



# Examining the factors of observational learning from *Genshin Impact* players' peers and player intrinsic motivation toward microtransaction purchasing behavior

Jonathan Haka<sup>1</sup> and \*Panji Nandiasa Ananda Mukadis<sup>1</sup>

<sup>1</sup>Swiss German University, Tangerang, Indonesia

panji.mukadis@sgu.ac.id

**Abstract.** Video games have become a popular entertainment platform, storytelling medium, and lucrative business, with the industry worth \$200 billion in 2022. *Genshin Impact*, for example, earned \$119 million in April 2024. Free-to-play [F2P] and games as a service [GaaS] titles with monetization options are common, requiring constant updates to keep players engaged. Loot boxes, paid packs containing randomized in-game items, are a popular microtransaction, leading to ethical concerns about gambling-like behavior. This paper tries to offer a conceptual framework between social learning theory and player microtransaction spending behavior and aims to understand how observational learning on peer behavior and players' own intrinsic reinforcement affect their microtransaction spending behavior, especially for children.

**Keywords:** peer behavior, microtransactions, *Genshin Impact*.

## 1 Introduction

### 1.1 Background

One of the more recent ways entertainment is provided is with video games. While traditional games as a state-of-play have existed for as long as civilization itself with the first recorded games dating back as far as 2600 BC [Soubeyrand, n.d.], video games, in comparison, are a modern phenomenon. Their existence is only made possible by the advancements in electronic technology as well as in computing.

Today, video games are defined as electronic games that use an input device like a controller, joystick, or keyboard to generate moving images and audio through a display output. Arcade-style video games are now uncommon with the vast majority of players playing via home consoles such as Sony's PlayStation, Microsoft's Xbox, and personal computers. Virtual reality [VR] games played with specific headsets to immerse players deeper than traditional consoles ever could are a new field, but still far from the mainstream as of date.

Accordingly, the video game industry has grown from a niche field to a major and valuable entertainment sector. The industry was worth \$200 billion in 2022 [1] and is

\* Correspondence author

© The Author(s) 2024

S. Musa et al. (eds.), *Proceedings of the 5th International Conference on Global Innovation and Trends in Economy 2024 (INCOGITE 2024)*, Advances in Economics, Business and Management Research 302, [https://doi.org/10.2991/978-94-6463-585-0\\_38](https://doi.org/10.2991/978-94-6463-585-0_38)

worth three times the global music industry and four times the global film industry in 2019 [2]. It is clear that video games are a heavyweight and profitable industry.

In terms of monetization, video games have historically been one-time paid items where players purchase the game outright. Companies have since discovered new ways to monetize players aside from the game's initial price. This is partly due to the popularity of free-to-play [F2P] games. As the name implies, these types of games have no upfront cost, which necessitates that developers look for other ways to monetize their game.

Free-to-play games can trace its roots to mobile games and PC-only online games, which use games as a service [GaaS] business model [3]. This is in contrast to the classic business model of paying once for the game itself.

GaaS games, also known as live service games, emerged from advancements in internet infrastructure, allowing players to purchase their games digitally and download them onto their own devices rather than buying physical disks as was once the norm. The internet also allows developers to retroactively patch and add updates to their games, as well as create additional content that is not large enough to warrant an entire game but still is sizable enough. These downloadable content [DLC] usually comes in expansion packs that add in-game items as well as additional missions and characters; DLCs are also a popular way for game developers to monetize their game even further by providing additional value after the game's initial launch.

F2P games must balance playable content for free and paid packs; if players are given too much content, they would not have to spend any money, which would be bad for developers since they have expenses from game development, talent hiring, and studio expenses like water and electricity. On the other hand, if developers erect too many paywalls, players might feel disincentivized to invest time and money in said game and might look for other games instead.

One of the most common microtransactions today is loot boxes, which are paid packs that contain randomized in-game items like customizations and gear for a character. Loot boxes are part of the psychological compulsion loop designed to keep players playing and paying [4], and the unknown chance a player will get a certain item has resulted in several watchdogs and governments to label them as gambling, which is particularly problematic as many gamers are under 18. The Australian government has even introduced a bill to rate any game with loot boxes as 18+ [1], which shows how seriously this issue is being treated.

To illustrate how prevalent loot boxes are in the gaming industry today, we can refer to *Genshin Impact* as an example. While an action RPG at heart, the free-to-play game

includes elements of *gacha* mechanics for its monetization systems. *Gacha* games implement slot machine-style random rewards and encourage players to spend [commonly known as “pull” in the gaming community] until they finally have the character and/or gear they desire [5]. The randomness of the *gacha* and loot box mechanics have led to debates on whether games like these should be classified as gambling [6]. This is particularly important as the most vulnerable people are young children while traditional gambling has always been heavily regulated. Regardless of its ethical consideration, there is no doubt *Genshin* is a financial success, grossing \$3.6 billion before its second anniversary [7].

To better understand how social dynamics affect player purchasing behavior, this research will analyze whether players’ social gaming environment correlates to their spending habits. *Genshin* therefore serves as the main point of study due to the game’s large Indonesian player base, varied microtransaction options, and *gacha* mechanics. This research will use Albert Bandura’s social learning theory concepts [specifically its observational learning and intrinsic reinforcement concept] to understand why players feel the need to purchase loot boxes and other microtransactions. The data from this research can be used as reference for further research.

## 1.2 Research problems

This research aims to reveal the impact these monetization systems have on players, and whether players feel compelled to purchase these microtransactions. Indonesia with its large, relatively young population and player base offers a rare opportunity to examine the relationship between the psychological and financial aspects of electronic entertainment.

## 1.3 Research questions

Does observational learning from *Genshin Impact* players’ peers impact their microtransaction purchase behavior?

Do *Genshin Impact* players’ intrinsic motivation impact their microtransaction purchase behavior?

# 2 Literature review

## 2.1 Video games

Video games are, in the context of this research, defined as electronic games that rely on player interaction [8]. This interactiveness is the single most distinguishing factor when comparing video games to other media like books, motion pictures, and songs.

Granic also added that while in other media users surrender to its narratives, video game storylines are often shaped by players themselves. Players actively engage with the in-game environment using available controls and the world reacts to it. This also varies by genre; a shooter game like Call of Duty will have different controls from the likes of Animal Crossing, which in turn affects the amount and type of actions players can do in each.

Also important to discuss is the way video games are played as the evolution of video games is tied to the medium in which they have been played [3]. Video games started in the latter half of the 20th century as technological advancements enabled the use of computers for entertainment. Back then, arcade machines were the only way to play. As a result, large arcade centers with various machines became lucrative businesses. As technology advanced even further, the concept of playing video games from the comfort of one's home materialized with video game consoles spurred on by the likes of Nintendo's Super Nintendo Entertainment System and Sony's PlayStation line of products. Personal computers [PCs] also saw their fair share of games too, and the advent of mass internet adoption as well as smartphones led the way to a new age of online gaming.

While the narrative among the media has been that video games can cause violence among its players, studies have shown that video games actually provide a positive impact to players, particularly in cognition [5]. They noted that players in fast-paced games like shooters have better as well as faster reaction times, pattern recognition skills and other cognitive values compared to their peers who do not. Granic also added that video games confer a positive motivational and emotional effect on players. Playing video games releases dopamine, the hormone that triggers feelings of satisfaction in our brains. However, they also noted that this positive feedback loop is vulnerable to exploitation by game developers, particularly when it comes to monetization. The specific details of video game monetization will be discussed later.

## **2.2 Video game monetization and loot boxes**

Video games are at its core, software, so game development follows some of the defined methods established in traditional software development like social media apps. However, due to its unique nature of blending technical computing knowledge with media elements such as storytelling, sound, and video, there is a creative aspect of game development with positions not unlike those in movie production. These two contrasting aspects also clash, with creative visions having to realize the technical constraints of said game's engine and the platform[s] in which the game is meant to be played.

All this means that video game development today is an expensive endeavor [9]. As with any other business, one's goal ultimately is to make money.

Traditionally, video games have always been a paid instance. Even during the 20th century where arcade games were the norm, one would pay with coins for the game to start. The advent of home consoles brought with portable game storage in the form of cartridges and DVDs. Another leap in technology was the internet, which brought together online storefronts like Steam, the Epic Games Store, and Android's Google Play as well as Apple's App Store. It also allowed existing console manufacturers to distribute their games digitally, and most importantly enabled the games-as-a-service [GaaS] model to function [10].

In contrast to traditional games which are a once-paid product, GaaS games see multiple updates post-release, usually with paid content updates to keep its player base active for a longer time [11]. Naturally, GaaS games often include social features like multiplayer and a leaderboard system for player rankings [3].

The modern internet infrastructure also developed within the last decade or two, a time when smartphones were becoming more popular. Due to this, the internet also facilitated the growth of mobile games which are often free to play [F2P]. Mobile game development requires less resources, both financial and technical as phones are less computationally complex devices compared to PCs and home consoles. Mobile games are even used for training pre-university students [12]. Consequently, most mobile games are F2P.

In place of a buying price, F2P games have microtransactions. These are paid in-game purchases from within the game itself [13]. They range from premium in-game currencies only earned via these kinds of purchases to in-game items. Microtransactions allow developers to earn revenue and recoup development costs while also attracting players to try out the game without any payment to see if they like it or not before investing any real money into said game. That said, properly encouraging players to purchase microtransactions without directly making the game unplayable without them as players might be turned away instead. Tomić cited *Dungeon Keepers 2* as an F2P game that is practically impossible to play without microtransactions, thus making the F2P label questionable.

One particular type of microtransaction that is the subject of this research is a loot box. It does similarly to other types of microtransactions, but the key difference is loot boxes will not show the player what item[s] they will get. A loot box contains a pool of rewards that on opening will be randomly rolled to generate a reward for the player. These mechanics make loot boxes highly similar to slot machines in casinos, and as such can be classified as gambling [5]. Some countries are as of 2019 introducing bills to ban loot boxes or enforce an 18+ rating on any game that implements them [14]. This is particularly concerning as unlike casinos, video games have no tangible way to enforce an age rating to players. Steam for example, has an age check before viewing

certain games with excessive violence and sexual content, but any player could just lie and enter a fictitious age that is old enough to let them in.

To highlight the dangers posed by unregulated loot boxes, we take a look at the controversy surrounding *Star Wars: Battlefront II*, a multiplayer shooter developed by Electronic Arts set in the *Star Wars* universe [15]. *Battlefront II*, despite being a \$60 purchase, has a steep progression system and better gear locked in loot boxes, which has led to controversies. Belgium's gaming regulatory body even launched an investigation into the game's loot boxes to determine if they are considered gambling. EA ultimately lost \$3.1 billion in stock value [16].

Since then, loot boxes have become more common in the gaming industry. Studying their psychological impact on players will be the key to better regulatory practices.

### 2.3 *Gacha* games & *Genshin Impact*

The term *gacha* refers to Japanese slot machines that give out random toys based on a specific set [5]. They are common in restaurants that cater to children and have also spread outside of the country.

When a video game implements these *gacha*-style mechanics into their monetization systems, such games are known as *gacha* games. To understand and contextualize how *gacha* games work, a good example to look at would be games developed by Chinese company miHoYo. Two of their games [*Genshin Impact* and *Honkai: Star Rail*] are both highly financially successful with *Genshin* recording a \$3.6 billion revenue nearly two years after its launch [7].

While similar to loot boxes at a glance, a *gacha* game also has additional mechanics for enticing players to spend real money. The most visible example is using fear-of-missing-out [FOMO] aspects by only making a character or item available for a select time period [5]. Therefore, if a player wants a certain character, they will have to spend money before the timer runs out [5]. These rotating systems are referred to as “banners” and they dictate which character or item is currently available.

In *Genshin* for example, a banner usually runs for six weeks. Each banner has a main character/weapon players are intended to try and get [to “pull”] via the *gacha* system. The rest of the drop table is filled with less powerful characters and/or items [denoted by their star rating in-game] to dilute the chances of getting the character on banner.

Once a banner ends, said character may take months or even years to appear again in a banner rerun. As *Genshin* and other *gacha* games often use the live service model to retain players, every major update means new characters for players to pull. For comparison, when the game launched in 2020 [Version 1.0], it had only 22 playable characters, but *Genshin* now has 80 playable characters as of Version 4.5. The wait times for reruns will only grow as more characters are introduced. This way, players are encouraged to spend as soon as their preferred character is on banner, be it due to gameplay or aesthetics. Speaking of gameplay, the game's core loop relies on players having characters with different elemental powers to combine and create reactions; another reason to pull for different characters as each character has only one element. Chiori, the current banner's character, is a Geo [earth] character for example.

To protect players from being statistically very unlucky with their pulls, *gacha* games sometimes have a "pity" mechanic as a hard cap to their chances. Each game can have different implementations; in *Genshin*'s case, every 10 pulls will guarantee a 4-star character/item while players are guaranteed to get a 5-star character/item every 90 pulls though this might not be the on-banner character. If that is the case, the second 5-star character players get will always be the on-banner character [dubbed "50/50" by the community].

Another common element in *gacha* games is a stamina/energy system. First popularized in mobile games, activities in-game often require this resource to complete. Once players' energy is expended, they can either wait in real time or pay real money to buy extra energy. The time it takes for 1 unit of energy to regenerate varies in each game; for example, eight minutes in *Genshin* to 30 minutes in *Candy Crush Saga* and possibly longer for other games. The amount of stored energy is also capped to keep players playing regularly [160 units in *Genshin*].

The random aspect of each pull has led to comparisons with gambling. Research conducted in Europe and the US reveals that over half of young people who play *gacha* have developed negative gambling habits. The *gacha* game industry encourages compulsive gambling, and 30 percent of students who spend between \$266 and \$1280 do not have a reliable source of income [17]. While this presents a dangerous situation as video game monetization is not as heavily [if any] regulated compared to traditional gambling, governments are already trying to rein in the industry. As of 2017, Belgium has launched an inquiry into whether loot boxes should be considered gambling. China also requires games to publish drop rates for *gacha* banners and loot boxes so players know their exact probability of pulling the characters they want [17]. Overall, video games and their monetization is a new field and much research is being conducted to explore the relationship between players, developers, and regulators.

Regardless of ethical implications, it is undeniable that *gacha* games like *Genshin* are able to generate significant profits if developers can strike the right balance between

the game itself and its monetization. To illustrate how profitable the game is, the game's highest-earning six-week banners are around \$30 million in revenue each [6]; \$30 million every six weeks.

## 2.4 Video game industry

The video game industry today has grown to become one of the most popular forms of entertainment. Research estimates that by 2030, the industry will be worth \$300 billion by 2030, encompassing 3.8 billion total players [18]. With current population estimates, this means that nearly half the entire world's population will have played video games by that point. The ubiquity of video games is on par with the likes of music and film.

Video games also have transcended their own medium and crossed over into television as well as film. A recent example is the critically acclaimed HBO series *The Last of Us*, which is actually an adaptation of developer Naughty Dog's similarly lauded game series of the same name [18]. Numerous video game intellectual properties [IPs] have also made the transition to the big screen. Examples include the animated *Mario* movie, a *Five Nights at Freddy's* adaptation and the *Resident Evil* films.

Aside from direct sales activities, the video game industry also is responsible for creating new career opportunities. Video game streamers are now a lucrative job with revenues totaling in the millions. Platforms such as Twitch enabled content creation around video games [19] and has changed the way the industry moves forward. Developers partner with streamers to promote and build hype for upcoming games.

Aside from streamers, various games are also played as e-sports [14]. Competitive genres like shooters and MOBAs [multiplayer online battle arenas] have international tournaments attracting athletes and fans from all over the world with millions of dollars in prize money.

While these all contribute to the overall game economy, the vast majority of revenue still comes from game-related transactions including microtransactions. It is the still-growing industry that incentivizes developers into finding new monetization methods, including the loot boxes discussed in the previous section.

## 2.5 Video game players

The sheer variety of video game genres allow for a wide range of player demographics. Frequent players are usually male and younger, while casual players tend to be female and are slightly older [2].



Players are also classified into four distinct profiles based on their motivations to play [19]. These four are as follows: casual, challenge, hardcore, and arousal. Potard also noted that certain personality traits are associated with the development of video game use preferences.

When it comes to player spending on video games, there is a link between in-game spending habits and problem gambling [6]. Due to the amount of microtransactions available, Gibson's team further arranged these into three categories: loot boxes, pay-to-win microtransactions, and mixed microtransaction models. They concluded that the single most significant indicator is the frequency of purchase, not the amount paid in a single transaction.

Another study also corroborated the pay-to-win aspect some microtransactions can have, particularly in competitive multiplayer games where paying players might have an edge towards non-paying ones. This might create an uneven playing field in the game [15]. Neely also emphasized the difference between in-game items obtainable by playing and real money with items only obtainable with real money. She concluded that as long as microtransactions do not give the player an unfair advantage, microtransactions are ethical.

## **2.6 Albert Bandura's social learning theory**

Developed by Canadian-American psychologist Albert Bandura in 1977, his social learning theory proposed that learning occurs through observation, imitation, and modeling. It is also influenced by factors such as attention, motivation, attitudes, and emotions. The theory accounts for the interaction of environmental and cognitive elements that affect how people learn [7].

While previous theories have so far argued that learning was through conditioning, rewarding [such as giving a dog a treat once they sat], and punishment [such as a teacher making their student stand up in class if they missed a homework], Bandura argued that learning can also be through observation [3], like knowing that a football is supposed to be kicked while watching a football match.

There are three key concepts in Bandura's theory:

1. **Observational learning**

People learn through observing others. In his now-famous Bobo doll experiment, Bandura brought children and an adult in a room together to test whether behavior is learned through observation. Children who saw an adult being aggressive towards the doll also replicated the behavior. Bandura further split this concept into three parts:

- a. Observation
  - b. Imitation
  - c. Modeling [or Learning]  
Further split into:
    - i. Attention: understanding the modeled behavior
    - ii. Retention: remembering the modeled behavior
    - iii. Replication: replicating the modeled behavior
    - iv. Motivation: what makes the subject want to replicate the behavior
2. Intrinsic reinforcement
- While peer dynamics play a part in how people behave, reinforcement and motivation does not have to come from outside sources [3]. Intrinsic reinforcement as a form of internal rewards, such as pride, satisfaction, and a sense of accomplishment [18].

One might start working out because his friends invited them, but the motivation to ultimately have a fit and toned body must come from within, particularly as proper training takes months and sometimes years before one starts to notice the changes in their body.

3. Learning and behavior change
- Behavioral psychology dictates that to learn, one must change their behavior. Bandura proposes that learning will not necessarily change one's behavior, but rather learn it without demonstrating any behavior change [17] through Modeling, which are explained above.

When it comes to video games, Bandura's social learning theory has traditionally been used to explain the link between video games and violent behavior. It is still being researched, and some argue in favor of a link while others deny it [20]. This research will instead focus on the link between video game peers' behavior and the player's microtransaction spending habits.

## **3 Research Design**

### **3.1 Type of study**

When it comes to research, either a quantitative or qualitative approach is commonly used [21]. Quantitative research is used to test and/or confirm theories, while qualitative research is used to understand concepts and experiences [19]. As a result, quantitative data are often expressed in graphs and numbers; qualitative data are explained in words and stories.

[22] noted the various type of sociological studies, including:

1. Surveys/questionnaires
2. Secondary/desk research [analyzing previous research]
3. Experimental [in a more controlled environment]
4. Interviews
5. Case studies
6. Longitudinal studies [examining subjects across a relatively long period of time]

As this research's goals are to determine whether there is a correlation between players' peer behavior and their microtransaction spending habits, this research will take a quantitative approach.

### **3.2 Unit of analysis**

The unit of analysis refers to the subject whose qualities will be measured [Satter, n.d.]. This research's unit of analysis is at the individual level, specifically the players' social peers.

Unit of measurement [also known as "unit of observation"] refers to the data that is actually collected [18]. Since this study aims to determine if players' peers actually have an impact on their spending habits, this research's unit of observation will be the players that will actually be surveyed.

### **3.3 Population target**

Population refers to the dataset that will be observed, while a sample is a subset of the population that will represent the population in a statistical analysis [23].

This research's population refers to players who play video games with any form of microtransaction in the Tangerang area. Players surveyed are from the ages of 16 to 30 as the vast majority of Indonesian gamers are around that range [23]. It includes various video games with differing genres as microtransactions are not limited to a single genre.

### **3.4 Sampling method**

Due to [23] findings of Indonesian gamers by age range, only players aged 16-30 will be sampled. Due to the nature of the research and for practical reasons, purposive sampling will be utilized as only *Genshin Impact* players will be studied. People who do not play video games and/or people that play video games other than *Genshin* will be excluded from this study.

Purposive sampling is a non-probability sampling technique that selects samples due to the required characteristics [23]. For this research, purposive sampling is used to gather and analyze shared experiences of *Genshin Impact* players. Non-gamers and gamers who do not play *Genshin* are not sampled.

### 3.5 Data collection

For this research, an online survey will be conducted in the form of questionnaires. This research will use a 5-point Likert scale to measure the level of agreement of each item presented in the questionnaire which is as follows:

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

The questionnaire structure is as follows:

1. Introduction  
This section will explain to the participants what the research is about.
2. Screening questions  
To determine whether a certain participant is eligible to be sampled, questions to confirm their eligibility must be asked. For this research, it includes their age, whether they play video games or not, and the kind of games they play.
3. Variables  
Once a certain participant is eligible, questions that will gauge a participant's social peer behavior according to social learning theory's key concepts of observational learning and intrinsic reinforcement affect their microtransaction spending habits.

Once the sufficient number of responses are collected, a series of tests will be performed. These tests will be outlined below.

### 3.6 Data processing

A pre-test must first be conducted to ensure the validity and reliability of the questions used in this research. The post-test will collect data from a minimum of 114 participants in regards to the sample. A validity and reliability test will be conducted to confirm the questions' validity and readability. Finally, all collected data will be analyzed with SPSS.

This research has multiple independent variables, but only one dependent variable. Hence, a multiple linear regression is performed to determine the relationship between the variables.

### 4 Results and Discussion

A multiple regression analysis is utilized in accordance with research conditions (multiple IVs and only 1 DV). There are 3 core tables to a multiple linear regression analysis, namely:

1. Model summary
2. Coefficient table (for equation modeling and t-test)
3. ANOVA (for F-test)

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958 <sup>a</sup>	.917	.916	2.213

a. Predictors: (Constant), IRtot, Oltot  
 b. Dependent Variable: SBtot

Figure 4.1 – Model summary

The model summary table has an adjusted squared R value of 0.916, which indicates that both independent variables account for 91.6% of the dependent variable’s variability, adjusted for the number of independent variables.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-3.544	1.005		-3.526	.001	-5.527	-1.562
	Oltot	.653	.075	.510	8.749	.000	.505	.800
	IRtot	.605	.076	.464	7.970	.000	.455	.755

a. Dependent Variable: SBtot

Figure 4.2 – Coefficient table

Next, the coefficient table provides the values needed for the regression formula. The formula for a multiple linear regression is as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2$$

Where:

Y : dependent variable

$\beta_0$  : y-intercept (the value of Y when all X values are 0)

$\beta_1, \beta_2$  : the coefficients for the independent variables X1 and X2, representing the change in Y for a one-unit change in the corresponding X.

X1, X2 : independent variables

Therefore, the general equation form to predict microtransaction spending behavior (y / SB) based on observational learning (x1 / OL) and intrinsic reinforcement (x2 / IR) is as follows:

$$SB = -3.544 + (0.653 * OL) + (0.605 * IR)$$

Finally, hypothesis tests are required to confirm the hypothesis. This research uses the t-test and F-test; the results are summarized in the table below:

Hypothesis	t-test (individual)		F-test (simultaneous)		Hypothesis conclusion
	t-score > t-table (1.973)	Sig < 0.05	F > F-table (3.042)	Sig < 0.05	
H1: OL - SB	8.749	0.000	1052.578	0.000	Accepted
H2: IR - SB	7.970	0.000	1052.578	0.000	Accepted

Figure 4.3 – Hypothesis testing summary

From these results, it can be concluded that both hypotheses are accepted.

The t-test results proved that microtransaction spending behavior is influenced by observational learning from one's peers, corroborating previous studies that link the influence of others on behavioral patterns. Therefore, the more social the player environment, the more likely it is for one player to be affected by their microtransaction. As online games like *Genshin Impact* require the player to always be connected to the internet, there is practically no chance players will not interact with other players during the course of their gameplay. Social features like co-op play and leaderboards also provide this social connection, and with it the influence of gaming behavior. Playing *Genshin* in particular, provides social opportunities and digitalized communication, improving players' social lives (Clemente & Realgo, 2024).

Albert Bandura's social learning theory has long been utilized to explain behavioral patterns, but exploring human interaction with digital technology is a relatively recent phenomenon (Hill et al., 2009). The data from this research suggest that the more a player's peers purchase microtransactions, the more likely it is for the player themselves to follow suit. With more purchases, a sense of normalization is also imparted on players, leading them to accept that buying these slot machine-style microtransactions is a normal thing (Turkay et al., 2014).

Previous studies mentioned the influence of one's uses and gratifications on behavior. In augmented reality (AR) online game *Pokémon Go*, players have been found to use their own needs and wants as the drive to continue playing. Research by Wu et al. (2010) also attributed players' desire and motivation to continue playing to their own volitions and desires.

## 5 References

- [1] Wittgenstein, L. *Philosophical Investigations: The German Text, with a Revised English Translation 50th Anniversary Commemorative Edition* [G. E. M. Anscombe, Trans.]. Wiley, 2001.
- [2] McCormick, E. "Industrial and Organizational Psychology Prentice hall,"
- [3] Dubois, L.-E., & Weststar, J, "Games-as-a-service: Conflicted identities on the new front-line of video game development," Sage Journals.
- [4] Ingram, *Sales management: Analysis and decision making*. Routledge, 2019.
- [5] Toto, S. "Gacha: Explaining Japan's Top Money-Making Social Game Mechanism [Social Games] – Kantan Games Inc. CEO Blog – From Tokyo, Japan. Kantan Games,," Kantan Games.
- [6] Turkay, S., Hoffman, D., Kinzer, C. K., Chantes, P., & Vicari, C, "Toward Understanding the Potential of Games for Learning: Learning Theory, Game Design Characteristics, and Situating Video Games in Classrooms."
- [7] Astle A, "Genshin Impact surpasses \$3.6 billion revenue ahead of second anniversary.

- [8] Grant, M. M S. Tamim, D. B. Brown, J. P. Sweeney, F. K. Ferguson, and L. B. Jones, "Teaching and Learning with Mobile Computing Devices: Case Study in K-12 Classrooms," *TechTrends*, vol. 59, no. 4, pp. 32–45, Jul. 2015, doi: 10.1007/s11528-015-0869-3.
- [9] Murphy-Hill, E. T. Zimmermann, and N. Nagappan, "Cowboys, ankle sprains, and keepers of quality: how is video game development different from software development?," in *Proceedings of the 36th International Conference on Software Engineering*, New York, NY, USA: ACM, May 2014, pp. 1–11. doi: 10.1145/2568225.2568226.
- [10] Zendle, D. and P. Cairns, "Video game loot boxes are linked to problem gambling: Results of a large-scale survey," *PLoS One*, vol. 13, no. 11, p. e0206767, Nov. 2018, doi: 10.1371/journal.pone.0206767.
- [11] Thorhauge, A. M. "The steam platform economy: From retail to player-driven economies," *New Media Soc*, vol. 26, no. 4, pp. 1963–1983, Apr. 2024, doi: 10.1177/14614448221081401.
- [12] Kurkovsky, S. "Engaging students through mobile game development," *ACM SIGCSE Bulletin*, vol. 41, no. 1, pp. 44–48, Mar. 2009, doi: 10.1145/1539024.1508881.

- [13] Hair, J. F. G. T. M. Hult, C. M. Ringle, M. Sarstedt, N. P. Danks, and S. Ray, "An Introduction to Structural Equation Modeling," 2021, pp. 1–29. doi: 10.1007/978-3-030-80519-7\_1.
- [14] McClure, R. F. and F. G. Mears, "Video Game Players: Personality Characteristics and Demographic Variables," *Psychol Rep*, vol. 55, no. 1, pp. 271–276, Aug. 1984, doi: 10.2466/pr0.1984.55.1.271.
- [15] Neely, E. L. "Come for the Game, Stay for the Cash Grab: The Ethics of Loot Boxes, Microtransactions, and Freemium Games," *Games Cult*, vol. 16, no. 2, pp. 228–247, Mar. 2021, doi: 10.1177/1555412019887658.
- [16] L. A. Guerrero, S. F. Ochoa, J. A. Pino, and C. A. Collazos, "Selecting Computing Devices to Support Mobile Collaboration," *Group Decis Negot*, vol. 15, no. 3, pp. 243–271, May 2006, doi: 10.1007/s10726-006-9020-3.
- [17] D. Leahy, "Rocking the Boat: Loot Boxes in Online Digital Games, the Regulatory Challenge, and the EU's Unfair Commercial Practices Directive," *J Consum Policy (Dordr)*, vol. 45, no. 3, pp. 561–592, Sep. 2022, doi: 10.1007/s10603-022-09522-7.
- [18] J. Batchelor, "Midia Research: Video games to pass \$300bn revenue, 3.8 billion players by 2030," *GamesIndustry.biz*.
- [19] M. R. Johnson and J. Woodcock, "The impacts of live streaming and Twitch.tv on the video game industry," *Media Cult Soc*, vol. 41, no. 5, pp. 670–688, Jul. 2019, doi: 10.1177/0163443718818363.
- [20] Prasetya, D. C., Arinda, F. K., Rini, E. P., & Nicola, N, "The Dynamics of Gambling Behavior Among Genshin Impact Players in Indonesia," 2022.
- [21] A. T. Maan, G. Abid, T. H. Butt, F. Ashfaq, and S. Ahmed, "Perceived organizational support and job satisfaction: a moderated mediation model of proactive personality and psychological empowerment," *Future Business Journal*, vol. 6, no. 1, p. 21, Dec. 2020, doi: 10.1186/s43093-020-00027-8.
- [22] J. Khan, M. Usman, I. Saeed, A. Ali, and H. G. Nisar, "Does workplace spirituality influence knowledge-sharing behavior and work engagement in work? Trust as a mediator," *Management Science Letters*, vol. 12, no. 1, pp. 51–66, 2022, doi: 10.5267/j.msl.2021.8.001.
- [23] Sugiyono, "Metode Penelitian Bisnis. Pendekatan Kuantitatif, kualitatif dan R & D," *Bandung: Alfabeta*, vol. 15, no. 2010, p. 90, 2010, doi: 10.1016/S0969-4765(04)00066-9.



**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

