Video Gaming and Gambling

Productive and Destructive Adventures

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Global Gaming Market Overview (2024)

Total Revenue: $187.7 billion (+2.1% from 2023)

Mobile Gaming: $92.6 billion (49% of total revenue)

Console Gaming: $51.9 billion

PC Gaming: $43.2 billion

North America Revenue: $50.2 billion

Projected Growth: Expected to reach $213.3 billion by 2027

Gaming Time Statistics (2024)

Global Average:

- Mobile: 1.6 hrs/day
- PC: 2.1 hrs/day
- Console: 2.1 hrs/day

U.S. Average: 12.8 hrs/week (~1.8 hrs/day)

Gen Z (10-25 years): 7.3 hrs/week

Millennials (26-41 years): 6.8 hrs/week

Gaming Time for Younger Children

Screen Time Recommendations:

- Under 18 months: Avoid screens (except video chat)
- 2-5 years: Limit to 1 hour/day
- 6+ years: Set consistent limits

Gaming Time for Younger Children

Actual Screen Time Usage:

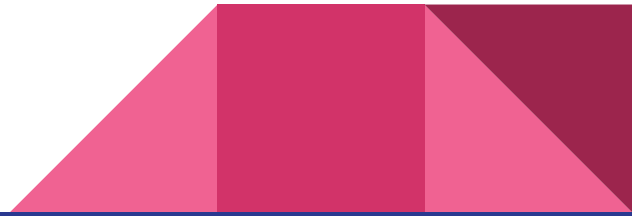
- Under 8: ~2 hrs/day
- 8-12 years: 5.5 hrs/day
- 8-18 years: 7.5 hrs/day

Gaming-Specific:

- Ages 6-8: ~2.7 hrs/day
- Roblox (ages 4-18): ~2.3 hrs/day

Neuroscientific Insights

Neuroimaging studies have found that similar brain regions are activated during both gambling and gaming activities. These studies suggest that the excitement derived from unpredictable rewards (whether monetary or virtual) involves overlapping neural circuits, which could explain why some individuals might transition from one form of behavior to the other.



Games and Gambling Tap Into Reward Mechanisms

Both gambling and many modern video games tap into the brain’s reward system.

Gambling = the uncertainty and potential for monetary gain trigger dopamine release, reinforcing risk-taking behavior.

Video games = especially those featuring loot boxes, randomized rewards, and microtransactions use variable reward schedules that can stimulate similar neural responses.

Game mechanics might encourage risk-taking like gambling behaviors.

Loot Boxes

Loot Boxes and Microtransactions

Loot boxes have become one of the most debated features in video games.

Similarity to Gambling: Loot boxes involve paying for a chance at obtaining rare in-game items, which mirrors the uncertainty of gambling.

Risk Factors: Studies suggest that individuals, particularly younger players, who engage with these mechanics may be more likely to develop problematic behaviors later on. However, it remains an open question whether these features cause gambling problems or if individuals already inclined toward risk-taking are simply drawn to these games.

Brawl Pass - Brawl Stars

Enticement

Buying all the offers


ULTIMATE SALE
1 d. 16 h. 20 m.
Contains:
x5
Champion
Crate
x10,000
A-Coins
x1,000,00
Credits
x50
Gold Tickets
x50
Fortune Keys
Division 1 Pack
Continue your journey to Mech Arena fame
$49.99
-89%

Mech Arena

Loot Boxes and Microtransactions

Problem Behaviors: There is evidence indicating a correlation between engagement in gambling-like video game features and symptoms of problematic gambling and gaming. However, the direction of causality is still debated.

Individual Differences: Factors such as age, personality, and socio-economic background appear to moderate the impact of these gaming features, meaning that not all players are equally at risk.

Examples of Loot Boxes

Loot Boxes in Star Wars Battlefront II

How It Works: In this game, players can purchase loot boxes that offer randomized rewards, including in-game items and upgrades. The randomness and potential for obtaining rare or powerful items create a situation very similar to a lottery or slot machine.

Gambling-Like Element: The uncertainty of what each box contains taps into the same variable reward system found in traditional gambling, where the anticipation of a high-value outcome can drive repeated spending.

Pack Openings in FIFA Ultimate Team

How It Works: In the FIFA Ultimate Team (FUT) mode, players buy packs that contain random player cards. The rarity and quality of these cards are not known until the pack is opened, mimicking the excitement (and risk) associated with gambling.

Gambling-Like Element: Much like buying a lottery ticket, the act of opening packs involves risk and uncertainty, as players hope to secure valuable cards that enhance their team's performance. This system has been widely discussed in academic research for its parallels to gambling behavior.

Skin Trading in Counter-Strike: Global Offensive (CS:GO)

How It Works: CS:GO features loot boxes that provide cosmetic “skins” for weapons. These skins can be traded on secondary markets or even gambled in unofficial online betting sites.

Gambling-Like Element: The chance of acquiring a rare skin, combined with the possibility of trading it for real-world money, creates a virtual marketplace that resembles gambling, where the risk and reward dynamics are a core part of the experience.

In game purchases like gambling

Each of these examples demonstrates how game mechanics—especially those involving randomness and potential rewards—mirror traditional gambling structures.

Research has shown that these features may trigger similar psychological responses and, in some cases, could contribute to problematic spending or gambling behaviors among vulnerable players.

Positive Example, New Pressure

Fortnite Core Gameplay and Purpose

Gameplay Focus: Fortnite is primarily a competitive shooter with a focus on strategy, skill, and teamwork. Its monetization (through cosmetic purchases and the battle pass) is designed to enhance the visual and progression aspects of the game, not to simulate gambling.

Monetization Transparency: Items in Fortnite's store are offered at fixed prices, and rewards from the battle pass are earned through gameplay rather than chance.

How mobile gambling compares

Poker/Slot Machine Games:

- **Gambling Simulation:** These games are built around the principles of chance and risk. Mobile slot machine games, for instance, use random number generators to simulate the unpredictability of a real slot machine, while poker games (especially those mimicking traditional casino poker) often involve betting, chance, and sometimes even simulated or real monetary stakes.
- **Risk and Reward:** The core mechanics rely on uncertainty and the potential for winning rewards (or money), mirroring the experience of traditional gambling.

Use of Randomness

Fortnite:

- **Predictable Transactions:** When purchasing an item or a battle pass reward in Fortnite, players know exactly what they're getting. Even if some games include elements like loot boxes, Fortnite has largely avoided integrating such random, gambling-like mechanics.

Gambling Apps:

- **Random Outcomes:** In slot machine apps or certain poker games, the outcome is deliberately unpredictable. This randomness is central to the experience, triggering excitement similar to what one might feel in a casino.

Financial Stakes and Regulation

Fortnite:

- **Cosmetic-Only Purchases:** Transactions in Fortnite are strictly for cosmetic enhancements and do not affect gameplay balance. There's no mechanism for wagering money or virtual currency on uncertain outcomes.
- **Social Pressure:** Having the best or right skin now becomes peer pressure issue which may trigger impulse buying.

Gambling Video Games:

- **Betting Mechanics:** Many mobile poker and slot machine games involve betting, even if it's with virtual currency. In some cases, players might even have the option to use real money, which brings them under the scrutiny of gambling regulators.
- **Addictive Potential:** The design of these games leverages the same psychological mechanisms as physical gambling, which can make them more addictive and riskier for vulnerable individuals.

User Experience and Intent

Fortnite:

> **Entertainment and Engagement:** The primary intent is to provide a competitive, skill-based environment where monetization is a secondary, cosmetic layer.

Poker/Slot Machine Games:

> **Simulated Gambling Experience:** These apps aim to recreate the thrill of gambling, with uncertainty, risk, and reward as key drivers of user engagement.

While both types of games may involve transactions and in-app purchases, the fundamental differences lie in how randomness and risk are integrated. Fortnite's system is designed to be transparent and skill-based, whereas poker and slot machine video games are structured to simulate the uncertainty and risk inherent in traditional gambling.

Policy and Regulatory Implications

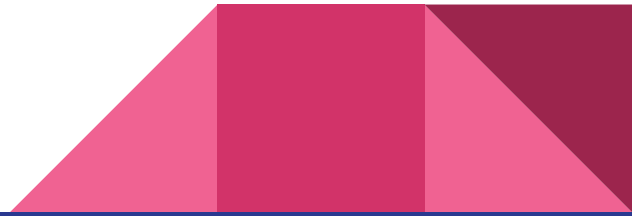
Regulatory Response: Some countries are already investigating whether loot boxes should be regulated under gambling laws. The debate centers on consumer protection, especially for minors, and whether the design of these game elements constitutes a form of gambling.

Industry Practices: Game developers are under increasing pressure to design mechanisms that mitigate potential harms while maintaining user engagement. This has led to discussions about transparency in odds, spending limits, and clearer warnings about the risks.

Microtransactions vs. Gambling Mechanics

Cosmetic Focus: The microtransactions in Fortnite are primarily cosmetic. They do not offer any competitive advantage and are not structured around variable reward schedules.

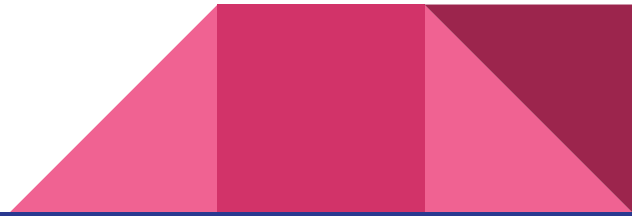
Contrast with Loot Boxes: Research on gambling-like features in video games—such as the studies by Zendle & Cairns (2018) and Drummond & Sauer (2018)—has mainly focused on loot boxes, where the outcome is uncertain and the potential rewards are unknown until after the purchase. Fortnite's design avoids this randomness.



Transparent Item Shop

No Randomization: Fortnite's item shop presents a rotating selection of cosmetic items for purchase with V-Bucks, its in-game currency. Unlike loot boxes, players can see exactly which items are available and at what price, eliminating the element of chance that is a hallmark of gambling mechanics.

Predictability: This transparency means that when you buy an item in Fortnite, you know what you're getting, which contrasts sharply with the randomized rewards in games like FIFA Ultimate Team or Star Wars Battlefront II.



Battle Pass System

Progress-Based Rewards: Fortnite’s battle pass system rewards players based on gameplay progression. As players level up their pass, they earn a set list of rewards rather than relying on chance. This predictable system further differentiates Fortnite from games that use gambling-like randomized reward mechanics.

Summary

In summary, while there is clear evidence that gambling and video gaming share common reward mechanisms and that features like loot boxes can mimic gambling behaviors, the relationship is complex. Not all players exposed to these elements develop problematic behaviors, and individual differences play a crucial role. Ongoing research is critical to fully understand the implications and to inform both policy and industry practices.

References

Zendle, D., & Cairns, P. (2018). *Video game loot boxes are linked to problem gambling: Results of a large-scale survey.* PLOS ONE, 13(11), e0206767.
This large-scale study found a significant association between engagement with loot boxes in video games and problem gambling behaviors, suggesting that the variable reward mechanics in games may share similarities with traditional gambling.

Macey, J., & Hamari, J. (2019). *eSports, skins and loot boxes: Participants, practices and problematic behaviour associated with emergent forms of gambling.* New Media & Society, 21(1), 20-41.
This research examines how emerging gambling-like practices—including the trading of in-game items and loot box systems—relate to problem behaviors, highlighting the psychological and social factors at play in digital gaming environments.

Drummond, A., & Sauer, J. D. (2018). *Video game loot boxes are psychologically akin to gambling.* Psychological Science, 29(10), 1576-1578.
In this brief report, the authors discuss the psychological parallels between loot box mechanics in video games and traditional gambling, emphasizing similar brain reward pathways and potential risks for vulnerable players.