What Aspects of Gacha Games Keep the Players Engaged?

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Abstract

Numerous papers examine the relationship between gacha mechanics and gambling, however, few enquire about what attracts players to gacha games. This is the focus of this thesis, asking players, from their perspective, what are the elements of gacha games that keep them engaged. It also queries why, after having stopped playing gacha games for a period of time, players return to these games. Data was gathered through semi-structured interviews with five players who play gacha games at least 20 hours a week and who took a break from these games for at least one month. Results indicate that players are initially attracted to gacha games due to their aesthetic and that players value narrative elements associated with the games and the gacha characters. Interestingly, the gacha mechanic itself was not pointed out as the reason for engaging with the game, rather it is used as a means to acquire a desired ingame item. Nonetheless, strong emotional attachment is associated with successful and unsuccessful pulls; a low amount of pulls to acquire a desired character or item is described as a strong joyful memory, whereas not being able to acquire the desired gacha character or item despite a large number of pulls is associated with intense frustration and sadness. Collectionism was pointed out by players as a motivation for acquiring gacha items, with players placing a higher value on items they need to complete their collection rather than necessarily on high-rated game items. The results also indicate that burnout can occur when a game stops or slows the release of new content, eventually leading players to stop playing that game.

Keywords: Burnout, engagement, gacha, player response, pulls, virtual rewards.
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1 Introduction
The concept of gacha games generates controversy and several studies have focused on the gambling and addiction aspects of such games. However, despite the negative media and academic attention, gacha games are popular with players. This thesis seeks to better understand why that is. What, from the point of view of the player, are the aspects that attract them to gacha games? Also why, after taking a break from a game, do players return to gacha games?

The purpose of this paper is to present information gathered directly from the players. It does not focus on the gambling aspect and potential associated addictions. Rather it asks broadly and openly about the players’ personal experiences with gacha games. Specifically, it seeks to understand what attracted players to gacha games in the first place, what are the emotional connections players develop with and associate with their favorite gacha games. And why, after having stopped playing a gacha game for a period of time, do players return to the game.

A gacha game is a video game that is developed around the gacha mechanic, despite the fact it is not necessarily the game’s core mechanic. The gacha mechanic is a monetization model that emerged in video games, containing randomized virtual ingame rewards with varying rarities (see section 2.1). Examples of gacha games are Genshin Impact (HoYoverse, 2020), Honkai Impact 3rd (HoYoverse, 2016), Love Nikki (Niki Games, 2015), and MapleStory (Wizet, 2003). Figure 1 demonstrates how gacha banners could look in games. These include information regarding potential rewards, time frame, and the amount required to pull gacha. This will be further discussed in chapter 2.1.

Loot-boxes are often associated with gachas since they both have a similar function in games. Both concepts provide a lucky-draw experience where players spend ingame currency to receive a random virtual item in the game. However, loot-boxes and gachas do not share the same definition (further in section 2.1). This investigation is concerned with gacha mechanics only and does not extend to or include the use of loot-boxes.

While there is extensive research on gacha games, most focus on the negative aspects of gacha and their relation to addiction. However, few studies have been conducted that concentrate on the players' experiences and the engaging qualities of these games. This study's purpose is to understand, from the perspective of the players, what they find engaging in these games and why they return to these games.
The research question is: “What aspects of gacha games keep the players engaged?”

In order to support the research question, three sub-questions are asked:

Sub-question 1: “What aspects of the gacha game mechanics players consider to be the most appealing?”

Sub-question 2: “Why, after having stopped playing a gacha game for a period of time, are players motivated to return to the game?”

Sub-question 3: “What are the emotional connections that players describe in relation to their experience interacting with gacha mechanics?”

To answer the research question, the study adopted qualitative semi-structured interviews with gacha players that have taken a break from gacha games for at least one month. The paper is organized as: Chapter 2 presents the Background and the Literature Review, Chapter 3 presents the Methodology, Limitations and Ethical considerations, Chapter 4 presents the Results, Chapter 5 presents the Discussion, and Chapter 6 presents the Conclusion.
2 Background
This investigation asks players what are the aspects of gacha games that keep them engaged. It therefore relies on a contextualization of gacha games, defining the gacha mechanics and its origin. Furthermore, concepts of engagement in games in general and in gacha games specifically are presented.

2.1 Contextualization of Gacha Games
Games that are free-to-play (F2P) have become an increasingly popular revenue model in the video gaming industry (Alha, 2020). F2P games can be acquired and played free of charge, however, players are given the choice to spend real currency on virtual goods such as stamina potions, skins, weapons, etc. As a result of this model, more people play and test out games, thereby increasing the economic significance of games as a business (Alha, 2020). The F2P games industry has experienced such success that in 2020, a significant portion (78%) of games revenue was from free-to-play games (SuperData, 2020).

Different revenue-generating strategies have been developed for F2P games. One of the monetization methods used is the gacha mechanic. To better understand how this mechanic functions, it is important to examine its history and origin.

The name comes from Japanese capsule toy vending machines. Gacha is an onomatopoeia that imitates the sound of a turning handle of the machine (Shibuya, Teramoto & Shoun, 2016). These machines usually have the capsule goods divided into several specific themes whose contents have a different rarity (Fig 2). “Some of the contents come in a set, and therefore, users continue buying Gacha, trying their luck at getting a full set” (Yamakami, 2012, p.1233). The main feature of gacha is somewhat similar to the lotteries, one cannot select a specific prize. Instead, users must insert a coin, to which in return they receive one random toy from that certain collection. Despite gacha’s popularity among children and adolescents, these machines are also used by many adults (Shibuya et al., 2016). These capsules are bought by users for fun and are used as topics of conversations or memories of travels (Shibuya et al., 2016). The action of spinning the gacha wheel after inserting a coin is called pulling or rolling.

Figure 2: Gacha machine with a variety of themes for the capsule items (Taweepat, 2015).
The concept of gacha first appeared in the game *MapleStory* developed by Wizet in 2003 (Fujihara & Shibuya, 2020). *MapleStory* (Wizet, 2003) is a 2D side scroller game where the player explores a magical vast world. The game features gacha machines in certain regions of the game through which players can exchange an in-game currency called the “Gachapon Ticket” for a random reward (Fig 3). These specific gachapon tickets can only be purchased with real life currency (Nexon, *MapleStory*, 2003).

![Figure 3: First recorded use of gacha mechanic in a game, from 2003 MapleStory (Nexon, 2003).](image)

In 2010, the game *Dragon Collection* (Konami, 2010) was released on GREE, a Japanese social networking platform. This was the first game designed around the gacha mechanic. *Dragon Collection* is a card game where players embark on a journey while collecting dragon cards. The player's purpose is to become a “Dragon Master” by fighting other trainers called “Dracolle Battler”. The game presents a gacha mechanic through which players can collect dragon cards to form a fighting deck. As a means of acquiring more cards, the gacha currency can be earned by completing certain tasks within the game, or it can be purchased with real money (Konami Digital Entertainment, 2022).

Today's gacha mechanic in F2P games focuses on virtual items such as characters, weapons, skins and many others (Yamakami, 2012). The player has free access to the rest of the content such as world exploration, story lines and events. These game contents are offered to the players free of charge with a constant influx of content each update. Throughout the gameplay experience, “Gacha can be free to play; however, rare and/or valuable gaming items often need to be obtained through special gacha with monetary purchasing” (Shibuya et al., 2016, p. 99).

Moreover, each of the gacha elements that come with game updates provide new content related to the game world engaging the players. In order to get rare items, the player has to earn the special currency on a daily basis by participating in daily tasks, events and engaging with the main game content. The player also has the option of purchasing in-game special currency with real money which later can be used to pull gacha items. Alha also explains that “Sometimes, special items can only be collected within a certain timeframe, building pressure on the player to spend money to get them before the time runs out” (Alha, 2020, p.33).
Figure 4: Outline of gacha in F2P games (Koeder et al., 2018).
Figure 4 presents an overview of how the gacha mechanic works in games (Koeder, Tanaka & Mitomo, 2018). Despite being a key element in the game, gacha is not the main game element. Although in many cases the game can be played without engaging with the gacha mechanic, its use can provide a new variety of gameplay experiences (Fig 4, item 1). Gacha pulls can be purchased with either soft or hard currency (Fig 4 item 2). Soft currency is the ingame currency and can usually be acquired by completing daily missions, as a reward for completing limited tasks when there is an ongoing event, and some games also provide daily login rewards. Hard currency is an additional type of ingame currency which is purchased with real money. Once purchased, the hard currency has value only within the game (Koeder et al., 2018). Figure 5 demonstrates both soft and hard currencies used in *Genshin Impact* (HoYoverse, 2020). Primogems are a soft currency that can be acquired by completing game tasks or by exchanging the hard currency called "Genesis Crystal".

![Exchange Primogems](image)

**Figure 5: Examples of hard (Genesis Crystal) and soft (Primogem) currency in the game *Genshin Impact* (HoYoverse, 2020).**

Gacha is a game mechanic based on probability. Some games provide a pity system where players are guaranteed a high rarity item in a specific amount of pulls. For example, in Figure 6, it can be seen that *Genshin Impact* (HoYoverse, 2020) has a pity system where players are guaranteed a five stars character in 90 pulls (Fig 4, item 3).

![Rules](image)

**Figure 6: Information regarding the pity system in *Genshin Impact* (HoYoverse, 2020)**

In most cases, the pull is separated from the actual gameplay and uses special audio and visuals. Some games have different animations depending on the rarity of the gacha item (Fig 4, item 4). There is always a virtual reward (Fig. 4, item 5) such as a character or item (Fig 7) after every pull (Koeder et al., 2018).
According to Koeder et al. (2008), gacha rewards:

a. have a given purpose in the game (decorative, functional, social) (Fig 4, item 5a),
b. are available in different levels of rarities, as shown in Figure 7 (Fig 4, item 5b),
c. can’t be redeemed for real currency (Fig 4, item 5c),
d. in often cases are collectibles,
e. are often limited (Fig 8) and connected with real time ingame campaigns (Fig 4, item 5e). Timed banners can pressure the player into spending real money on gacha in order to receive limited reward (Alha, 2020).

The acquired virtual rewards are only valuable within the game and often are an essential part of the overall game ecosystem (Fig 4, item 6). Gacha mechanics (Fig 4, item 7) are mostly used in games to increase monetization for the provider (Koeder et al, 2018).
Gacha is commonly associated with loot boxes due to their similarities. Gacha and loot-boxes both provide players with a random virtual reward for soft and/or hard currency. The main difference between these two concepts revolves around the monetization of the game. Gacha is often used in F2P games, and it is the key monetization mechanic. While loot-boxes are usually an addition to full priced games in order to obtain more earnings (Koeder et al, 2018)

The different variations of gachas are also discussed by Koeder et al. (2018) and Shibuya et al. (2016). Table 1 describes some of the often-used types of gacha.

**Table 1: Different types of gacha (Koeder et al, 2018).**

<table>
<thead>
<tr>
<th>Gacha Types</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step-up Gacha or Box Gacha</td>
<td>Represent a virtual box with set rewards where the probabilities of obtaining a high rarity gacha item increase after every pull and are known by the player (Shibuya et al., 2016). After every pull the probability of obtaining the extremely rare item increases or “steps-up” (e.g., 1/100, 1/99, 1/98…1/3, 1/2, 1/1).</td>
</tr>
<tr>
<td>Sugoroku Gacha</td>
<td>Gacha combined with a board game. Like “Snakes and Ladders”, sugoroku board game has a start and an end, and the player moves according to the results of a dice roll.</td>
</tr>
<tr>
<td>Redraw Gacha</td>
<td>Players have a chance to re-roll their pulls for free or in exchange of currency.</td>
</tr>
<tr>
<td>Consecutive Gacha</td>
<td>Purchasing multiple gacha at the same time.</td>
</tr>
<tr>
<td>Open/Closed Gacha</td>
<td>Gacha with chances of gaining known/unknown by the player.</td>
</tr>
<tr>
<td>Discounted Gacha</td>
<td>Users can pay less for a gacha pull due to the ongoing campaigns.</td>
</tr>
<tr>
<td>Kompu-Gacha</td>
<td>The name comes from the Japanese word “KOMPURITO” which translates to “complete”. This meant, players had to pull multiple gacha set pieces in order to acquire the presented gacha item. However, the Kompu-gacha got banned in Japan due to unknown probabilities and players' complaints (Koeder et al 2018).</td>
</tr>
</tbody>
</table>

Aside from the Kompu-Gacha, other events have affected the use of gacha mechanics. In the first iterations of gacha games, the chances of gaining an item with high rarity were hidden from the player, which contributed to the game publishers’ amassing large revenues. The chances of gaining a rare item were not always truly presented to the player (Koeder et al., 2018). The lack of transparency led to a law announced by the Computer Entertainment Supplier’s Association in 2016 in Japan (CESA, 2016). As part of the law, companies must disclose item probabilities in paid gachas so consumers can understand their chances of winning (CESA, 2016). Instead of displaying the gacha item offer ratios, game publishers can select and focus on any of the following restrictions:
• The upper limit of the estimated amount of money to acquire any of the gacha rare items is within 100 times of the charge amount per paid gacha. If the upper limit is exceeded, the estimated price or multiplying factor must be displayed on the gacha page.
• The price limit to obtain rare gacha items should be within 50,000 yen. If the limit exceeds, the estimated price must be displayed on the gacha page.
• Display the upper and lower distribution rates of rare gacha items.
• The offer ratio is displayed for each type of gacha item.

(CESA, 2016)

After this law was passed on April 27th, 2016, in Japan, other countries also followed the same steps by regulating gacha games locally.

Apart from the lack of transparency, there are other aspects of gacha games that place them in a negative light. Their design is often considered addictive and deemed to entice players to spend more money than they initially anticipated (Sztainert, 2018). Winning high ranking virtual items in gacha is extremely rare and unpredictable. This can trigger the gambler’s fallacy in players. The gambler’s fallacy is the false belief that a certain event is less or more likely to occur, based on a previous series of events (Kenton, 2021). Sztainert claims that “The fact that big wins are rare and random adds to the perception that players are bound to win eventually” (Sztainert, 2018, p.3). In gacha games, after every unlucky pull, players could start tricking their brains into thinking that there is a greater likelihood of winning a rare item in the next pull (Sztainert, 2018).

2.2 Engagement in Games

Koster (2014) postulates a theory to explain why games are considered to be fun and why people enjoy playing them. According to the author, when experiencing joyful events, the human brain secretes happiness hormones in the form of chemicals such as serotonin, dopamine, oxytocin, and endorphins. These chemicals affect motivation, attention, and the desire to learn. Human beings enjoy learning new experiences because it helps them survive longer (Koster, 2014). Further, the human brain is designed in such a way that it constantly seeks patterns in all types of activities, including games. Players have the tendency to look for patterns to make their game experience more enjoyable. When games lack patterns, they can become noisy and may lead to frustration and procrastination. According to Koster “When we meet noise and fail to see a pattern in it, we get frustrated and give up” (Koster, 2014, p. 25). This leads to “grokking” which means that the player understands a concept until a point when they become one with it and start loving it. Grokking also leads to executing actions almost immediately without much thought.

Koster believes that “the destiny of games is to become boring, not to be fun” (Koster, 2014, p. 120), as the players will play for learning despite the fact that the game becomes repetitive. Furthermore, when a game becomes repetitive is when players enjoy it the most since they get the chance to apply their previously acquired skills. In other words, the whole process of grokking paid off, and now they get the chance to fully enjoy their desired experience. “That’s what games are, in the end. Teachers. Fun is just another word for learning” (Koster, 2014, p.46).

This argument that players derive pleasure from learning new skills is echoed by Cook’s (2007) skill chain theory. This model uses skill atoms and skill chains to explain what keeps players engaged. “The player is entity that is driven, consciously or subconsciously, to learn new skills
high in perceived value. They gain pleasure from successfully acquiring skills” (Cook, 2007). Cook argues that the human mind is programmed to constantly crave new information. When players acquire a new skill, this leads to them attempting to master it. In addition, the player must experience every stage of the skill atom loop before mastering a certain skill. This feedback loop is composed of four main elements: action, simulation, feedback, and modeling.

Figure 9: General representation of a skill atom starting with the player making an action (Cook, 2007).

Figure 10: The skill atom of the player learning how to make Mario jump (Cook, 2007).

Action is how the player interacts with the game. Based on the action, the state of the system updates. Players then receive feedback - the visual representation of the change. This information is absorbed by the players and updates their mental model (Fig10). Depending on the players’ need, they perceive the action as useful or un-useful (Cook, 2007). While the skill atoms are interconnected with one another, grokking can occur, which makes the player interested once again in learning a new skill.

“When you learn something new, when you understand it so fully you can use that knowledge to manipulate your environment for the better, you experience joy” (Cook, 2007). The player gets a chance to combine the overall environment with the acquired skills to get a new joyful and relaxed experience. As a result of all the hard work the players had to put in learning, the game rewards the player with a sense of control.

Cook’s theory portrays the skill atoms in five distinctive categories: mastered, partially mastered, unexercised, active, and burnout (Cook, 2007). Mastered skills are as the name implies, skills that are recently mastered. Partially mastered skills are the ones in the process of mastering. Unexercised skills are skills that yet need to be mastered. Active skills are the skills that the player is currently using, and burnout skills are abilities that the player has lost interest in. However, there is one other type of skill which is called “red herring”. This is a type of partially mastered skill that does not help the player manipulate the world but provides a certain
mood. Nonetheless, this skill creates a mental connection between the specific content and the already existing knowledge. This makes the player happy and to seek the feel again (Cook, 2007).

When learning new skills players have the tendency of choosing meaningful skills that match their current needs. In contrast to the learning process, the outcome is a skill which represents the players’ ability to manipulate the world. Nevertheless, some skills are acquired subconsciously as a result of practicing and learning other skills (Cook, 2007).

F2P games continuously provide new content with each update, which encourages players to continue playing and updating their mental model for the game. In gacha games, the majority of the new content that impacts gameplay, such as characters, weapons, skins and cards, are tools for learning and are provided through gacha banners.

F2P games' concept of gacha has been discussed extensively, and theories have been written from the point of view of addiction and gambling. However, there are few studies that focus on the players' experience and the engaging aspects of these games. This is the goal of this study, to understand, from the players’ perspective, what they find engaging in these games and, in their own words, why they keep returning to these games.
3 Methodology

The research question of this paper is “What aspects of gacha games keep the players engaged?”

In order to answer the RQ, the study relied on qualitative semi-structured interviews with gacha players that have taken a break from gacha games for at least one month.

The interviews were two-on-one type (two interviewers and one participant), where the interviewers were the authors. Interviews were conducted on Zoom, an online conferencing software, and were audio-recorded. Interviews had a semi-structured approach, allowing more in-depth discussions. The interviews followed the interview schedule presented in Appendix B. Prior to the interview with the target participants, a pilot study was conducted to test the interview questions, length of the interview, and to give the authors the opportunity to practice their interview techniques.

To recruit participants, an appeal was posted on Discord and Facebook gacha game communities. The appeal presented the research topic, requirements and what would be expected from the participants. See Appendix A for the appeal. Candidates were sought on online-platforms to account for a broader demographic. All of the interviews were conducted and transcribed in English.

Sampling was randomized, and the target participants are active gacha-game players who took a minimum of a one month break before returning to these games. There were five participants in total, in the demographic age group of between 22 to 27 years of age. However, it was later found out that one of the participants was aged 17 and in this case, their participation was approved by their parents/guardians. The average age including the minor was 24 years of age. None of the participants were previously known to the authors.

A digital signup sheet was developed, where authors selected a convenient time and date for each participant. Different time zones needed to be taken into consideration.

Before conducting the interviews, each participant received and agreed to an interview consent form. The form summarized the information regarding the purpose of the study, privacy concerns, and the intended use of collected data. Participants who were under the age of 18 were asked to provide parental consent with their signatures. Additionally, at the beginning of every interview session, all participants were reminded about the interviews being recorded and that the gathered data would be anonymized. The participants could opt out of participating should they not agree with the aforementioned terms.

When transcribing the interview recordings, the software Otter.ai was used, which is software that converts audio files to written text. After the conversion, the interview transcripts were manually reviewed by the authors. In order to transcribe data, an intelligent transcription type was used. In other words, every word was transcribed, excluding any pauses or filler words and possibly correcting any grammatical errors. In order to maintain the anonymity of the participants, they were referred to as Participant 1, Participant 2, etc.

The transcribed interviews were analyzed using thematic analysis. First, the transcribed data was analyzed by each author separately, the notes were then compared. The purpose of this was to determine whether any of the information had been interpreted differently by both authors of this paper. The qualitative data was later coded to make the analysis more systematic and rigorous. The inductive approach was used, meaning codes were created based on the data itself.
3.1 Interview Schedule
Before starting with the interview questions, participants were asked whether they agreed with terms and conditions that were presented to them through the consent form. Once the participant's response was recorded, the authors began with the questions. Appendix B presents the questions that were prepared by the authors and were asked during the interviews. The interview questions were based upon and motivated by this investigation’s research question “What aspects of gacha games keep the players engaged?”. More specifically, each interview question seeks to answer a specific sub-question as described in Table 2.

Table 2: Relationship between interview questions and sub-questions.

<table>
<thead>
<tr>
<th>Sub-question</th>
<th>Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ1 What aspects of the gacha game mechanics players consider to be the most appealing?</td>
<td>1, 2, 5</td>
</tr>
<tr>
<td>SQ2 Why, after having stopped playing a gacha game for a period of time, are players motivated to return to the game?</td>
<td>3, 4</td>
</tr>
<tr>
<td>SQ3 What are the emotional connections that players describe in relation to their experience interacting with gacha mechanics?</td>
<td>5, 6, 7, 8, 9</td>
</tr>
</tbody>
</table>

Additionally, in order to identify potential patterns, control questions (see appendix B, q.10-14) were asked at the end of the interview. These questions asked for participants' age, location, and current occupation.

3.2 Limitations and ethical considerations
The interviews were conducted online due to limited access to the target audience where the authors live. However, this approach has risks and limitations that need to be addressed. One common issue with online interviews is the need for a fast internet connection which is crucial for remote interviews. Dealing with the poor connection may impede the interview process. Delays and stutters may disrupt the rhythm of a conversation and may even cause miscommunication between the interviewer and participant. Additionally, in contrast to face-to-face interviews, online interviews may lack visual elements such as facial expressions and gestures. Due to this, it is possible that emotional content that could also have been analyzed was missing.

The participants were from around the world and had different levels of language proficiency in English. Meaning that language barriers were inevitable in some cases. There were cases when subjects did not at first understand the question asked by the interviewer, or the requirements posted on the appeal. As a result, the interview process was prolonged.

Managing time with time zones was very difficult. While interviewing candidates from abroad, the authors were obliged to keep in mind the time difference at all times. To ensure that the times selected were convenient for both parties, the interview had to be scheduled according to both interviewers' and interviewees' time zones. For the authors' convenience, each interview time was written in both parties’ time zones.
Another limitation is that all steps of the research were carried out by the authors. The preparation of the interview schedule, conducting, and analyzing interviews were done by the authors of this paper. This is not ideal since it can incur bias, however it is a common scenario given the limitations of a Bachelor thesis.

The authors are aware of ethical considerations when it comes to gacha games and the potential connections with addictive behavior. These however have been addressed in previously published and are not the focus of this investigation.
4 Results

This investigation seeks to understand what are the aspects of gacha games that keep players engaged. For the purpose of answering the research question, the sub-questions focus on the appeal of gacha games for players, what are the players’ motivations to return to the game, and their emotional connection when interacting with the gacha mechanic. Results are based on semi-structured interviews with five participants with an age range between 17 and 27 years old and different locations, as described in section 3.

While gacha is one of the key mechanics in the game, the results suggest that it is not the main attraction for players to engage with. Figure 11 shows the topic of interests in gacha games brought up by participants during the interviews. According to the received data, the popular aspects in a gacha game are the story, characters, and game’s art style (Fig 11).

Numerous participants are interested in gacha games' visuals due to their anime-like art style. The promotional videos of certain gacha games showcase character designs and gameplay in an engaging manner which appealed to some of the participants. For example, Participant 3 mentioned that the art style of Honkai Impact 3rd (HoYoverse, 2016) was the main reason for them starting to play the game “Oh, well, I started playing my first gacha game through a Facebook ad. And then I got to know more about gacha games. And now I'm probably an avid gamer (…) My first gacha game was Honkai Impact 3rd.” Participant 3 is recounting that their first gacha game was Honkai Impact 3rd (HoYoverse, 2016) which presents a strong anime like art style. And that their first encounter with the game was through an ad in social media.
It is also interesting to note that most of the participants like to collect the gacha items. As opposed to focusing on the strongest items, most players tend to try and collect them all. Participant 1 and Participant 4 both described themselves as collectors/whales when it comes to gacha games. Whales is a term used by the gaming community to describe a player who spends money more than the average player on a specific game. Participant 1 explains “I really want to get a character, all the limited characters, so I would pull either way in terms of liking them (...) in Honkai Impact 3rd. I also tried to get all the characters.” Participant 1 is determined to collect all characters not for their usage in a game, but for the desire of completion, a common motivation amongst collectors.

In the case of Participant 4, they were eager to get a character with a rarity of four stars on one of the limited gacha banners rather than focusing on the five stars character also available in the same limited banner, as they already had that five star character. Characters in Genshin Impact (HoYoverse, 2020) are ranked by stars, with three stars being the lowest and most common, and five stars being the rarest and most valuable. Participant 4 recalled:

(...) in Genshin Impact was a time when Yanfei came out the first time. It was in the rerun for Zhongli, and I already had him at the time. So, I just want to get Yanfei and then you know bounce it off. So just keep rolling it and I got a Zhongli and no Yanfei. So I roll again and got Diluc. Rolled again and it was Zhongli again. So I got C2 Zhongli and plus one Diluc. But out of 105 rolls there was no Yanfei at all.

Limited gacha banners in Genshin Impact (HoYoverse, 2020) normally include one five-star character and three four-star characters as potential rewards. The banner that Participant 4 was referring to was a rerun for Zhongli who is a five-star character. This banner also included a new character called Yanfei who is a four-star character. Participant 4 made 105 pulls, but despite a large number of pulls, unfortunately, they did not manage to secure the four-star character they wanted. Instead, they received Zhongli and were able to upgrade Zhongli to Constellation 2 (C2). In Genshin Impact (HoYoverse, 2020) the constellations are unlockable.
abilities that can be obtained by pulling a copy of the same character. For each playable
character, there are a total of six constellations, and in order to unlock all of their abilities,
players must pull seven copies of the same character. Additionally, 105 pulls in Genshin Impact
(HoYoverse, 2020) value 210 US dollars and it is unknown whether Participant 4 spent real
currency trying to acquire this specific character.

Furthermore, Participant 4 stated that in Genshin Impact (HoYoverse, 2020) players can clear
all content while not owning any five stars characters, which are the rarest in the game. Participant 4 states that:

(...)you don't really need those five stars characters to actually clear the whole content
which is Spiral Abyss 12 to nine star, you can actually do with only the four star
characters and stuff like that. So in a way that Genshin Impact made the Gacha as a
collection. I think it's pretty fine for Genshin.

Here Participant 4 talks about Spiral Abyss in Genshin Impact (HoYoverse, 2020) which is a
domain challenge that lasts two weeks. According to Participant 4, players don't need high rarity
characters in order to complete this challenge and the gacha mechanic in this game is not forced
upon players.

Participant 1 said:

Cookie Run only has five limited characters, and a lot, let's say, three stars, four stars,
five stars, just five, five stars. So it did take me 3000 pulls to get one of them. But
because by doing that I could literally full strength, a very good Meta four stars. Didn't
seem like it mattered that much, even if it took a while to pull a five star.

Cookie Run: Kingdom (Devsisters, 2021) currently has only five stars characters meaning
players have to pull a lot of gacha to acquire one. While trying to obtain a five-star character,
Participant 1 collected a large number of copies of four stars and was able to upgrade four stars
characters to their full potential. Even though the participant had to pull around 3000 times for
a single five stars character, they seemed very satisfied with the results.

Another interesting observation was that all of the participants were open about discussing their
gacha game expenditures. Four out of five participants have spent money on gacha games.
When discussing spending money on a desired gacha item, two out of five participants
expressed joy. One of the participants shared that they have savings ready to spend for their
desired gacha items. Participant 5 said, “once I got a consistent income and I had some side
spending money, I was like, Heck yes (…) I specifically put the savings aside because I knew
I was gonna pull for him [Kazuha] real hard.” In the second part of the quote, Participant 5 talks
about one of their favorite characters, Kazuha, from Genshin Impact (HoYoverse, 2020) and
how they specifically saved money in order to get that character. As the interview continued,
Participant 5 elaborated that they spent around 300 US dollars in order to secure that character.

Participant 4 expressed pride when asked about their spendings. They stated that “Without a
second thought just went to the Paimon shop and I got a whole lot of primogems just to get
Zhongli (...) And I'm proud of myself.” Participant 4 explains that when they did not get the
desired character in Genshin Impact (HoYoverse, 2020), they purchased ingame currency
through the game store which is called Paimon shop.
On a side note, some participants stated that they were unable to spend a lot of money because of an unstable income. This was highlighted by three individuals, one of whom is a student and the other two who currently have jobs. Participant 3, who is a student, stated “I don't have any, like allowance to spend on stuff like, like, gacha. So, I mostly am free to play gamer.” The other two participants described their experiences from their student years and how they had to be careful with their spendings. Participant 1 mentions “I was like, below 20 by then. And it was very competitive in a way that a younger person's budget could not compete.” During the interview, this participant brought up their experience with *Heroes of Dragon Age* (Capital Games, 2013). They explained that this game was very competitive and people who could spend a lot of money had an advantage in the game. This participant unfortunately could not spend much to compete with the rest.

Participant 5 also did not have the opportunity to spend a lot of money in their student years. They stated “I was still a teenager. (...)I wasn't making much money back then. (...)I'd have to be really careful about like, the urge to spend money on that game. And so sometimes, if I would, if I buy a package or something, I would play it consistently.” They claimed that while they couldn't spend a lot of money, they would play the game on a regular basis so they wouldn't feel bad about their expenditures. Today, Participant 1 and Participant 5 both allocate and spend money in gacha games.

Lore was another aspect that participants found highly engaging in gacha games (Fig 11). Almost every participant stated that the narrative played an important role in games. Both the main and the side stories were brought up during the interviews.

When a new character is introduced for the first time in a game, some companies also release a quest that follows the character’s life events, giving the opportunity for players to get acquainted with them. Throughout the interviews, participants expressed that they enjoy learning about these characters. Some of the participants could not wait for the official announcement of certain characters which made them resort to leaks.

Participant 3 says “(...) I found out about her [Fu Hua, *Honkai Impact 3rd*] from the leaks and stuff like that. And I wanted her because my favorite character is Fu Hua and I didn't care if she was overpowered or not I just wanted more Fu Hua battlesuits(...)”. The characters in *Honkai Impact 3rd* (HoYoverse, 2016) are referred to as battlesuits since they are not original characters, but rather stages in the life of an existing character. The battlesuits in Figure 13 are different representations of the same character, however, each has their own skills, fighting styles and players can obtain both of them. This should not be confused with skins. Skins in games represent an alternative character or item design. The purpose of these decorations is purely aesthetic and does not provide any special features. However, in some games, the skins can provide buffs which are additional abilities and/or attributes to the virtual items.
According to Participant 5, acquiring a character is more than obtaining a virtual item. They say that “The gacha is never really what pulls me into these kinds of games. But I mean, I really enjoy getting to know all the different types of characters. So I mean, character, gacha is always fun.” To Participant 5, character gachas are enjoyable since it allows them to learn more about different personas. In Genshin Impact (HoYoverse, 2020), when players pull a character they receive more information and backstory about that specific character. Players receive information on characters’ life, intentions and aspirations. Players can also read information on what characters think about other characters and their relationships.
One of the questions this investigation aimed to understand was why some players take breaks from gacha games and afterwards return to these games. The interviews highlighted several reasons why players took a break from gacha games. Figure 14 shows the reasons for participants taking breaks from games.

Two out of the five participants were forced to stop playing gacha games for a period due to lack of time. As the participants' schedules were getting more crowded and games were not their primary focus, they were forced to reduce the amount of time spent playing games and abandon some of their favorite ones. Participant 2 explains “Sometimes because real life was getting overwhelming. And there was stuff I needed to do (…)” Some even expressed sadness and that they would not have stopped playing if it was not for personal matters. Participant 3 said “Well, honestly, I came back because I was forced to not play because of my schoolwork and busy life. I really want to continue playing those games.”

Other participants provided an alternative explanation regarding their breaks and abandonment of certain games. Three participants out of five took a break or quit playing due to burnout. The burnout was due to participants being active daily performing the same tasks in the game, as well as an absence of content. Participants indicated a tendency of feeling burned out when companies start releasing less content or stop producing new content at all. Games such as Kingdom Hearts Union (Square Enix, 2015) and Fantastica (Mobage Inc, 2012) were mentioned as examples of such games during the interviews.

Some participants have developed a strategy to avoid burnout while playing gacha games. As Participant 1 explained, “when the new patch comes in, I usually spend all the gems and then take a breather before playing again.” When the game content is updated Participant 1 spends all of the in-game currency they've saved, then takes a break until the next update as a coping mechanism against burnout. Moreover, Participant 1 mentioned that they play multiple gacha games. However, they play only three of them at the same time, while the rest are played individually one by one. Participant 1 stated “I usually don't play them altogether except for this one which is the Honkai Impact 3rd, Genshin Impact and Cookie Run. Apart from that the other games I usually play them one by one.”
There were also cases that were brought up in the interview regarding content that is unrelated to the original game. When this happens, players expressed that they began feeling overwhelmed and frustrated with having to readjust. For instance, according to Participant 4, *Crusader Quest* (Loadcomplete, 2014) added an extra equipable slot meant for weapons which was not part of the initial game concept. Previously, the characters had weapons that couldn't be changed nor upgraded and only functioned as part of their design. Moreover, the character design was changing when reaching a certain upgrade point in the game (Fig 15). Now, however, in order to increase the power of a character, players need to acquire a good weapon through the gacha mechanic.

Figure 15: The character evolution in Crusader Quest (Loadcomplete, 2014).

Another example mentioned was *Heroes of Dragon Age* (Capital Games, 2013). One of the participants stated that the developer began releasing content that was not connected to the main story. The participant explained that they could not feel attachment to the new characters and thought their rarities were absurd since there was no backstory on them. Partially this was the reason for Participant 1 quitting the game. Participant 1 said, “(...) when I did come back, I think I only stayed for maybe two to three months before leaving it entirely, and that is because there was no new things coming in. (...) a very simple dragon that didn't even have a name in the main game would become a triple SR, six stars kind of character, which is ridiculous.”

Figure 16: Participants’ reasons for returning to gacha games.
After taking a break, all participants resumed playing gacha games. The participants returned to the games due to multiple different reasons, as demonstrated in Figure 16.

One of the reasons that many participants could relate to was nostalgia. They wanted to relive some of the experiences and feelings they had when they first started playing the game. Participant 1 says “When I come back, because I want to relive something.” Participant 2 mentioned “So I was checking in on how things are going in somewhere that I knew had good content at some point.” Participant 4 “(...) you stop playing it and then just come back and play it again, people's type of games that you just play cause of nostalgia.”

Four out of five participants took longer and more frequent breaks until they finally quit playing some of their old gacha games. Participant 1 mentioned regarding game *Heroes of Dragon Age* (Capital Games, 2013):

*I actually took a break of one month. And then it took three months. And then it took almost one year. (...) But when I did come back, I think I only stayed for maybe two to three months before leaving it entirely (...).*

Participant 5 expressed a similar experience:

(...) I take a break is just because I was playing it too consistently and I just feel like I feel burned out. And I needed to just set it down for a while. And sometimes I set it down for good.

Mastering gacha items was also discussed during the interviews. This refers to understanding and utilizing the items to their full potential. Figure 17 shows what stages participants consider themselves in when it comes to mastering their most used gacha item. Two out of five participants said that they have not yet mastered certain gacha items (Fig 17).

![Figure 17: Participants’ current state of mastering gacha items.](image-url)
Participants who mastered certain in-game items they received through gacha used them constantly while playing. Among the five participants, three noted that, once the item is mastered, they have fun and tend to use the item frequently. For example, Participant 4 stated “Whenever there's something like an event or like a new map, as long as they're not countering the shield at all, I always bring him [Zhongli, Genshin Impact] no matter what.” Participant 4 is talking about a character from Genshin Impact (HoYoverse, 2020) called Zhongli, who is capable of casting shields. Furthermore, they are also saying that unless they encounter a challenge which counters the shield of this character, they will always bring Zhongli in their team. Participant 5 had a similar statement to Participant 4 saying:

But, ya know, I can solo him [Kazuha, Genshin Impact] in most cases now without having to use other characters(...) Oh, he's [Kazuha, Genshin Impact] such a fun character to play. It was impossible to have him not in my party anymore because I had so much fun.

Based on the participants’ accounts, the learning process tends to start before the virtual item is released in the game. As mentioned earlier, players often have access to gacha item information before their official release through leaks. This suggests that the learning process of gacha items can start before having full access to the items. Through leaks, players can receive information regarding upgrade materials, combat skills, team composition, etc. Participant 3 mentioned that due to leaks they were able to pre-farm or in other words pre-collect upgrade materials required for an upcoming character:

I farmed farmable tears or weapons, artifacts and stuff like that (…) we get tidbits of the latest version from the Chinese server which is like more or less a month earlier so we get to see what will happen next before what happens.

The game Participant 3 mentioned is called Honkai Impact 3rd (HoYoverse, 2016) and it has multiple servers around the world. Since the game was initially launched only in China, the Chinese server is the first to receive updates, while the rest of the servers receive updates a few weeks later.

Nevertheless, two out of five participants were opposed to leaks. They strongly believe that it breaks the immersiveness and excitement. Instead, they prefer to wait for the official announcement to start their learning process which is a few days prior to the item release in the game. Participant 4 explains that “I don't really watch those leaks and stuff like that. So, I waited until the actual HoYoverse released the skills and stuff like that, then I just try to analyze it”.

Players also learn without owning the actual item. Some games provide trials for newly released gacha items which allows players to partially master them. Participant 1 said “when I get a character or when it's in the trial, I read all the info, the talents and how to use them, I practice a bit.” In Genshin Impact, during the character trial players have the opportunity to read about the character’s abilities. Participants read additional info available during the trial to decide how many copies of the same character players would like to pull. Participant 5 said “(...) I did test him [Kazuha, Genshin Impact] out first when they had that available before I kept falling for him. And that's when I looked at his constellations, and I realized a C2 would be really useful.” Participant 5 read that the Constellation 2 for this character was useful and something they really wanted. To increase the constellation, players need to acquire the same character several times to upgrade them. In this case, Participant 5 had to pull three copies of Kazuha.

When asking players about the happiest and saddest moments of their gacha-game experience, their answers revolved around the same matter. This matter refers to them pulling for a specific
gacha item. All participants said they were happy when they got a limited gacha reward they wanted in a low number of pulls. Participant 1 stated with excitement that:

I got like Tartaglia on my very first pull, (…) my sister told me this is the five star you have a chance to get him [Tartaglia] and then I just did one pull and bam, he came in and we screamed because it was gold.

Here they are talking about a five-star character called Tartaglia who was newly introduced to *Genshin Impact* (HoYoverse, 2020) at the time. Participant 1 was able to obtain him from a limited gacha in a single pull, which they later described as the happiest moment of their gacha experience. Other participants had similar experiences and were very thrilled to talk about their own happiest gacha moments as well.

Participant 2 also mentioned being able to acquire a high rare character using the gacha mechanic. However, the high rarity character took them by surprise since the indicator which shows the high rarity of a gacha item was not there. “I managed to get her in a single pool, which came very unpredictably (…) the graphics for indicating that it's a high-quality character wasn't there for some reason. But I was very surprised, and I was very happy.” The participant was interested in a specific character from *Another Eden* (WFS, Inc., 2017) who they don’t name during the interview. Participant 2 also mentions that “it sometimes happens in this game”. This is an intended feature in *Another Eden* (WFS, Inc., 2017) to make players feel extra lucky.

Participant 3 expressed joy when asked about their happiest experience with gacha and stated:

I saved up a really long time for this character called Fu Hua (…) I saved up a really large amount of crystals. I've never saved this much crystal before (…) when it came to a banner, I was like, I got her to SSS, I got her. I got her full gear twice. And I even got her outfit too. So basically, that was a very, very whale type of coy if you will.

Participant 3 saved up a lot of ingame currency for one of their favorite characters in *Honkai Impact 3rd* (HoYoverse, 2016). Once the character was released, they were able to acquire one copy of Fu Hua. They had a lot of currency left so they tried their luck again, being able to acquire multiple copies of the same character which allowed them to fully SSS the character. Additionally, Participant 3 was also able to obtain the equipment designed specifically for this character. To complement Participant’s 3 experience, Participant 5 mentions that they are always happy when they are able to acquire a high rarity gacha item in a low amount of pulls.

All participants also shared a similar sad gacha experience. When there is a gacha item the participants want, they save up the ingame gacha currency specifically for that limited banner. Once the banner is available, the participants spend their savings until they get the item they want. Unfortunately, in some cases the participants were unlucky enough and unable to obtain the desired item. The fact that they saved up for a specific banner and ended up not getting the desired gacha item was very devastating for participants. One of the participants further explained that gacha moments like this make them feel very demotivated to continue playing the game. Participant 1 recounted:

So I saved up or I spent and then I tried to get them [artifacts]. And there are times where you get three of one artifact rather than three of different artifacts. So it kind of gets a little tiring, say using up all your saved gems (…)
Participant 1 is talking about trying to get an artifact set using the gacha mechanic in *Honkai Impact 3rd* (HoYoverse, 2016). These artifacts are pieces of equipment used to increase the power of a character. Moreover, like any other gacha reward, the players have a specific chance of getting them. Additionally, Participant 4 shared another gacha moment that was both sad and happy. The participant wanted to obtain a four-star character in one of the limited banners, however, received instead two different five-star characters.

**Figure 18: Ways in which participants first learn about gacha items.**

Figure 18 shows how participants learned about certain gacha items. A high number of participants mentioned that they first learned about specific gacha items from the community. The community in this case represents a group of people with common interests. Participants mentioned family members, friends as well as social media groups that provide leaks. Three participants learned about certain gacha items through official announcements made by the company. Two of five participants said they found out about certain gacha items through the ingame content such as stories and events.

**Figure 19: Gacha games that the participants play often.**
Table 3: Gacha games mentioned by the participants and their current state of playing.

<table>
<thead>
<tr>
<th>Game</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
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<tr>
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</tr>
<tr>
<td>Another Eden</td>
<td>Playing</td>
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<td>Used to Play</td>
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<tr>
<td>Enemy Memoria Freeze</td>
<td>Playing</td>
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<td>Fantastica</td>
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<td>Used to Play</td>
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<td>Food Fantasy</td>
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<td>Playing</td>
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<td>Punishing: Gray Raven</td>
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<td>Used to Play</td>
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<td>Tears of Themis</td>
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<td>Playing</td>
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</table>

Table 3 and Figure 19 demonstrates what games the participants played or continue playing. The most mentioned game was *Genshin Impact* (HoYoverse, 2020) which is a 3D action role playing game that has a character and weapon gacha mechanic (Fig 19, red). The second place was *Honkai Impact 3rd* (HoYoverse, 2016) which is also a 3D action role playing game (Fig 19, green). Gacha banners for this game tend to feature characters, gear and equipable artifacts called “Stigmata”.

26
5 Discussion
Discussion focused on addressing the research question: "What aspects of gacha games keep the players engaged?" In order to make the process of answering the research question easier, sub-questions with focus on the gacha games’ appeal, players’ reasons to return to these games and the emotional connection when using the gacha mechanic were asked. Each sub-question is discussed in their own sub-sections.

The data required to answer the research question was gathered through qualitative semi-structured interviews. The participants were asked to meet a requirement that is represented by a break of at least one month or longer from gacha games. The interviews were transcribed and analyzed by the authors of this paper.

This chapter has four sub-heading which are chapter 5.1 Sub-question 1: “What aspects of the gacha games players consider to be the most appealing?”, 5.2 Sub-question 2: “Why, after having stopped playing a gacha game for a period of time, are players motivated to return to the game?”, 5.3 Sub-question 3: “What are the emotional connections that players describe in relation to their experience interacting with gacha mechanics?” and chapter 5.4 RQ: “What aspects of gacha games keep the players engaged?”

5.1 Sub-question 1: “What aspects of the gacha games players consider to be the most appealing?”
When asked about their interests in gacha games the results showed that the narrative was mentioned by all participants. The main game narrative which primarily follows the protagonist was brought up on multiple occasions. Additionally, some of the participants showed interest in the character stories which allow players to get to know certain characters. Moreover, one of the participants specifically mentioned that they started playing Genshin Impact (HoYoverse, 2020) again because of a character story. In Genshin Impact (HoYoverse, 2020), every time a new character is released, a story that revolves around them is also provided to the players. This gives players an opportunity to get familiar with characters and become emotionally attached, which relates to the next popular aspect in gacha games. Characters along with visuals were the second most popular aspects among participants due to their aesthetic design and interactivity.

The study indicates that when obtaining a high rarity gacha item, especially characters, the participants expressed joy and mentioned fun as a way to describe the process of pulling. However, the “fun” does not end there. Going back to Koster’s theory (Koster, 2014), when experiencing joyful events and obtaining a rush of happiness chemicals players are stimulated to further engage with the gacha items. Participants were more interested in character gachas in comparison to other gacha items due to their complexity and their feedback loop of interactivity. Once acquired, the characters in gacha games provide players with the opportunity to learn and experiment in an enjoyable and interactive way. Despite the fact that it wasn’t mentioned directly by the participants this can be seen from the way participants described their experience when asked about mastering a gacha item they have acquired.

Another aspect of gacha games that participants were interested in, was their gameplay. Two participants of five said that gameplay was appealing to them because of gacha characters that introduce new ways to play the game. Cook (2007) states that once players learn something new and master it, they can utilize that information to manipulate the game environment to their advantage. Once the participants mastered a character received from gacha, they overuse and adapt their skills to their best interest. The participants can combine the newly acquired skill with already existent skills and form a new skill map that makes the game experience joyful. Participant 5 explained that by acquiring Kazuha, who is a character in Genshin Impact
(HoYoverse, 2020), they were able to navigate the game world more easily. Kazuha has an ability to make a very high jump which allows Participant 5 to reach areas swiftly without wasting character’s stamina.

Additionally, one of the participants mentioned that they were attracted to the rewards that certain gacha games were offering. Participant 1 explained that Cookie Run: Kingdom (Devsisters, 2021) is a gacha game with high value ingame rewards which motivates players to keep playing. In order to clarify the statement from Participant 1, additional research on the rewards provided by Cookie Run: Kingdom (Devsisters, 2021) was made. It was found from a player base on Reddit that sometimes the ingame currency rewards can be compared to their 100 US dollars packs.

To summarize, the interviews indicate that gacha is not the main interest of the participants. Instead, participants are attracted to the game narrative, visuals, playable characters and rewards. On multiple occasions character stories were brought up where participants were able to learn more about the playable characters. Moreover, from the participants perspective, obtaining a character is perceived as enjoyable. However, they further mention that fun did not stop there. It was seen in the analysis that while learning how to master the character, participants were still experiencing “fun” based on Koster’s theory (2014).

5.2 Sub-question 2: “Why, after having stopped playing a gacha game for a period of time, are players motivated to return to the game?”

After taking a break from a certain gacha game, the majority of participants mentioned that they have returned to the game because they wanted to relive their first experience. This suggests a relationship to nostalgia, which is a common reason for humans to want to relieve previous experiences. Nostalgia might be related to favorable memories from the first time the players encountered the game or with experiences within the game that they considered particularly pleasant or enjoyable. However, it was noted during the interviews that the recollection of that initial experience could never completely be replicated because the player, despite taking a break, was already familiar with the game.

Humans are evolutionarily programmed to enjoy the learning process since that increases their chances of survival. When players successfully acquire skills and can apply them to manipulate their environment for the better, they gain pleasure as a chemical reward. Gachas in F2P games constantly provide new content for players. After learning everything in the game, the learning process of the players became faster than the ability of the developers to produce new content. It can be speculated that these breaks were taken in order to help themselves relieve experiences by trying to forget how the game works. As this cycle repeats, the breaks become longer and more frequent until participants quit playing some of their old gacha games. This supports Koster’s statement that games are destined to become boring and not fun (Koster, 2014). After participants go through the break loop multiple times, they have a clear mental skill map of the game which interferes with the process of re-learning everything from the beginning, thus not relieving the same experience. Another interesting aspect that was noticed during the interviews was that some participants developed a strategy to avoid burnout. Participants would switch between multiple games to slow down their process of learning for every game. The constant switch between games makes it harder for the brain to create a clear skill map.

Another reason for participants leaving the gacha games for good was the irrelevant content introduced in the games which was not of interest anymore. This was discussed by Participants 1 and 4. Participant 1 talks about Heroes of Dragon Age (Capital Games, 2013) where the game stopped developing the main story. However, the game continued releasing new gacha items
which were not relevant to the main content anymore. Participant 1 perceived this as absurd which led to them quitting the game for good. Participant 4 reports a similar situation in another game called Crusader Quest (Loadcomplete, 2014) where developers introduced an additional feature represented by weapons. According to Participant 4, after this change to get a good weapon players had to use the gacha mechanic. The participants perceived these changes as noise, which takes us back to Koster’s theory. Koster explains that when players cannot identify patterns, they cannot grok, get frustrated and establish it as a useless feature (Koster, 2014). This is what happened in the case of Participant 1 and Participant 4.

Time availability was another reason to return to gacha games. Two out of five participants were forced to stop playing certain gacha games due to personal matters that needed to be taken care of. Participants had to take a break due to school and work-related matters. Additionally, once the matters were taken care of and participants had more free time, they returned to their put-on hold gacha games.

Moreover, participants also mentioned the game content as a reason for their return to gacha games. Two participants who mentioned this as a reason had different motives. One of the participants specified that they came back due to the game update that conveyed content they liked. The other participant returned to the game without knowing about the new content. They explained that their return revolved around the game which once had content to their liking. The participant was sure that the game had been updated and provided the same game experience they once enjoyed.

In short, participants took breaks due to reasons such as burnout, time constraints, and noise. Burnout was the most common reason to take a break from gacha games. Some participants have developed a method of avoiding burnout by taking breaks and switching between multiple gacha games which prolonged their learning experience. The participants who mentioned time constraints as a reason to take a break explained that they would return once they have more free time. This was done involuntarily due to more important matters. The content irrelevancy was perceived as noise by the participants which led to longer and more often breaks. As a consequence, participants would quit those gacha games. Besides time availability participants also mentioned that their reasons to return to gacha games are nostalgia and new content.

5.3 Sub-question 3: “What are the emotional connections that players describe in relation to their experience interacting with gacha mechanics?”

During the interviews, participants were asked about their happiest and saddest gacha experiences. The participants’ answers revolved around the same idea in both scenarios. The results showed that all participants experienced joy when they won a limited gacha reward in a low number of pulls. It is hard to establish a number of what a low amount of pulls represents since each game handles their ingame currency differently. For example, 100 pulls in one game could be considered low, while in a different game this could be a high number of pulls. The understanding of low and high amounts of pulls has been established based on the participants' explanations. One of the participants joyfully described their experience of receiving a high rarity character in their first pull after starting to play the game. The participant also mentioned that they had the chance to share their happy moment together with their sister which was the reason for them playing that specific game. The experience happened in the game called Genshin Impact (HoYoverse, 2020) where the usual amount of pulls required to pull a high rarity item can vary between 70 to 90 pulls, where the 90th pull is the guaranteed rare gacha item. Another participant also mentioned that they were able to get a high rarity character in a single pull. When pulling for a gacha item there is usually an animation with different visuals for each item’s rarity. Participant 2 explained that in their case the animation indicated a low
rarity gacha item. However, to their surprise they received a high rarity character which was unexpected and made them happy. The game that is described is called *Another Eden* (WFS, Inc., 2017) where such events are possible according to Participant 2. Obtaining the desired character did not stop some participants from further trying their luck on the same banner. For instance, Participant 3 mentions that they saved up ingame currency for a specific character who they wanted because they had low hopes of pulling the character. However, they received the character several times which allowed them to upgrade the character to the maximum potential. Participant 5 had a similar experience in *Genshin Impact* (HoYoverse, 2020) where they were able to receive three copies of the desired character in just 70 pulls, where usually 90 pulls are required for only one copy of a five stars character. The chance of receiving a five stars character is 0.6%. Additionally, *Genshin Impact* (HoYoverse, 2020) has a 50/50 chance of receiving the limited five stars character. This means that in 90 pulls when receiving five stars character, players have a 50% chance of obtaining the limited five stars character. The other 50% chance is obtaining a five stars standard character. Participant 5 was lucky enough not to lose any 50/50.

Participant 4 describes their experience as both happy and sad. The participant was trying to receive a four stars character in one of the limited banners. In *Genshin Impact* (HoYoverse, 2020) the players are guaranteed to obtain at least one four stars item every 10 pulls. Regardless of how the pulls are made, individually or in a batch of ten at once, this factor remains unchanged. Moreover, with a chance of 5.1% of obtaining a four stars gacha item players have a 50% chance of obtaining a four stars character. The other 50% is represented by the player's chance of obtaining a four stars weapon. Additionally, when obtaining a four stars character, players have a 50% chance of obtaining one of the three four stars characters presented on the banner. When losing the 50% chance, the next four stars gacha item they receive will be one of the three four stars characters presented on the banner. Participant 4 had a chance of 0.425% of obtaining the desired four stars character in every pull. Unfortunately, Participant 4 wasn’t able to obtain the four stars character that they wanted from this banner. This incident, however, still made the participant happy since they were able to pull three five stars characters in 105 pulls in this banner. As mentioned earlier players can usually obtain one five stars character in 70 to 90 pulls. Participant 4 was lucky enough to pull five stars characters with a chance of only 0.6% per pull.

As mentioned earlier, participants also shared similar sad gacha game experiences. Participants 1 and Participant 5 talk about *Genshin Impact* (HoYoverse, 2020) and share similar sad moments. Both mention that pulling multiple times and losing the 50/50 chance made them feel devastated. Participant 1 further mentions their experience in *Honkai Impact 3rd* (HoYoverse, 2016) where they were receiving the same gacha item instead of the one they needed, demotivating them to further play the game. Every participant briefly mentioned saving up ingame currency for a certain gacha banner. Participant 2 and Participant 3 talk about this in detail. Participant 2 mentioned that in the game *Another Eden* (WFS, Inc., 2017) they saved up all of their ingame currency until they finally encountered a character that interested them visually and story-wise. Unfortunately, Participant 2 said that using all of their ingame currency on gacha did not bring them the desired character or anything of value. Participant 3 also saved up the ingame currency in a game called *Arknights* (HyperGryph, 2017) and they were not able to acquire the limited character. According to Participant 3, that specific character was a one-time banner and will not get a rerun in the future. Moreover, they were disappointed in not receiving a character who was strong enough to complete harder game content. The participant did over 200 pulls which, according to them, is a big amount in that specific game context.
As mentioned in Chapter 2.1 gacha companies need to be transparent when it comes to gacha mechanics. This information needs to be accessible for players at all times. Interestingly, most of the participants understood how the pity system works and the percentages that accompanied it. This meant that most of the participants read the information that is provided by companies regarding the gacha mechanic in the game in order to understand their chances of winning a certain gacha item.

To summarize, participants were happy when they were able to receive a character in a low amount of pulls or winning the 50/50 chance. The participants felt devastated when losing the pity as well as not being able to acquire the desired gacha items despite spending all their ingame savings. One of the participants experienced both happiness and sadness in one of their interactions with the gacha mechanic. Additionally, it was also noticed that most of the participants have read the information regarding gacha mechanics since they were able to remember their chances of receiving a gacha item. As well as the pulls, it's clear in the participants’ accounts that they develop strong emotional connections to their favorite characters. Some participants even said they kept on playing with their favorites even after having other higher-ranking characters. There were also the accounts of pulling for specific characters after learning about their backstory or being attracted to their visuals. This emotional connection with the characters also answers SQ3.

5.4 RQ: “What aspects of gacha games keep the players engaged?”
This study suggests that the participants are drawn to gacha games by multiple aspects. Sub-question 1 highlights that participants are attracted to the narrative, characters, and visuals of gacha games. Through narrative, participants mentioned that they had a chance to learn about certain characters which influenced their decision of whether to pull or not for that specific character. However, some of the participants pulled for all characters since they want to own a collection. It is also important to note that participants were still having fun due to the learning experience with the gacha items. Moreover, Sub-question 2 discussed what aspects of gacha games pushed away the participants. As mentioned earlier, participants are interested in narrative. However, when the new content became irrelevant to the main narrative, participants took it as noise and quit the game. Another aspect that was considered as noise was the introduction of a new feature in the game. This feature forced the participant to engage with the gacha mechanic which was not to their liking. Burnout and time constraints were additional reasons for taking a break from gacha games. Sub-question 2 also asked why the participants returned to gacha games. These reasons include nostalgia, time availability, and new content of the game. The final and third sub-question looked into the emotional aspects that participants experienced when interacting with the gacha mechanic. Using the gacha mechanic made the participants both happy and sad. Participants experienced excitement when obtaining the desired gacha item in a low amount of pulls. In these moments participants described the gacha mechanic as fun. When participants did not receive the desired character while spending all of their ingame savings they described it as being a sad experience.

As it can be seen here, there are several aspects of gacha games that participants find engaging. The engaging aspects that were discussed are the narrative, art style, and characters together with their visuals and backstories. Based on the participants’ accounts, the reason that makes them stay with the game is the constant relevant game updates which keep releasing new stories and characters.

While gacha facilitates the experience and allows players to acquire new characters and items, it was not specifically mentioned by participants as a reason for engaging with the game. Participants, however, did express an intense emotional response to pulling the characters they
desired, both positive emotion when the pull was considered to be low, and negative emotion when they were unable to acquire the desired character.
6 Conclusion
The premise was that gacha game players are interested in a steady influx of content generated by the gacha mechanic, which delivers a continuous learning experience. However, the participants did not perceive this as the primary reason for their interest in the gacha. Based on the participants’ responses the sense of attraction mostly comes from the story, visuals and the feel of owning a collection of potential rewards. While some participants focused on collecting as many items as possible, others sought only the items that satisfied their needs. Despite the fact that participants were not pulling gacha to learn, the learning process happened inevitably through using the gacha item. Most of the participants mentioned that they were able to master at least one of their most used gacha items. However, in some cases, the learning process happened prior to the item release due to leaks provided by the community. Moreover, the participants were able to learn about specific gacha items through trials and narrative. While analyzing the data, it is important to notice that the irrelevant gacha games updates were frowned upon and were considered noise by participants. Companies should be trying to develop relevant content even when it comes to gacha. Additionally, the game developers are recommended to provide enough gameplay to last for the whole patch in order to prevent players from experiencing burnout.

The engaging aspects of gacha games according to participants are the narrative, and game visuals and, when it comes to the gacha element, the participants were interested in the character gacha. The narrative was the most popular aspect of gacha games among participants. The participants mentioned that when the story does not match the initial game concept or when the developers stop producing more narrative they quit. Additionally, when the new game updates were released, the participants tried to seek out patterns in the newly provided content. As stated by Koster (2014) when players fail in identifying the patterns, they tend to get frustrated and give up. This behavior was recognized among participants when they were talking about irrelevant gacha game content. The accounts suggest that participants engaged with gacha games due to their visuals in anime style, especially in characters. In addition to the characters’ visuals, participants were also interested in their backstories. Through their biography and background stories, participants were able to connect with the characters on an emotional level getting attached to them. Participants further experienced attachment to characters when finally obtained them through gacha using their in-game savings. On top of the emotional attachment, participants showed a tendency of overusing the character they made a connection with.

To conclude and answer the research question “What aspects of gacha games keep the players engaged?” the aspects that participants find engaging are represented by story and visuals. In terms of the gacha mechanic, participants were particularly interested in obtaining character rewards. Furthermore, participants often did not care about the rarity of gacha items as they wished to collect all items to achieve a sense of completion.

Recommendation for Further Research
Even though the participants did not explicitly refer to gacha mechanics as a motivating factor to engage with gacha games, they did mention tactics and emotional attachment related to pulls and acquiring gacha items. For further research, with the help of a prototype, it would be interesting to analyze whether players are in fact interested in the gacha mechanic or if it is just forced upon them. This might be tested for example via an A/B prototype featuring the same type of gameplay, but wherein A, characters and items can be acquired via gacha, and in B they can be purposefully bought via a shop front or similar. Furthermore, it would be interesting to find if the gacha mechanic would be as successful and popular among players in games featuring visual styles other than anime, as this visual style was pointed out by participants as one of the reasons they are attracted to and/or started playing gacha games.
7 References


Appendix A

Hello everyone! Me and my thesis partner are writing a paper on gacha games. We are looking for 5 players who are comfortable with jumping in a voice chat with us and answering a few questions. We have prepared a set of questions and we ask for 20 minutes of your time to help us gather data that later will help us with our research. The interviews are going to be voice recorded and anonymous. You have a right to withdraw any time during the interview.

We have few requirements:

- is playing gacha games 20 hours a week;
- has taken a break from gacha games for at least 1 month;
- is playing/has played any gacha games (Examples: Onmyoji, Exos Heroes, Genshin Impact, Miracle Nikki/Love Nikki, Honkai Impact 3rd, Arknights, etc.)
- comfortable talking to strangers;
- We appreciate your contribution and we thank you in advance for your help.”
Appendix B

1. Tell us about how you got started playing gacha games?
   a. What gacha games have you played or still play the most?
   b. How long have you been playing the game?
2. Did your interests change for these games? If so, when and how?
3. When you stopped playing the game, how long was the break? Which game was it, and why did you take a break?
4. Why did you come back?
5. What kind of gacha-content (characters, equipment, skin, etc.,) are you most interested in?
6. Tell us one of the gacha-pulls that made you happy or sad.
7. How did you first encounter the character/item/skin/etc. and how did you feel about them?
   a. Did you pursue getting more information about the character/weapon?
   b. Did you use it/them in different teams?
   c. Did you master the skills of the character/weapon?
8. How many pulls did it take you to get the item/character?
   a. Did you spend real currency? If no…did you ever spend real currency?
   b. What is your average pull per patch(six weeks)? (They are further from the emotional aspect)
9. Did this pull affect your playtime or gameplay experience in any way? If so, how?
10. What is your age?
11. What is your gender?
12. What is your occupation?
13. Where are you from?
14. Are there other types of games you enjoy?
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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| “x” stars             | The rarity of an item where one stars is the lowest rarity.  
| 50/50 chance          | Concept from *Genshin Impact* (HoYoverse, 2020). Where players have 50% chance of obtaining the limited five stars character when obtaining a five stars character.  
| Artifacts             | Equipable items.  
| Banner                | Visual representation of potential gacha rewards.  
| Battlesuits           | Characters, a term used in *Honkai Impact 3rd* (HoYoverse, 2016).  
| Buff                  | The increases in the power of a game element.  
| Burnout               | A form of exhaustion and loss of interest.  
| C“x” (Constellation “x”) | In the Game *Genshin Impact* (HoYoverse, 2020), when obtaining another copy of the same character, players receive a stella fortuna which is used to upgrade the constellation of that specific character.  
| Domain Challenge      | A challenge which takes part in a different level outside the game world in *Genshin Impact* (HoYoverse, 2020).  
| Farm                  | Collecting certain ingame valuables. This can include, ingame currency, EXP, collectables etc.  
| Free-to-Play (F2P)    | Games that are free of charge.  
| Full strength         | The ability to maximize the potential of gacha item.  
| Gacha                 | A game mechanic where users can obtain a random ingame reward by spending ingame gacha currency.  
| Gacha currency        | Ingame currency that players spend to get a random reward from gacha.  
| Gacha games           | Games that have a gacha mechanic.  
| Hard currency         | Real money.  
| Leaks                 | Information that is released before the official announcements.  
| Mastering             | Understanding and utilizing the items or skills to their full potential.  
| Party                 | A team of characters.  
| Patch                 | New version of a game.  
| Pity system           | A number of pulls players need to make on a banner before they are guaranteed a high rarity gacha item.  

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Pull/Roll</td>
<td>The action of using ingame currency to receive a virtual reward from gacha.</td>
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<tr>
<td>Skins</td>
<td>Character or Item alternative visual.</td>
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<tr>
<td>Soft currency</td>
<td>Ingame currency that the player earns by playing the game.</td>
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<tr>
<td>Solo</td>
<td>Playing with a singular character.</td>
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<tr>
<td>SSS</td>
<td>Highest item ranking used in some games such as <em>Honkai Impact 3rd</em> (HoYoverse, 2016). “S” stands for Super or Superior</td>
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<tr>
<td>Stamina</td>
<td>Character’s energy in the game.</td>
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<tr>
<td>Tear</td>
<td>Items used to upgrade characters in the game called <em>Honkai Impact 3rd</em> (HoYoverse, 2016).</td>
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<tr>
<td>Whales</td>
<td>Players who spend a lot on microtransactions in comparison to the average player. This can differ from game to game.</td>
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