

Research on the Method of Service Games to Enhance Player Stickiness and Purchase Intention

—Taking Genshin Impact and Fortnite as Examples

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Abstract: The service game market has increased rapidly in the last few years, these games must increase player stickiness and purchase intention to maintain income. Genshin Impact and Fortnite are successful service games. The popularity of these two games and the willingness of users to pay are very high. This paper will analyze their game mechanics and game updates to show how the game design of these two games attracts users and motivates them to pay. This paper uses the Skinner box theory as a research method to discuss. The results of the study show that the two games were designed with additive, creative, and entertaining game mechanics, which helped them attract a large number of users. Moreover, frequent and timely updates increase the stickiness of players and stimulate users' willingness to pay.

Keywords: stickiness, purchase intention, game analytics, service games

1. Introduction

As computer and internet technology improved, video games became a mainstream form of recreation. The definition of games keeps evolving [1]. Nowadays, game-as-a-service is pretty popular. Service games are typically free to play; new content can be added after the initial content-restricted release. GaaS is a method of extending the life of a game while maintaining income [2]. For example, Epic games earned 5.477 billion dollars in 2018 and 3.709 billion dollars in 2019 through Fortnite [3]. Mihoyo earned 20 billion dollars in the first year and 17 billion dollars in the second year through Genshin Impact [4]. We can see that these games can generate a high income.

Many studies have generally examined service games. However, only a few studies have examined the way service games increase the loyalty and purchase intentions of players. This study examines the game mechanics of Genshin Impact and Fortnite and their periodic update, and shows methods of using these ingredients to enhance player stickiness and purchase intention. This study can facilitate players, game developers and game operation managers to understand the running model of service games, which can help them enhance player experience, optimize game design and improve the business performance.

2. Academic Background

This study analyzed Genshin Impact based on the Skinner Box theory.

Skinner Box is a classic psychology experiment that established by Burrhus Frederic Skinner.

According to Burrhus Frederic Skinner, there are two types of behavior: operant behavior, which is simply released by the organism, and responsive behavior, which is evoked by a recognized stimulus [5]. In the Skinner box, Skinner attempted to train a rat's response to pressing a lever. Every time the rat pulled the lever, a tiny food pellet was delivered into the feeding cup thanks to the design of the box. The rat would begin pressing the lever more regularly to get the food pellet after a few unintentional lever presses. Operant conditioning refers to the use of consequences to regulate behavior [6]. The majority of games use this method of trial-and-error learning, in which reinforcers are subtly exploited to elicit particular behaviors [7].

3. Genshin Impact

Genshin Impact is an open-world action role-playing game developed by miHoYo. It features a vast fantasy world with seven regions, each based on a different culture and element. Players can explore the world, fight enemies, collect resources, and complete quests with a variety of characters.

3.1. Treasure Chests

There are numerous treasure chests in the large world of Genshin Impact. Players need to collect them to get weapons, materials, game currency, and so on. This mechanic is addicting and puts players in a skinner box. We can consider treasure chests as food pellets and the player as a rat. Operant conditioning can be established when the player collects treasures from treasure chests. Because players have needs for treasures, and they will feel satisfied after getting the treasures. The process of finding treasure chests is the same as when the rat depresses the lever. When the player collects treasures from the chest, operant conditioning can be triggered because of the need for treasures and the sense of satisfaction. Then the player will try to find more treasure chests. The reinforcer ought to match the player's behavior, not the other way around [7]. Which can prevent boredom. In the game, low-value chests can be found easily, while high-value chests are hidden in puzzles or protected by monsters. The mechanic that has to be mentioned is that due to the special connection between the events, when the player is trying to solve a puzzle, the player could easily be drawn into combat, and then find another puzzle, over and over again [8]. In this case, the player will not feel bored and the operant conditioning can be reinforced. Finally, the player's game time can be prolonged, and the player will become addicted to finding treasure chests. According to Burrhus Frederic Skinner, continuous reinforcement means that every time a particular behavior occurs, an animal or human receives positive reinforcement [9]. Continuous reinforcement is a way to increase player's loyalty.

3.2. Daily Missions&Regular Challenges

There are daily missions and regular challenges in Genshin Impact, which can improve the player's loyalty. To get the resources that the player needs, the player always needs to keep an eye on these missions and challenges. As a result, the game becomes a part of the player's daily life. If the player has free time, the first amusement that the player will think of is Genshin Impact. According to Burrhus Frederic Skinner, after a predetermined amount of time, if at least one right response is given, one reinforcement is delivered, which is called fixed interval reinforcement [9]. Fixed-interval reinforcement is more effective than continuous reinforcement.

3.3. Time-Limited Gacha

A time-limited gacha event is an important way for Genshin Impact to increase the player's purchase intention and maintain income. First of all, why do players love the gacha? According to Burrhus Frederic Skinner, if food pellets appear random, the rat will be more likely to press the lever, which is named "variable ratio reinforcement" [9]. The most reliable and stable response is produced via ratio reinforcement, which is also less prone to extinction [10]. These explain the reason that many players are usually addicted to gacha.

The only way to get new characters is the gacha, and each time-limited gacha event has its own time-limited-available character. The five-star characters are normally powerful and fascinating; however, the probability of getting them is very low, at only 1.6%. To get the desired character, the player must spend a lot of game currency. To get enough currency, the player must finish all daily missions and regular challenges. To finish challenges efficiently, the player must acquire powerful characters. A perfect loop has been founded. However, even though the player collects enough currency and gets a five-star character, the character may not be the time-limited-available character that the player desired. And there is no time for the player to collect more currency before the gacha event ends. If the player really desires to get the character, purchasing game currency in cash is the best way. If some players do not get the desired character and do not want to purchase it, there is also a way to keep it. The time-limited gacha event will restart at a certain time, which can encourage the player to keep playing and prepare currency for the next chance.

3.4. Fascinating Characters and Story

Characters and the story are important for the game. In Genshin Impact, male characters are handsome and female characters are beautiful. The story revolves around these attractive characters. Some accounts may move the player, which makes them want to defeat the character in a lottery. The story is full and very lengthy; the ups and downs are mind-blowing and make the player want to see what will happen next, which can make the player play the game longer, and increase loyalty.

3.5. Extra Playable Content

The core of Skinner Box is that food pellets are unlimited. So if the game wants to retain the player, it must keep the player pressing the lever forever [11].

To keep the player "pressing the lever" forever, Genshin Impact keeps adding extra playable content in each version update. The game updates at a relatively high rate. It usually updates every one and a half months. When the update releases, players will be able to explore new regions, fight with new monsters, and find new treasure chests. Thus, players always have something to do. Every version update will add two new characters to the game. Players can experience stories about these characters, which can make players realize them quickly and avoid getting bored. Oftentimes, the new five-star character is more powerful and charming, making it easier for players to get him or her through gacha. To gain enough game coins to gacha, players need to explore the new content of the new version, or they can pay for gacha.

4. Fortnite

Fortnite is a popular online game developed by Epic Games. It has three modes: Save the World, Battle Royale, and Creative. Players can compete with other players, or build their own worlds. Fortnite is known for its colorful graphics, fun gameplay, and frequent updates.

4.1. Battle Royale

“Battle Royale” is the main mode of “Fortnite”. In this mode, “chairs” catapult up to 100 players onto an island. When players land, they must search for weapons, traps, ammo, and medical supplies. And, they need to randomly place these items in buildings and loot boxes, bringing randomness and variability to each game. Additionally, players can gather building materials, which they can store and employ in a variety of tactical ways to create covert structures, gain an advantage in height, or set traps. A round of games usually ends within 15-20 minutes. Because there will be a “storm circle” in the game, and the “storm circle” will surround the entire island. Some players on the island are outside the shrinking safety zone, and the “storm circle” will force the surviving players to conflict. Winners are either “duos” (two players working together) or “squads” (teams of four players). Winning the game is not easy and requires expertise in how to control player characters, work in teams, navigate the game world, build towering structures quickly, and what strategies and weapons work best. As a result, players experience tense duels that escalate from fierce melee battles with 100 players to a handful of players [12].

Obviously, after the release of PUBG, Battle Royale has become one of the most popular online game modes. This type of online game is pretty charming, and there are some reasons for its charm. In Battle Royale games, players have to combat other players and live to the end, which is very suitable for players who like to battle. Players will be immersed in the exciting game match. If they win, they will be happy to join their new match and pursue the next success. Interestingly, if players fail, they will join a new match, too. Because Battle Royale games contain random battlefields, if players fail, they will think that they are out of luck in this match, and believe that they will be lucky in the next match. Thus, players will tend to play the game over and over again, which means their stickiness increases.

4.2. Battle Pass and Quests

Battle Pass is the unique mechanic of Fortnite. There are a lot of quests in the game that are similar to tasks in other games. When players complete a quest, they will receive plenty of XP to level up. Every time players level up, they will receive stars, which they can use to exchange charming items in Battle Pass. Items in Battle Pass are usually good-looking skins and interesting actions, and players can only exchange them during the current season, which can boost players’ purchase intentions. It is important that players pay for the Battle Pass first; otherwise, they can only exchange a few items. After paying for Battle Pass, to avoid wasting their money, many players will keep playing to level up and exchange all the items. On the other hand, quests are very unique and interesting, so they can attract players who love experiencing something new to explore the game world and complete the quest. Many players like to finish tasks, level up, and receive rewards; Battle Pass and Quests really get them. And players who are happy to communicate with other players are pleased to wear new skins and use new actions to interact with new players. In a nutshell, Battle Pass and quests can effectively charm different types of players and boost their stickiness and purchase intentions.

4.3. Frequent Updates

4.3.1. New Weapons

Obviously, weapons are very important in Battle Royale games. In every new season, Fortnite will remove some old weapons and add some new ones, which can arouse players’ curiosity, make them try new weapons, and give them time to adapt to these weapons. Usually, new weapons will change the atmosphere of the game, and players will have fresh feelings. Sometimes, Fortnite brings some

old weapons back to trigger players' nostalgia. Thus, players are willing to play Fortnite for a long time and do not feel bored.

4.3.2. Ever-changing Map

Over the course of a season, various in-game events occur that change the map territory and infuse the game world with history and temporality. This concept of seasons heavily influences the experience of playing Fortnite, giving it a sense of "worldness" similar to that found in World of Warcraft but not typically found in FPS games. Fortnite is unique in this sense [12]. This really got to the "explorers". And this can make players look forward to the next change in the map, they will keep an eye on the game and be willing to explore the changed region.

4.3.3. New Battle Pass

As noted above, Battle Pass is really charming. Every season has its own unique Battle Pass, which contains different types of special styles. It is important that players can get game coins from Battle Pass, which means that usually players will have enough game coins to buy Battle Pass when the new season begins. This can make players always have Battle Pass and be immersed in it. Sometimes, players have no time to get all the items in Battle Pass or they can not wait to get all the items. They can pay for stars and exchange items immediately.

5. Conclusions

Service games are worth analyzing. This study provides some insights into the method of using service games to enhance player stickiness and purchase intention by analyzing two popular games, Genshin Impact and Fortnite. Service games use additive, creative, and entertaining mechanics to charm players, and arouse their purchase intentions. Frequent opportune updates also contribute to increasing player stickiness and boosting their purchase intentions.

Future studies should analyze more games to get a more comprehensive conclusion of the method that service games use to enhance player stickiness and purchase intention.

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