistics on Google play store shows 50,000+ downloads. Therefore, the estimate is listed as 50,000~200,000. Table 3 shows the result of downloads and sales estimation for each game. Both the download numbers and sales are un-official estimates from third-party websites, the numbers may be off by up to a few million units. However, Table 3 is still useful in comparing the statistics for different games, to view if the games has a relatively high or relatively low performance compared to each other.

The inaccuracy of the numbers in Table 3 is slightly caused by the fact that it is an estimation. However, there is another greater reason. The numbers will differ depending on whether the game requires re-download of the app for the “reset marathon” (reset marathon is a term for resetting the game before starting the actual gameplay; this is done because the player wants to get satisfied results for the gacha lottery at the beginning of the game). For example, the game Megido72 and World Flipper have less downloads, most likely because the reset marathon does not require re-downloading the app. Meanwhile, the game

Kick-Flight requires uninstalling and re-installing the app for reset marathon, thus, the game has a larger number of downloads on Google Play Store. In other words, the store ranking and the popularity of the app are not necessarily

equal—the same person may download multiple times for reset marathon in one game, and not in another game that does not require the re-installation the game).

Table 3. Estimation of the number of downloads and sales (As of June 10, 2022) (Phi 2020; Mixi 2020; Arima 2021; Nagaoka 2018; Nikkei 2017)

	Megido72	Kotodaman	World Flipper	Fight League	World End Heroes	Kick Flight	Engage Souls
Overall DLs (Android)	581,585	1,698,587 *5,000,000~ DL counts	350,000	500,000~ 1,000,000 *worldwide	130,000~ 150,000	1,860,000	50,000~200,000
Sales (yen/first month)	72.66 million	104 million	65.96 million	89.43 million	56.52 million	96.80 million	7.94 million
Sales (yen/overall)	7.27 billion	11.41 billion	4 billion	200 million	~600 million	310 million	~13.19 million

Table 4. Number of playable characters of highest rank (As of June 10, 2022)

	Megido72	Kotodaman	World Flipper	Fight League	World End Heroes	Kick Flight	Engage Souls
Number of characters of highest ranks <i>* the numbers underlined</i>	<u>144</u> + α	<u>769</u> + α	<u>113</u>	<u>39</u>	15+ α (94)	<u>14</u> +Item gacha	60+ α (26)
α	Special clothing	“Manpuku” characters Can evolve from highest rare/	212 lower rank characters	100+ lower rank characters	Special clothing	More importance on items	Special clothing
note	No effect on status	Many collaborations			Has effect on status		Has effect on status

As the number of downloads vary because of the reset marathon aimed at getting the characters the player wants to win from the gacha lottery, the number of characters, or rather, the number of the “best playable characters” of the highest ranks may be theorized to influence the sales of the game. Table 4 shows the number of playable characters of highest rank (the numbers underlined). For the game Engage Souls, the number of highest ranked characters is considered as 26 rather than 60 because the 26 special clothing characters have a positive effect on the character status, which effects the game balance. But for the game Megido72, the special clothing has no effect on status and the clothes cannot be collected by gacha lottery (the special clothing are sold in a fixed price in the store within the game), hence, the special clothing characters are not counted as highest ranks. The more “highest rare characters” there are, the higher the sales amount tends to be. All games with continuing service have 100 or more maximum rare playable characters. The games that have ended service have less than 100 maximum rare playable characters. The

gacha lottery of the game Kick-Flight was focused more on the items, as explained previously, but nevertheless only had 14 maximum rare items.

Summary

Table 5. Comparison of tweets, sales, and characters of the game titles (As of June 10, 2022) *2

	Megido72	Kotodaman	World Flipper	Fight League	World End Heroes	Kick-Flight	Engage Souls
Frequency of tweeting	4	4	3	1	3	1	1
Variety of tweets	3	4	3	3	3	3	1
Overall sales	4	4	4	3	3	3	1
Sales (first month after release)	3	4	3	4	3	4	1
Number of characters of highest ranks	3	4	3	2	2	1	2

The overall evaluation of the game titles is summarized in Table 5. The evaluation is simplified in the form of numbers, from “4” to “1”, highest to lowest. The specific measurements are listed in the Appendix.

The games considered as successful seem to share the traits of “frequent tweeting,” “large amount of overall sales,” and “large number of characters of highest rank.” The “quantity” within the game seems to be the key for successful game managements, rather than the quality of the game.

On the other hand, there was not a large gap between the official Twitter accounts for the variety of tweets; therefore, the significance of tweet variety cannot be measured. Some of the games that ended service within two or three years had much sales for the first month after the release of the game, but nevertheless ended service quickly. Others, such as Megido72, did not go well regarding the sales of the game during the first couple of months, but later successfully stabilized its service. The game World Flipper

also did not go well in terms of sales during its first month after release, but has turned successful later, and even started its service overseas recently.

It can be seen that "the number of tweets" and "the number of maximum rare playable characters," may have led to the continuity of the target games, since the correlation is shown. But before concluding, whether this is a causal relationship or not should be verified, since, for example, the number of tweets and the number of playable highest rank characters might be high because of strong sales, instead of other way around.

A simple verification process was taken, and that is, to compare the number of tweets and the number of playable characters of the game for the first months of service. This method is workable because for the first months of service, the number of tweets and character addition pace are planned before the start of service, before knowing the actual sales statistic. The sales statistics are the “result”. It is almost impossible for it to be the “cause”.

Table 6. Number of tweets for the first 90 days of service

Game title	Continuing Service			Ended Service > 2 years	Ended service < 2 tears		
	Megido72	Kotodaman	World Flipper	Fight League	World End Heroes	Kick Flight	Engage Souls
Number of tweets (first 90 days of service)	251	1135	248	475	258	227	136
Sales (yen/first month)	72.66 million	104 million	65.96 million	89.43 million	56.52 million	96.80 million	7.94 million

From Table 6, other than “Kotodaman” and “Engage Souls”, most games have tweets of around 200s. “Kotodaman” has an extremely high number of over 1000 tweets, and “Fight League” has a slightly high number at around 400s, while “Engage Souls” is just a little over 100. For “Kotodaman” and “Engage Souls”, there seems to be a causal relationship, while for other games, it seems as there are other factors other than the number of tweets, as a cause for success or failure, and also, the average number of tweets have changed a lot for the five games other than “Kotodaman” and “Engage Souls” when compared to Figure 4, meaning that the number of tweets for these games are more likely the results of sales rather than the cause.

From Table 7, it can be inferred that the number of highest-ranked characters is very likely the cause of success. (The numbers for “Kotodaman” are estimates made from interviews, tweets, and websites of game information, since no reliable source could be found, that notes the exact number of highest-ranked characters during this period (Kamiyama 2018; Mfro 2022)). All “successful games” (games that are ongoing) have more than 20 highest-ranked characters, while games that ended service have less than 20, at the point of 90 days after the start of service. Also, all ongoing games added more than 10 highest-ranked characters within 90 days, while the games that ended service added less than 10 characters within this period.

Table 7. Highest-ranked playable characters for the first 90 days of service (Kamiyama 2018; Mfro 2022; Nanaki-Nanashino 2020; summer vacation n.d.; World End Heroes (Wahiro) wiki 2020)

Game title	Continuing Service			Ended Service > 2 years	Ended service < 2 tears		
	Megido72	Kotodaman	World Flipper	Fight League	World End Heroes	Kick Flight	Engage Souls
Number of highest-ranked characters (first 90 days of service)	88 (72+16)	97 (82+15) *All numbers are estimates	27 (16+11)	8 (5+3)	9 (0+9) *Special clothing	12 (12+0)	6 (0+6) *Special clothing *30 before higher rank appeared

There were some limitations in these methods. For example, factors such as download numbers and pricing of gacha lottery is omitted for the purpose of comparison, so this method will be applicable only for the purpose of verification of causal relationships.

5. Conclusions

The number of people who play social games has increased dramatically in the last few years, along with popularization of smartphones. Game management has a small influence and serves as a trigger to start the game. However, for the game to be considered as “successful,” the game service must continue for two years or more to stabilize. Therefore, preventing the outflow of players is an important issue. Based on survey data analysis, game management plays an important role in preventing player outflow.

“Extreme frequent tweeting” seems to have a positive effect on game management, as it can be seen in the example of “Kotodaman”, but average tweets, which was around 200s tweets in the first 90 days, has little or no effect on the continuation of game service. The effect of “extreme frequent tweeting” can also be backed up by the results from the interview, as most people did not feel frustration from the frequent tweeting of the game’s official account. This implicates that the more the official account tweets, the better chance the tweets will reach current players, and remind the players about updates on the game, without the fear of losing current followers. The tweets will also have a better chance of reaching “potential players” who follows a player who is following the official account.

The variation of tweets seems to have little or no effect on game management. This may be because most of the

game titles surveyed provided a wide variety of information. It may also be because of the small number of samples.

The number of downloads were not reliable in evaluating the game because there were differences in the need for re-downloading during reset marathons, causing spikes in the number of downloads for some of the games. The number of highest-ranked playable characters seems to have a positive effect on the sales of the game. The more highest-ranked playable characters there are, the more likely the player will pay for the gacha lottery to get the characters the player wants. Overall, “quantity” seems to be the key towards success for social game managements. The quality of the game is of course also important, but if the quantity is neglected, it will be harder for the game to stabilize its service and there will be a higher chance for the service to end.

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Appendix

- *¹The questionnaire survey was conducted online from December 10 to 15, 2021 among men and women in their 20s and 40s, living in the Tokyo metropolitan area. The number of valid responses was 3,046 in the screening survey and 900 in the main survey, which was conducted on people with experience in social

games. The latter included 150 men and 150 women each in their 20, 30s, and 40s.

*²The specific measurement of categorization on high, middle, low, and very low for each category are listed below.

	High (4)	Middle (3)	Low (2)	Very low (1)
Frequency of tweeting	Over 100 tweets per month	50~100 tweets per month	-	Under 50 tweets per month
Variety of tweets	Over 50 types	30~50 types	-	Under 30 types
Overall sales (yen)	Over 1 billion	100 million~1 billion	-	Under 100 million
Sales (first month after release) (yen)	Over 80 million	50~80 million	-	Under 50 million
Number of characters of highest ranks	Over 200	100~200	20~100	Under 20