PLAYING THE PLAYER

Unfair digital gaming practices and their impact on Australians

MONASH University

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Statement of Recognition

CPRC and Monash University acknowledge the Traditional Custodians of the lands and waters throughout Australia. We pay our respect to Elders, past, present and emerging, acknowledging their continuing relationship to land and the ongoing living cultures of Aboriginal and Torres Strait Islander Peoples across Australia.

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Introduction

When you play a game, you want to relax, learn, connect with friends or test your skill. Gaming should be an enjoyable experience. Yet, common design features in games are leaving players stressed and frustrated as they lose money and time trying to navigate game designs made to manipulate.

Dark patterns (also known as deceptive and manipulative designs) are everywhere – when we shop online, on social media, streaming services and booking systems. They are design features built into websites, apps and other digital platforms purely to steer consumer choice, and generally not in the consumers' best interests. This report examines the prevalence and related harm caused by dark patterns used in digital games. It presents the current gaming experience of Australian players and explains how manipulative designs are affecting players.

While not all games use the manipulative design tactics outlined in this report, these tactics are prevalent enough that **95%** of Australian adult players have encountered them at least once. Through a survey of Australians who regularly play digital games, we have identified the following harmful practices that require stricter regulation such as:

Deceptive designs that exploit cognitive biases and vulnerabilities, e.g. trick questions/confusing language, disguised ads, confirmshaming, and false hierarchies.

Designs and reward dynamics akin to gambling, e.g. loot boxes, battle passes, and skin betting.[1]

Layers of in-game currencies that mask or distort real-world monetary costs (microtransactions).

Manipulative practices targeted towards children.

The digital game industry is one of the largest entertainment sectors globally, with revenues surpassing both box office and music sales. Australians are estimated to spend more than AU$4 billion on digital games and gaming-related hardware each year.[2] This exceeds the annual spend on other common forms of entertainment such as films, streaming services, music or books. Globally, the market is predicted to have been worth more than $290 billion by the end of 2024.[3] Given the size and influence of this sector, we have to consider how to encourage great quality games and how to remove or reduce harmful practices.

At the time of releasing this report, Australia is considering introducing a ban on unfair business practices. This reform could address many of the worst harms identified in this report, especially if combined with reforms to how businesses collect and use consumer data. Even if these economy-wide reforms are implemented, two major harms will still need to be addressed. The first is the need to protect children from manipulative tactics in gaming. The second is the need to establish clearer pathways for redress when something goes wrong and to strengthen customer service obligations for digital products.

Key insights

95%

of Australian players encountered some form of dark game pattern in the past 12 months.

58%

had encountered more than 10 different types of dark game patterns in the past 12 months.

The most commonly encountered dark game patterns were freemiums, hidden costs and redirections or pop-ups.

83%

of players had experienced what they perceive as a negative impact as a result of encountering a dark game pattern

The most harmful dark gaming patterns (eliciting stronger negative impacts including time/money responses) were

Hidden costs

Data grabs

Freemiums

Close to half (42%) of Australian players who incurred loss (in terms of money or time) do not complain or seek support when things go wrong, even when they experience financial loss.

42%

46%

of players experienced some form of financial detriment from digital gaming:

- 27% felt pressured into buying something
- 30% spent more money than intended on a game
- 19% accidentally made a purchase

52%

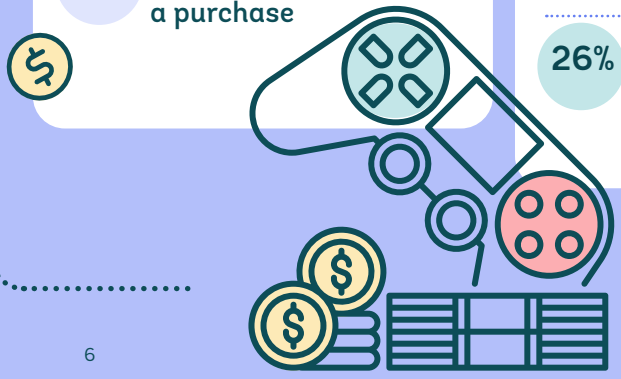
of players encountered some form of privacy harm:

- 34% accidentally signed up to something
- 31% created an unwanted account online
- 29% felt pressured into signing up
- 26% shared more personal information than they wanted to

59%

of players experienced a negative impact on their wellbeing:

- 54% reported feelings of annoyance from games
- 24% felt manipulated when gaming



Summary of recommendations

We recommend a series of safeguards for players of digital games.

1. Establish and uphold a duty of care to protect children and other vulnerable consumers

Digital gaming is prevalent across all age groups, with certain gaming practices, such as simulated gambling and in-game purchases, being particularly harmful to children. Game developers should adopt a duty of care towards all players by testing their choice architecture (e.g. algorithms, information transparency) to ensure fair and ethical treatment of players, particularly children and other players experiencing vulnerability.

2. Introduce meaningful and standardised disclosures

Current disclosure practices in app stores and gaming platforms are inconsistent. More meaningful and standardised disclosures are needed, which should focus on in-game features including loot boxes, in-game purchases (currencies, prices, schedules), the presence of chance or simulated gambling features, and the need for 'grinding' to achieve rewards. This would better enable players and parents to make informed choices.

3. Make unfair illegal

On 16 October 2024, the Australian Government announced the plan to ban unfair trading practices, legislating a general prohibition, in addition to a list of specific prohibitions on a range of practices.

These reforms, while still in consultation, should grant the ACCC and state and territory consumer protection agencies the authority to issue infringement notices – as is possible in other overseas countries.

4. Update privacy protections to align with 21st century realities

Current privacy laws do not adequately safeguard consumer data in the context of digital gaming. Reforms should include the right to opt in to data collection when playing a digital game (instead of the default opt out), and impose stricter limits on gaming companies' use of data. The law should clearly define personal information, expanding to cover all data that can identify individuals.

5. Ban the use of gambling-like designs in games

There is growing momentum for stronger regulations around gambling-like elements, such as loot boxes, within digital games. European Union countries have introduced bans or strict guidelines to mitigate these risks.

Australia needs to consider these examples and insist on clearer pricing, probability disclosures, and spending controls for in-game purchases, thus allowing players to make informed decisions.

6. Restrict microtransactions and enforce clear labelling of in-game transactions

Lessons from the sports-betting industry show that transparency of total spend can help players manage their risk and spend more effectively. Clear pricing in real-world currency should be mandatory and visible for every payment, and players should be able to track their total spend in real time to avoid unintentional overspending.

7. Impose penalties on digital gaming companies that fail to offer fair remedies

Strengthening Consumer Guarantees, including imposing penalties for breaches of the Australian Consumer Law, would hold digital gaming platforms accountable and ensure better outcomes for consumers.

8. Establish clear, accessible pathways for resolving disputes

Game developers should establish a framework for complaints, together with accessible customer service options, which would enhance player support and reduce frustration when issues arise.

The establishment of a Digital Ombudsman would centralise dispute resolution for digital gaming services and provide players with a fair and independent means to address complaints. This would improve transparency, customer service, and accountability across the gaming industry.

9. Ensure funding for digital game development in Australia is reserved for games that do not use dark patterns

Funding for digital games in Australia should be dependent on Australian developers creating games that do not utilise dark patterns, ensuring both player trust and sustainable growth for the local industry.

Methodology

The aim of this study was to understand digital gaming players' experiences of gaming design patterns and practices, including how players are affected by them.

This study is a collaboration between researchers from the Consumer Policy Research Centre (CPRC) and Monash University.[4]

Study and sample details

From 24 May to 10 June 2024, an online quantitative survey was undertaken with n=800 Australians who engage at least weekly in digital gaming via console, desktop and/or mobile device.

To ensure the research provided a comprehensive picture of the digital gaming world, the sample was stratified so that n=400 self-classified as playing games for more than 5 hours in total per week, and n=400 self-classified as playing games for between 1 and 5 hours per week. This stratification was devised by gaming researchers and confirmed within the gaming community as an accurate representation of diversity of gaming intensity.

In the absence of an independently recognised sample frame of the digital gaming population in Australia, the sample frame for this study was designed to be disproportionately stratified to enable robust comparison and deep dives into subsamples of light/medium and heavy gamers, as well as an audience segmentation.

This study does not include responses from children/people under the age of 18 years. However, in reviewing examples of harmful gaming tactics provided through the survey responses, researchers identified games that were either available or appealing to children.

Confidence interval and margin of error

The margin of error (95% confidence interval) associated with a sample of n=800 at the 50th percentile is +3.5%. This means that if the proportion for a particular question is 50% within the overall sample, we can be 95% confident that the result in the broader population lies between 46.5% and 53.5%.

The research instrument

The quantitative questionnaire was cognitively tested by researchers and gaming experts at Monash University prior to commencing the fieldwork.

Question topics this study investigated included:

- gaming behaviours and preferences, including gaming styles, variety, companions, time of day
- gaming attitudes and engagement, including motivators, engagement with gaming culture, adoption of new forms of digital gaming
- frustrations experienced during digital gaming, including consequences such as financial, privacy and wellbeing effects
- encounters of dark game patterns and perceived negative impacts, including behavioural responses costing money, time or effort, and perceived personal impacts (positive, neutral or negative)
- psychographics, including engagement with pop culture, social media and trends
- demographics.

Players' comments on their experiences and personal gaming imagery were also collected in the survey and are used throughout this report to highlight tactics perceived by players to be manipulative in digital gaming.

Prior to commencement, the research approach and research instrument received ethical approval from the Monash University Human Research Ethics Committee.

Quantitative findings, and categorisation of dark game patterns, were socialised via an expert roundtable held on 27 August 2024. The roundtable was attended by experts in gaming, consumer law, consumer advocacy and gambling.

About the research

Study limitations

Due to the absence of a nationally recognised sample frame of the adult digital gaming population in Australia, this sample, while robust, may not be representative of the Australian adult digital gaming population. In comparing findings with other recent Australian research, our research is consistent in gaming intensity, as well as gender and age distributions.[5]

This methodology was designed to measure adult players' experiences with digital games overall. The study provides a view of how many players have encountered specific harmful practices but the extent of dark patterns present within individual games or across game types was not measurable using this methodology.

Examples used in this report are those provided by survey respondents when asked to give examples of games with certain features or gameplay styles. As some games are updated frequently, we note that the examples used in this report reflect games available during the May to June 2024 period and those features may have been removed or adjusted since then. Unless specified, the businesses or practices referenced are not necessarily breaching current consumer laws or protections. For legal reasons we have chosen not to directly name small businesses using harmful practices in this report.

Lexicon used within the report

The report uses the terms 'players' or 'gamers' overall, based on player intensity and likelihood of the segment identifying as a 'gamer'.

The research referenced a series of gaming genres, but researchers note that many genres have some degree of overlap with each other making it impossible to classify game genres in a mutually exclusive manner. For example, the simulation genre encompasses many sandbox titles (e.g. Minecraft).[6] Similarly, games such as the Grand Theft Auto series (which began primarily as a driving game) crossed over categories and could be considered a sandbox, and a shooter.[7] For this reason, the questionnaire and gaming genres were developed in collaboration with gaming experts and tested with digital game players.

There are references within this report to outcomes or consequences experienced as a result of digital gaming. These include accidentally signing up or buying something; spending more than intended; feeling pressured to sign up, create an account, or buy something; sharing more personal information than intended; or feeling annoyed, manipulated or that having one's trust undermined.

This report centres around 'dark game patterns', a well-regarded term adapted from dark patterns found in the broader digital environment.[8] Dark game patterns refer to a series of design features that can be built into a game to steer consumer choice, often not in the player's best interest. These are described in more detail in Table 1.

The report refers to the impacts of dark game patterns, as perceived by players, in response to individual harmful practices/dark patterns. We refer to impacts on a scale of 'very negative' through to 'very positive'. This report mostly discusses the negative impact unique to each type of dark pattern, as well as the aggregated negative impact across any and all dark game patterns encountered.

We measured behavioural responses to the negative impacts of dark game patterns. These included not doing anything, trying to do something to no avail, changing settings on the game, quitting and reloading, stopping playing and switching to a different game temporarily, dropping out and quitting the game permanently, or paying for a premium version of the game.

Lastly, while respondents may have reportedly stopped playing or switched games when encountering these practices, this assumes that many individuals recognise the issue and take rational steps to avoid harm. However, as we did not survey children aged under 18 years, behavioural responses may not reflect the full picture in that harmful gaming practices often affect children and less capable consumers who might not have the same awareness or ability to avoid harm. This means that proportions of rational responses (e.g. stopping play or switching) may represent the best-case scenario, primarily reflecting more capable consumers. It should not be assumed these findings are fully representative of all consumers, especially consumers experiencing vulnerability, as they may underestimate the negative impacts to such groups.

Why do people play games?

Australian digital game players predominately engage in gaming to be entertained, to learn, and to boost their mood (Figure 1). Most players see digital gaming as their main source of entertainment (83%), while a significant proportion immerse themselves in gaming to enhance their problem-solving abilities (65%), and more than half find that digital gaming creates a positive shift in their mood (57%).

These findings are consistent with other recent research showing that the main reasons Australians play digital games are for fun, and to destress.[9]

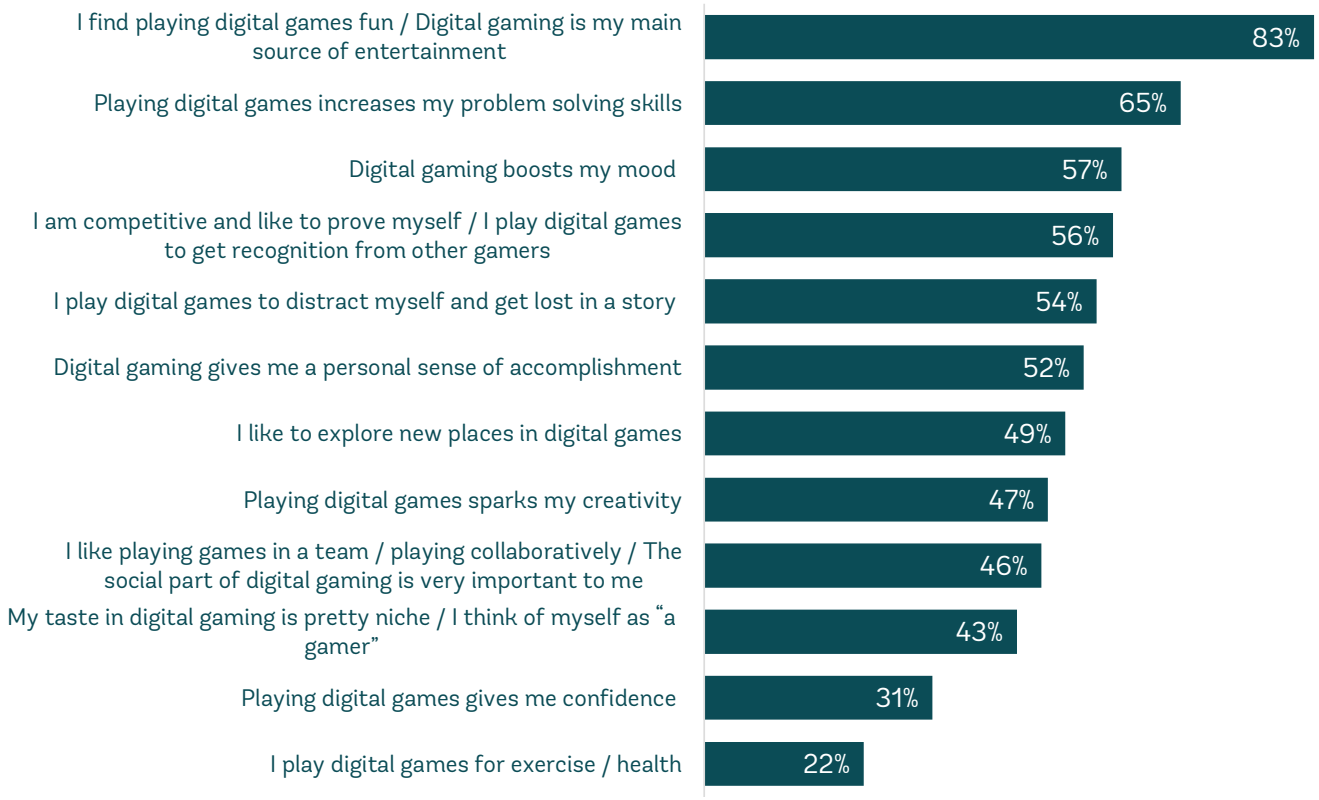
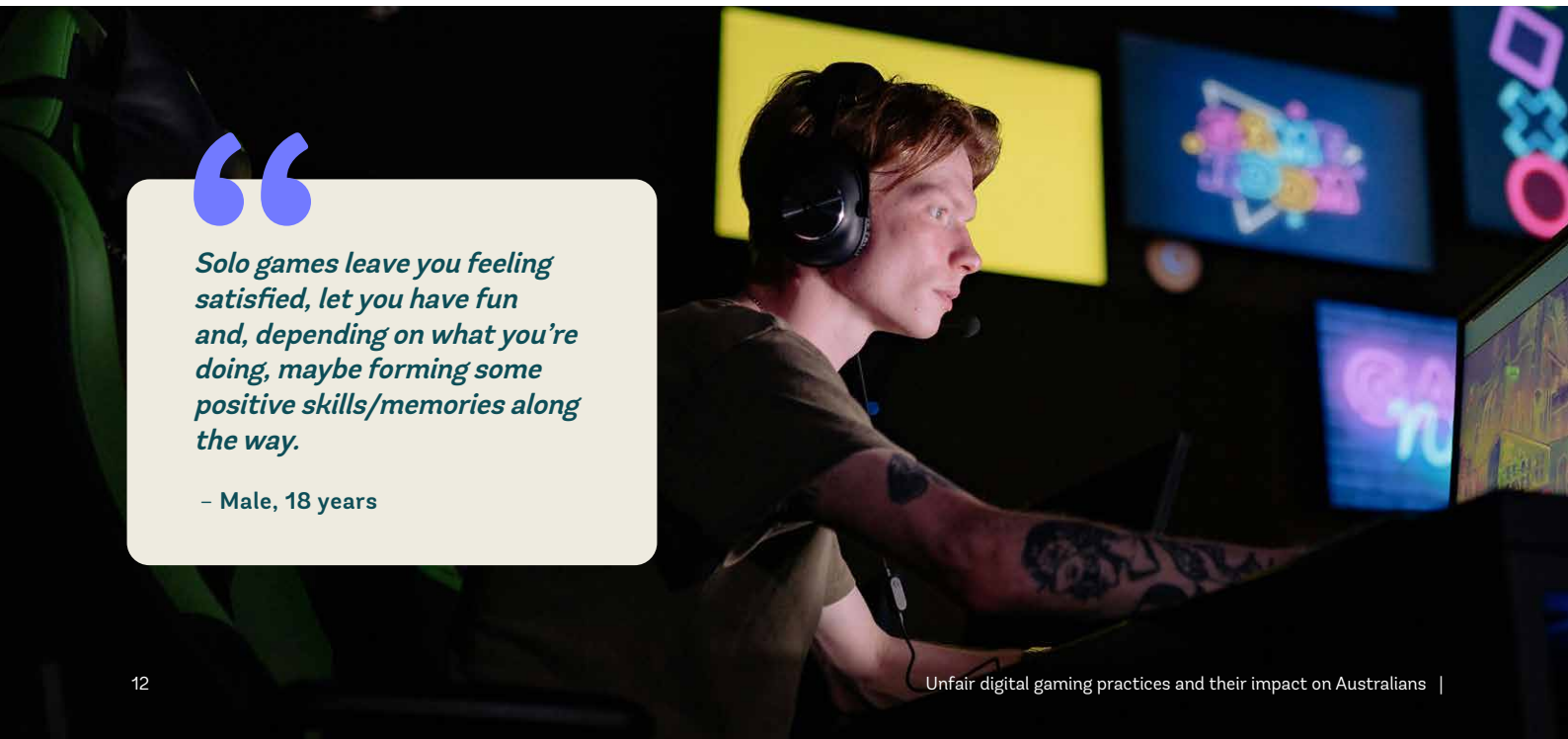


Figure 1. Reasons why Australians engage in digital gaming



> ***Solo games leave you feeling satisfied, let you have fun and, depending on what you're doing, maybe forming some positive skills/memories along the way.***
>
> **– Male, 18 years**

When describing their favourite game, players use words consistent with fun, entertainment, relaxation and leisure, and also derive enjoyment from strategic and problem-solving tasks.

> *Creative, out-of-the-box thinking and problem-solving. You have to identify sets of words that are connected in increasingly abstract ways.*
>
> – Female, 35 years

> *GTA online: Driving, RPG. Fun mindless fun with friends or by myself.*
>
> – Male, 29 years

> *Cats and soup: Relaxing idle game that's fun.*
>
> – Male, 54 years

> *Farmville: The visual animations and interactive elements of the farm, like birds landing on scarecrows and farmhands playing games, add a lively atmosphere to the game.*
>
> – Female, 37 years

> *FIFA: Sports I use it to relax. I enjoy the real-life sport so enjoy playing it virtually as well.*
>
> – Male, 25 years

> *Fortnite: It's something different you can play together with everyone.*
>
> – Female, 28 years

> *Elder scrolls: It's a highly immersive online role playing game. Set in a fantasy world where every action has consequences*
>
> – Male, 25 years

Figure 2. Words players used to describe their favourite game

Australian digital game players show relatively strong engagement with gaming, with Australian players engaging with an average of 2.8 activities related to gaming culture on a regular basis. The most common being watching gaming videos such as 'Let's Play' videos on YouTube, gaming streams and walkthroughs (44%).

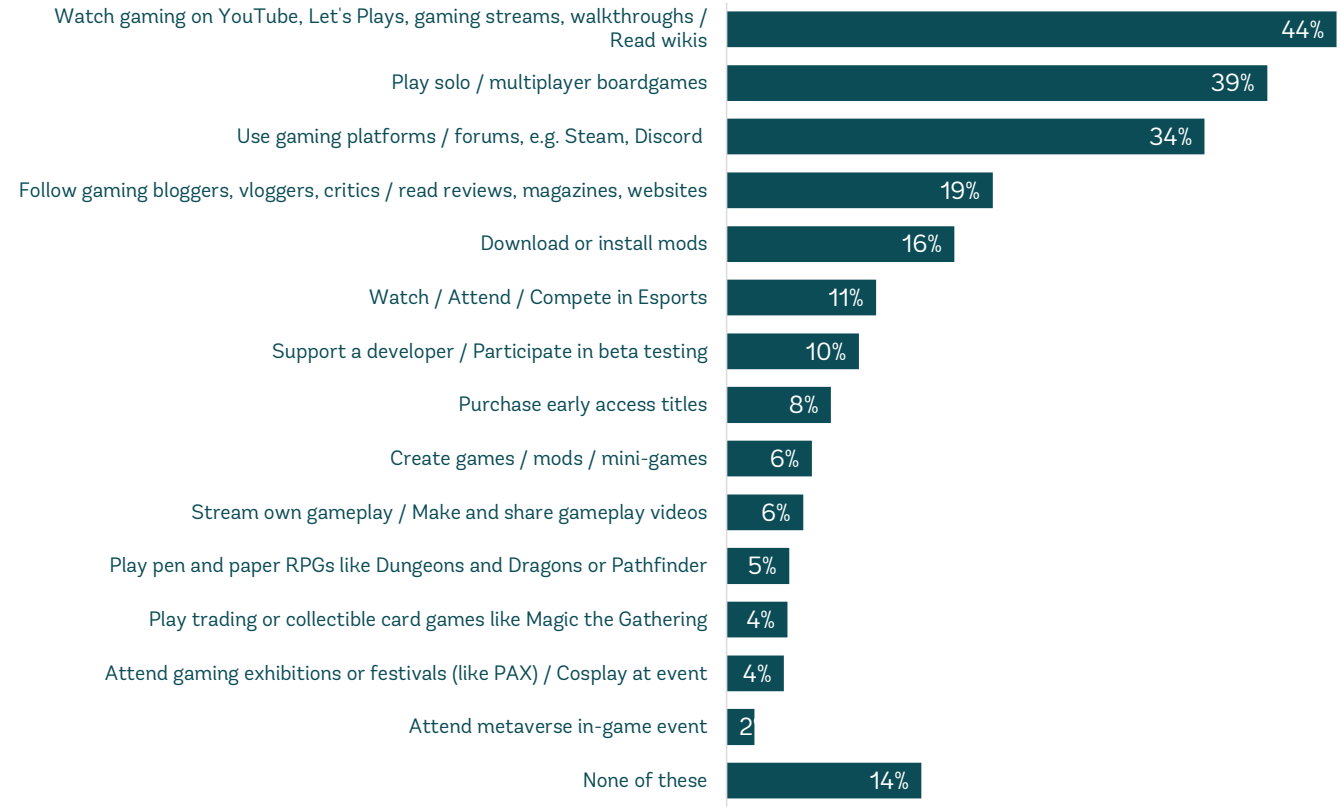


Figure 3. Engagement on a regular basis with cultural activities related to gaming

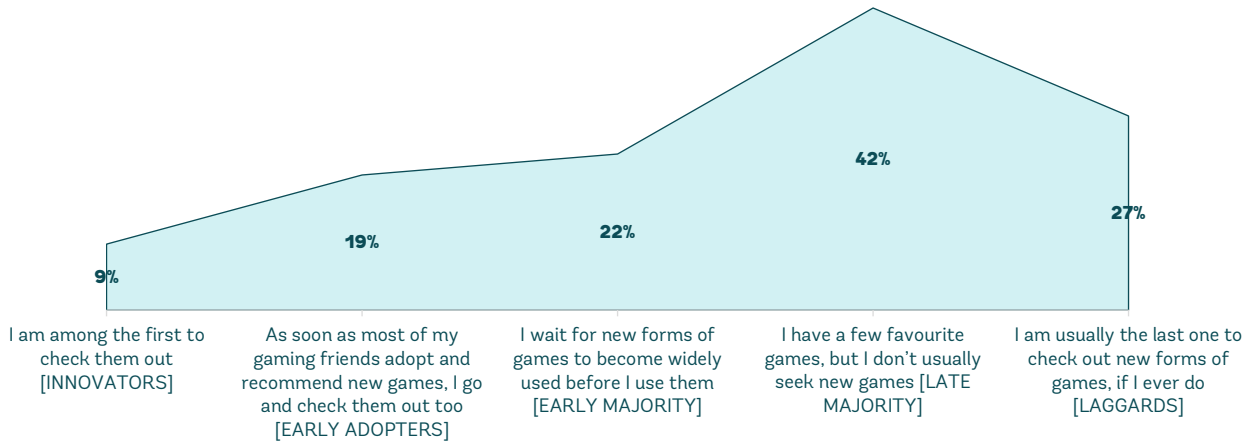


Figure 4. Gaming technology adoption segment

Know the player, know the game

Digital gaming has traditionally been perceived as a pastime engaged in by young males, yet both new and established research has generally indicated that the gaming audience has broader age and gender representation.[10] This changing audience is driven by the growing diversity of game styles and the increased availability of games on any/all personal devices.[11] Many people may not identify as conventional gamers and may be surprised to realise that they are targeted by dark game patterns.

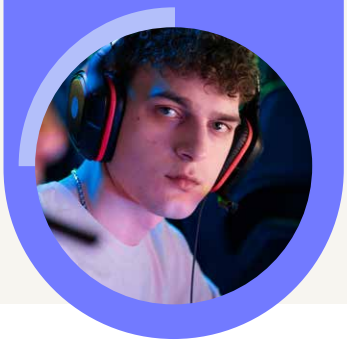
This research segmented adult players using latent class analysis, based on number of hours gaming per week, preferred gaming companions or opponents, gaming motivations, and gaming adoption type. Four unique segments of players were identified suggesting that, similar to other findings globally, the gaming population is now much more diverse and evenly spread across the generations than traditionally thought.[12]

Below are the four core player segments identified in this research:

Hardcore All-in Gamer [25%]

Characterised by their deep involvement in gaming, both in terms of hours spent and engagement with different game genres and cultures.

"The fantasy world filled with all the emotions makes you laugh, cry, love. In the real world I'm just a worker, but when I play, I'm a powerful Mage leader of the Guild, I unwind and forget all my troubles."



Relatively heavy playing intensity – plays for several hours a day (on average 14.5 hours per week)

2-5 game styles per week

Plays with broad range of opponents particularly random opponents matched with, partner, family members, friends and online acquaintances

Enjoys broad range of game genres **particularly shooters/battle royale, web/social, driving, fighting, sandbox, sims, MOBAs, MMOs**

Plays on all devices **mostly computer and console**

Diverse gaming motivations **entertainment, exploring, mood, social, accomplishment, creativity, learning, escapism, recognition, identity**

Pop culture and trends enthusiasts

Activities that relate to gaming culture watches gaming on YouTube, streams, uses gaming platforms, uses gaming forums, plays board games (average of 5.4 activities related to gaming culture)

Gaming Innovators/Early Adopters on gaming adoption curve among the first to experience new games/checks out new games as soon as friends do

1% non-binary or preferred not to say

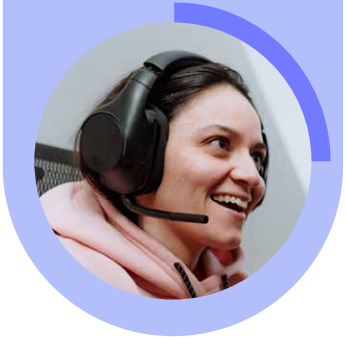
65% male **34% female**

35.6 Average Age

Oldschool Gamer [27%]

Characterised by their long history of gaming and focused, consistent and traditional gaming habits from the origins of cartridge gaming days.

"Gaming is so relaxing, and a great way to destress and just enjoy a game."



Relatively heavy playing intensity – Plays on average for just over an hour per day (9.3 hours per week)

1-3 game styles per week

Plays online with randomly matched people and acquaintances

Preferred game genres **shooters, driving games, sports, sandbox, fighting, sims, education/ training, cosy**

Most likely to play on **a computer and console**

Gaming motivations **entertainment, learning, mood, recognition, escapism, accomplishment**

Sees pop culture as a **vehicle for social/ political change**

Activities that relate to gaming culture some watching of gaming on YouTube, some use of gaming platforms/forums, plays board games (average of 2.4 activities related to gaming culture)

Early Majority on gaming adoption curve culture waits for new forms of games to become widely used before using them

52% male **48% female**

42.1 Average Age

Long history of gaming since childhood

Casual Brain Trainer [33%]

Characterised by their enjoyment of games that mix entertainment with elements of learning and skill development.

"My favourite game is interesting to play because in each new level you have to use your mind."

Medium/light playing intensity – plays on average for just under an hour per day (6 hours per week)

2-3 game styles per week

Typically **plays solo**

Preferred game genres **hidden object, web/social, education/training, sims**

Favours playing on **a mobile device**

Gaming motivations **entertainment, learning, recognition**

Moderate engagement with pop culture uses pop culture to understand world around, sees it as a vehicle for social/political change, keeps up with pop culture

Activities that relate to gaming culture plays board games, low level use of YouTube, gaming platforms/forums (average of 1.8 gaming culture activities)

Late Majority on gaming adoption curve culture has a few favourite games but does not usually seek new games

2% non-binary or preferred not to say

40% male **58% female**

45.1 Average Age

Mix of **singles, couples with and without children**

Seasoned Puzzle Master [15%]

Characterised by their preference for playing a smaller selection of puzzle-heavy games.

"Playing games is educational and keeps the brain active at my age."

Medium/light playing intensity – around 1 hour per day (7.7 hours per week on average)

1 game style per week

Typically **plays solo**

Preferred game genres **hidden object/puzzle games**

Favours playing on **a mobile device**

Gaming motivations **entertainment, learning**

Sees pop culture as a **vehicle for social/political change**

Low engagement with activities related to gaming culture – plays board games (average of 1.3 activities)

Laggards on gaming adoption curve – usually the last to check out a new form of game (if ever)

43% male **57% female**

50.8 Average Age

Mix of **singles/couples with children living at home and empty nesters**

Note: Demographic profiling represents skews; segments are not made of these cohorts exclusively

The game play

In a world where the digital gaming landscape is constantly evolving, gaming genres are also expanding and increasing in complexity, and overlapping with other genres.

What digital games are Australians playing?

Overall, this research found the top 3 genres of games played by Australian digital gamers in the past year were:

hidden object/puzzle games (e.g. Hidden Folks, Mystery Case Files, Words with friends, Wordle) – played by **68%** of players overall, predominantly on a mobile device

web/social (e.g. Candy Crush, Clash of Clans, Farmville) – played by **65%** of players overall, predominantly on a mobile device

shooters/battle royale (e.g. Fortnite, Call of Duty, Destiny) – played by **50%** of players overall, across the 3 different device types

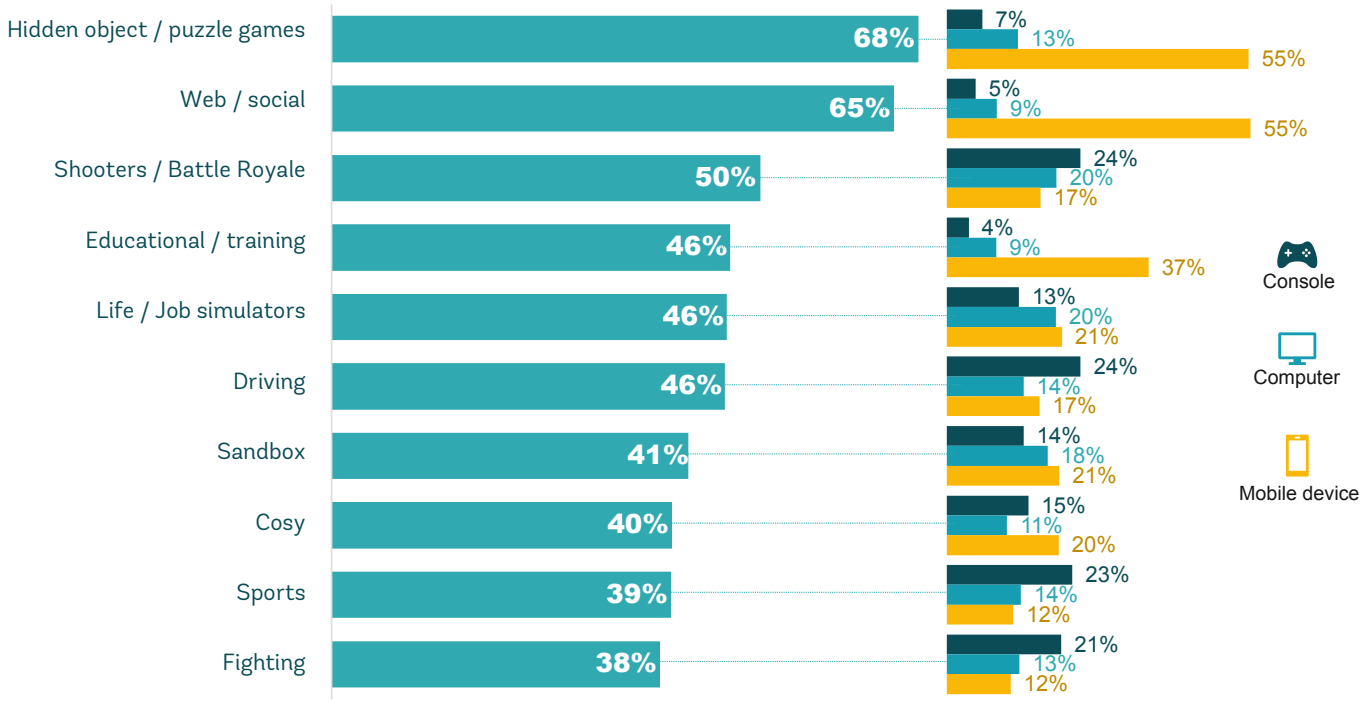


Figure 5. Top 10 most popular gaming styles and cross-device usage

How and when are Australians playing digital games?

Australian digital game players show diversity in the number and genres of games they play. Hardcore All-in Gamers demonstrate their adventurousness and commitment to gaming through enjoying, on average, 13.2 different game genres in the past year. Seasoned Puzzle Masters, at the other end of the engagement scale, enjoy a smaller rotation of favourite games (playing on average 3.4 different game genres in the past year).

As well as diversity observed in gaming genres, many Australian digital gamers engage in a lot of cross-play.[13] This is particularly evident for the games most played by Hardcore All-in Gamers and Oldschool Gamers (e.g. shooters/battle royale, sims, driving, sandbox) which all enable cross-play. The games played by Casual Brain Trainers and Seasoned Puzzle Masters tend to be on mobile devices only, requiring more constricted gaming behaviour on only one device type.

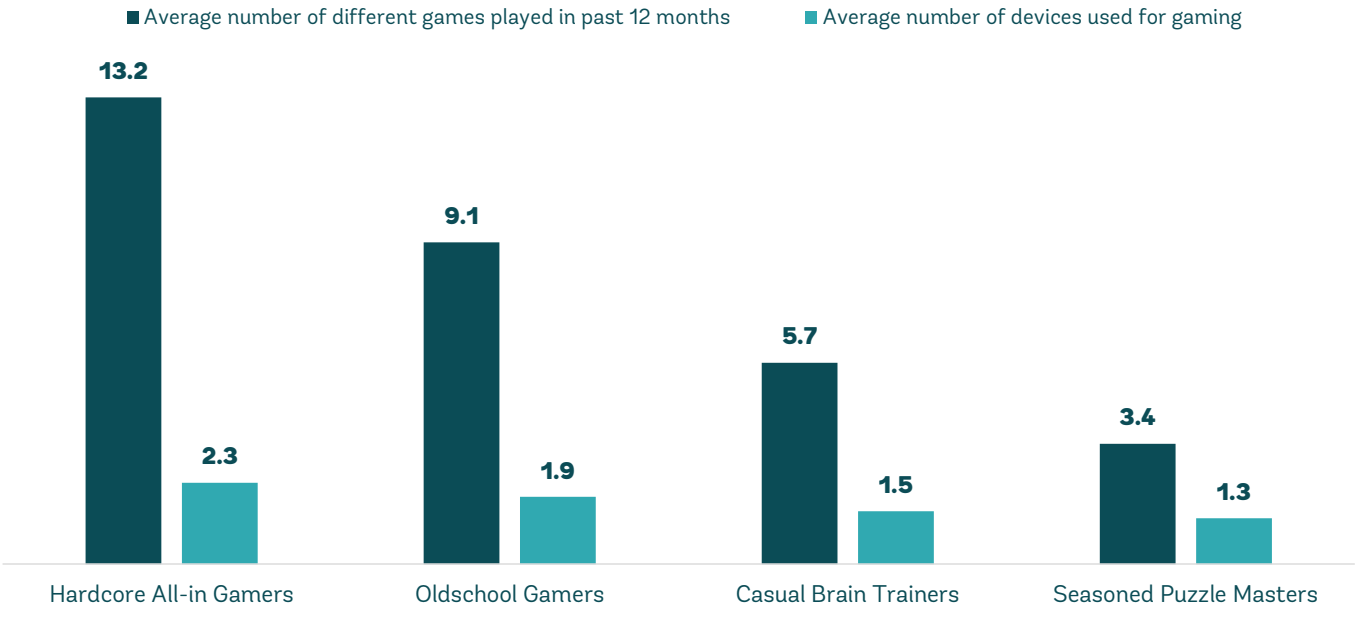
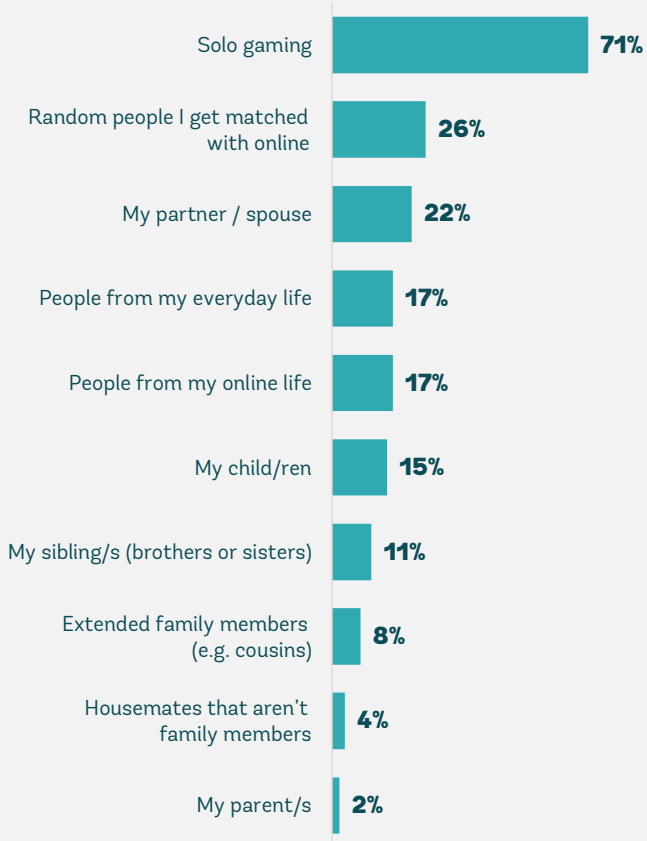


Figure 6. Average number of different game types played and device types used in the past 12 months

Solo gaming is dominant across game players with most people playing games during the evening and daytime on weekends (Figure 7). Players also enjoy being matched with random online opponents, as well as playing with family and friends. Overall, **15%** of players reported playing digital games with their children.



	Weekdays	Weekends	Total
Mornings 5-9am	23%	29%	38%
Day 9-6pm	34%	58%	68%
Evening/ night 6-11pm	70%	66%	87%
Late night 11pm-5am	16%	31%	34%

Figure 7. When and with whom are Australians typically gaming?

When does digital gaming stop being fun?

Players were asked (unprompted) about what frustrations they experience when gaming, or if they had encountered anything unfair in relation to the features or design of the game.[14] Overall, **33%** of players' comments referred to a dark pattern, and these encounters were deemed moderately to extremely frustrating for 7 in 10 players (**71%**).

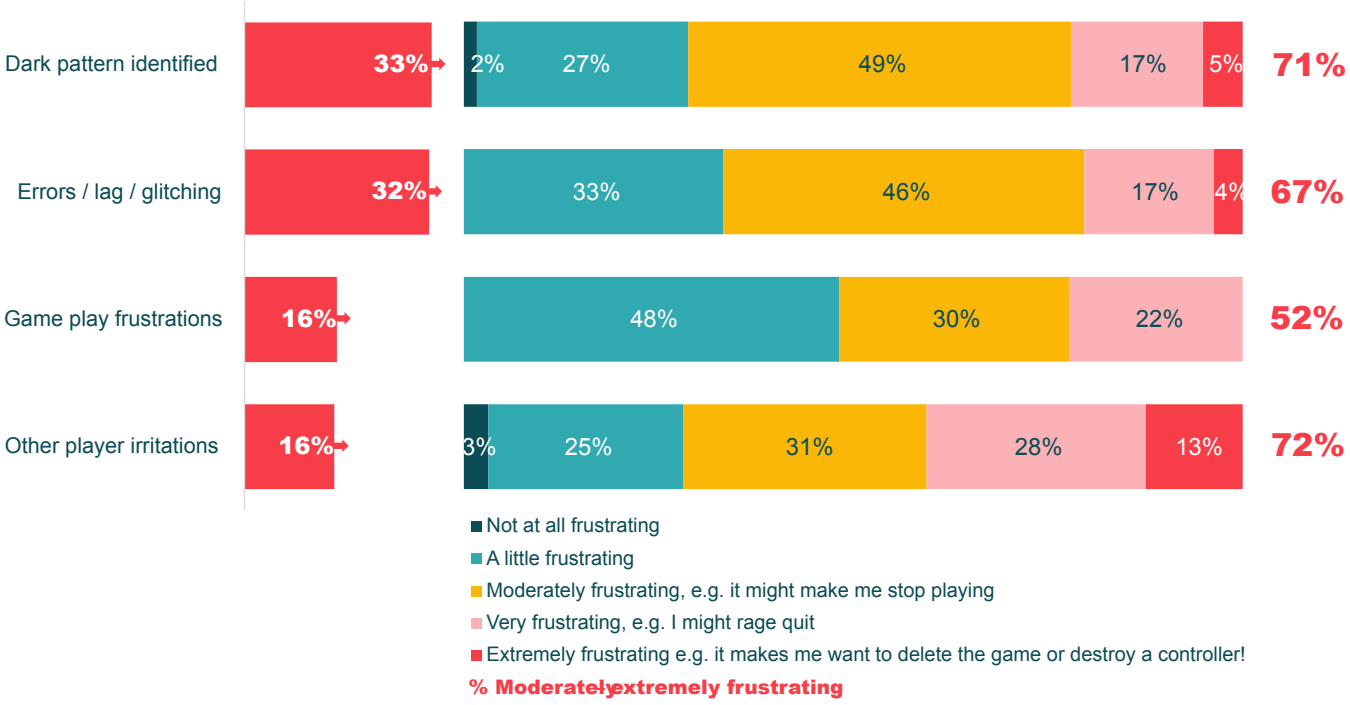


Figure 8. Unprompted frustrations and unfair practices in digital gaming, and level of frustration (noting frustrations were mentioned unprompted by n=229 respondents)

Specifically, players had been most frustrated recently with payment to win practices – where a microtransaction enables players to progress in a game, followed by ads in the middle of games.

> *"It feels like 99% of them [games] are made to create an emotional vortex of dopamine [and] chasing that, people – especially young men with a lot of anger – get sucked down, constantly chasing positive reinforcement through microtransactions and wins while in reality hating the experience moment-to-moment the majority of the time."*
>
> – **Male, 18 years**

> *"Games basically lovebomb you at the beginning and then take it away once you are acclimated to that level of progression and pay to get it back. They lock basic UX functions and mechanics behind paywalls so you have to pay just for basic functionality and anti-frustration. For example, fast travel tokens where you have to pay to fast travel somewhere else, otherwise you have to waste time and effort walking all the way to the location you need."*
>
> – **Female, 20 years**

What is the cost to players?

Costs of digital gaming are not only financial but also extend to negative consequences for privacy and wellbeing.

Undue financial loss

Financial loss is by far the biggest negative consequence of gaming experienced by players. Close to half (**46%**) of the players had experienced at least one of the following:

- spent more money on a game than they had intended (**30%**)
- felt pressured into buying something (**27%**)
- accidentally made a purchase (**19%**).

Loss of control over privacy

In the last 12 months, more than half of Australian players (**52%**) had encountered some form of privacy harm:

- accidentally signed up to something (**34%**)
- created an unwanted account online (**31%**)
- felt pressured into signing up (**29%**)
- shared more personal information than they wanted to (**26%**).

Weathering your wellbeing

While harms are traditionally considered from a financial perspective, and more recently in terms of privacy, it is clear that Australians are also experiencing negative consequences of gaming that affect their wellbeing.

In the last 12 months, **59%** of Australian players experienced negative impacts on their wellbeing as a result of a gaming practice. More than half of the players reported feelings of annoyance (**54%**) – by far the most reported negative impact – while close to a quarter of players (**24%**) reported feeling manipulated when gaming.

Loss of trust

Consumer trust is essential for market success but when consumers experience unfair or exploitative practices, trust is likely to deteriorate.[15]

Over the past 12 months, more than a quarter of players felt that their trust in a game designer or a gaming company had been undermined (**28%**). When reflecting beyond the past 12 months, the proportion of players experiencing a lack of trust increases to **44%**.

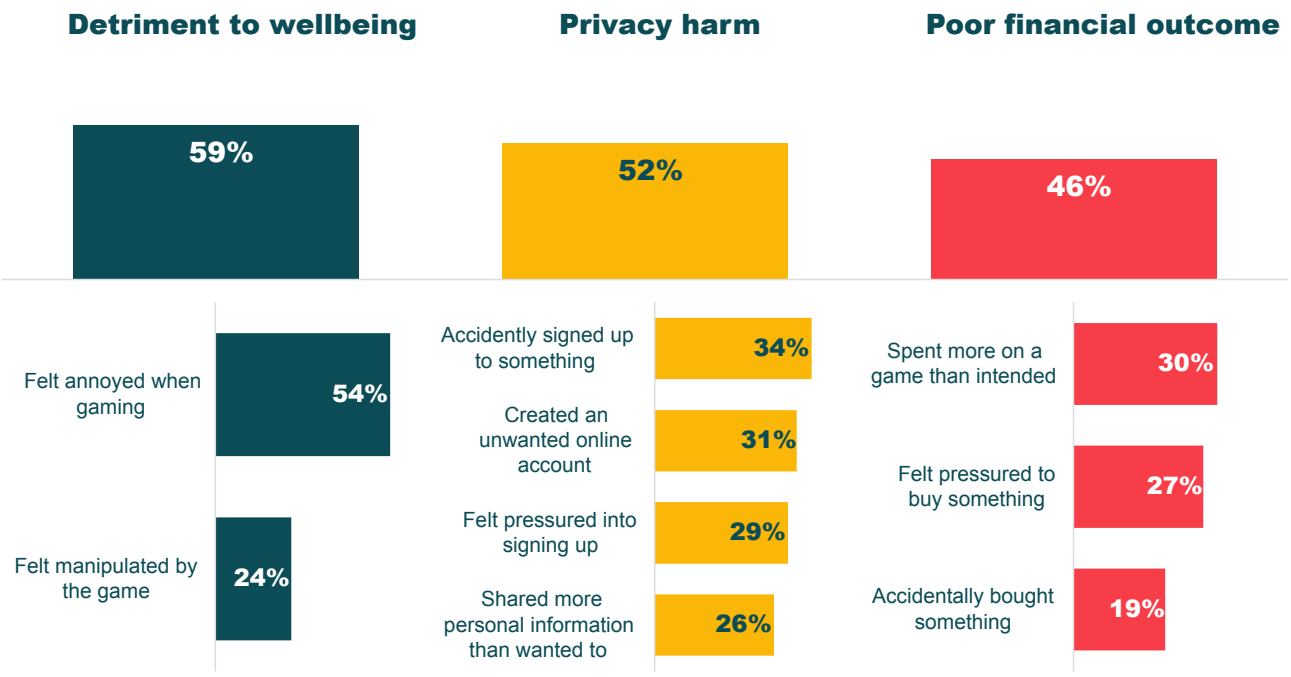
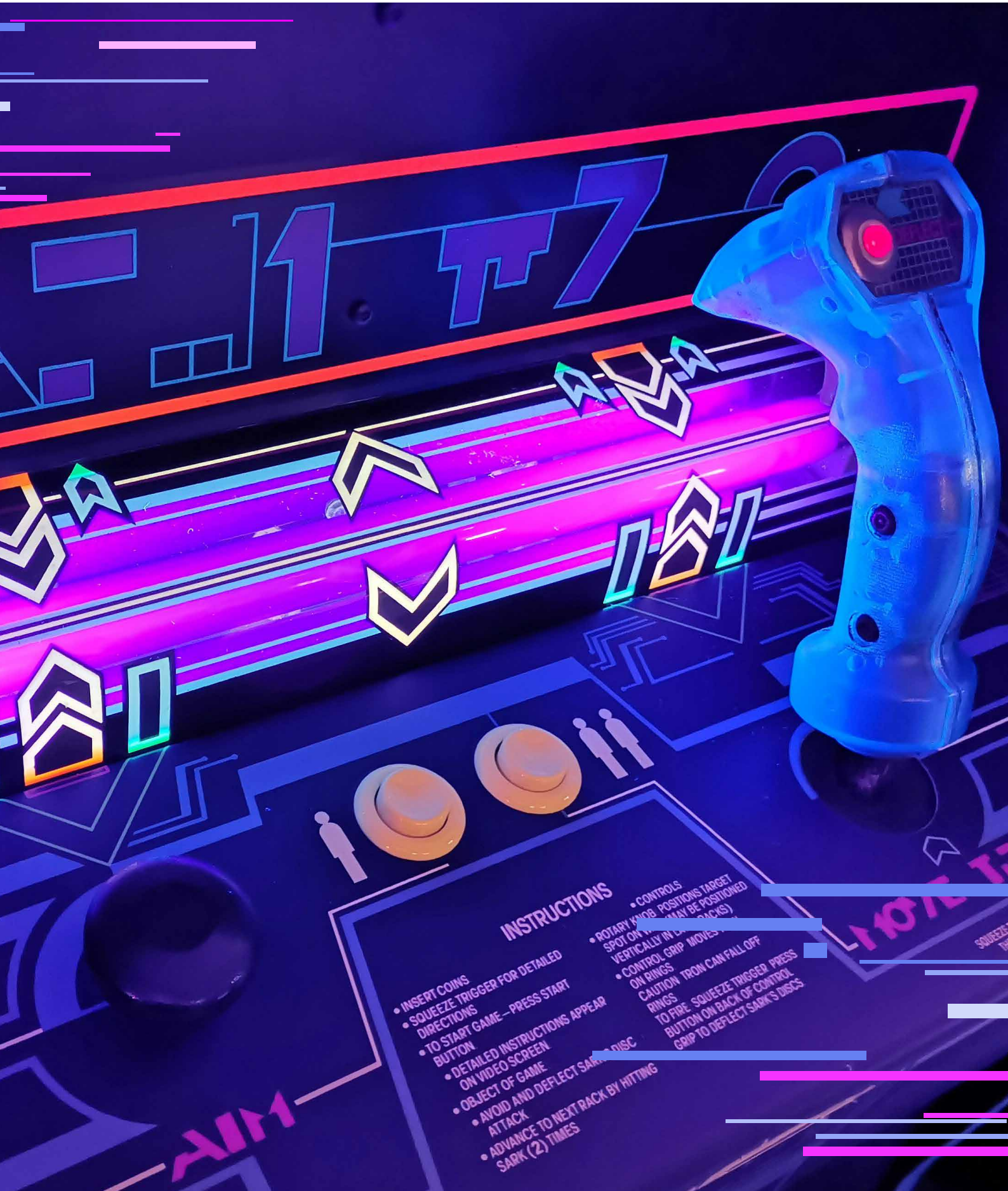


Figure 9. Losses and consequences from digital gaming within the past 12 months

Game design practices



When is a game design practice a dark game pattern?

Game design practices can be part of the fun of gaming, benign, or could cause harm.

Game design practices that can be considered unethical have been given various titles, from 'anti-patterns' and 'egregious game errors', recently settling on 'dark game pattern'.

> ***"A dark game design pattern is a pattern used intentionally by a game creator to cause negative experiences for the players that are against their best interests and happen without their consent."***[16]

Some researchers have made a distinction between 'bad design' and 'designing for bad'. In other words, some research seeks to understand the intent of the game designer.

Our survey focuses on the experience of the player. We cannot know if the games were deliberately designed to cause a negative effect on players, but we can show which practices players themselves say are causing them harm.

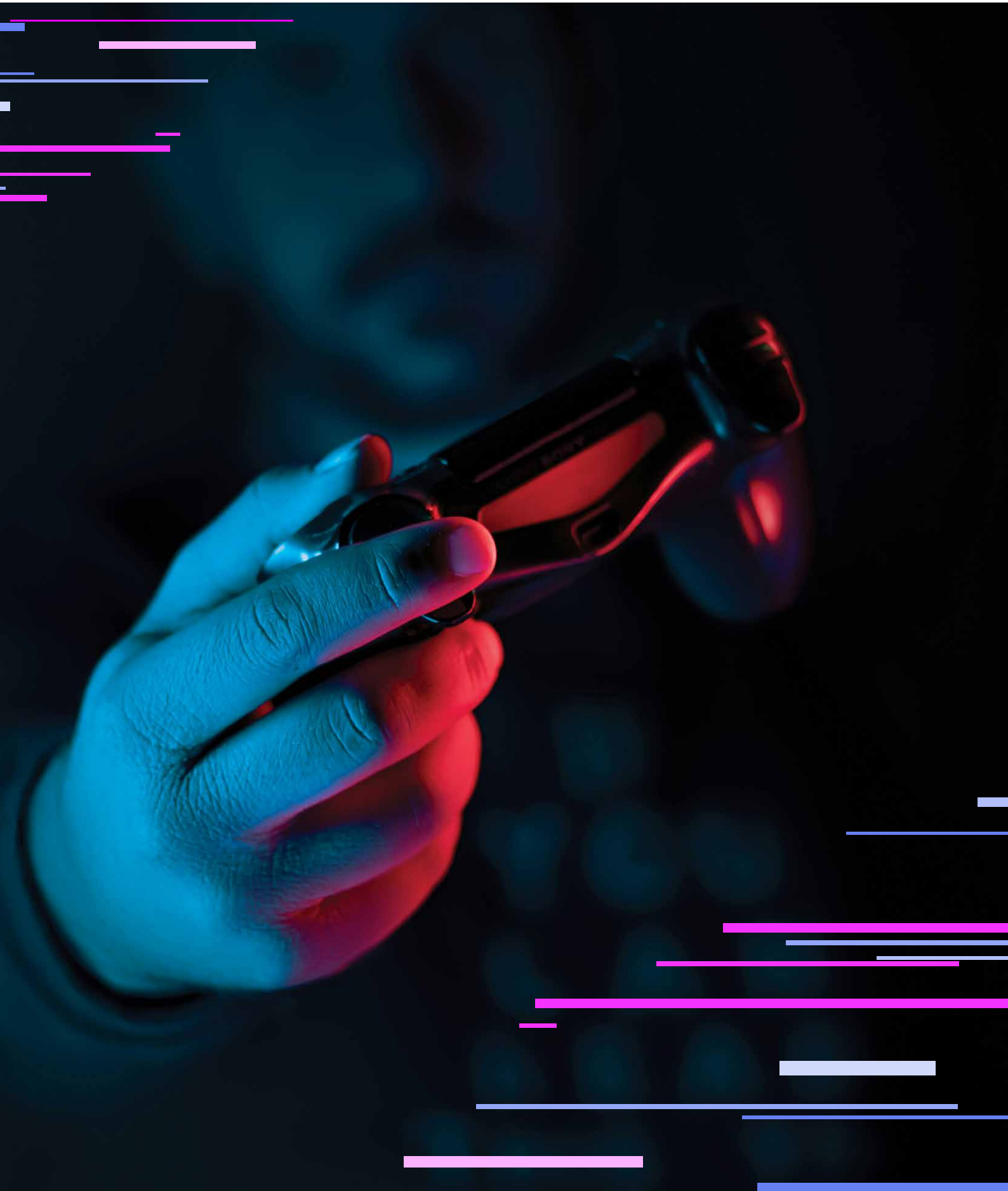
This 2024 research builds on existing CPRC research into the presence and impacts of a series of 10 known dark patterns identified in the broader digital environment, which are explored within the world of digital gaming.[17] An additional 10 questionable game design practices unique to digital gaming are also explored.

Established dark patterns commonly found across a range of digital products	How it presents in the digital gaming world
Hidden costs	Free game with hidden additional costs required to open or access significant or appealing parts of the game, including paywalls where players are asked to pay after having invested time into the game.
Disguised advertisements	Ambiguous ad design and placement making it difficult to distinguish the ad from the game.
Trick question/confusing language	Questions or options using confusing language making it unclear how to opt in or out of a feature that may involve payment or sharing personal information.
Scarcity cues	Features or options that are promoted for a limited time only.
Activity notifications	In-game notifications which may include what other players are doing in the game.
Confirmshaming	Language suggesting a certain choice or action is stupid, irresponsible or shameful.
Subscription trap	Difficulty cancelling an online game subscription.
False hierarchy	One option – often the deluxe or premium – is displayed more prominently than others.
Redirection	A pop-up, interruption or redirection away from what you wanted to do in the game.
Data grab	Personal information is requested, more than what is necessary to access the game.

Dark game patterns commonly observed in digital games	How it presents in the digital gaming world
Early access	Paying extra (usually for a deluxe edition) to access the game a few days or weeks early, or payment in full for a game in development, e.g. beta stage.
Freemium	A free game that is restricted in some way (e.g. ads, game play, characters) where you can pay to unlock game play or items, or pay to remove advertising.
Subscribe-to-play	Ongoing payment is required to play the game/ access the game world.
Paid downloadable content (DLC)	Payment for a significant expansion or addition to an existing game.
Earned battle pass	Performing set tasks/playing for set time to unlock a season pass, characters or challenges.
Paid battle pass	Payment for a season pass, characters or challenges.
Microtransactions	Small payments using in-game currencies or real money to purchase game items.
Skin betting	Using virtual goods in a game to bet on the outcome of games of chance.
Earned loot box	A virtual container / mystery box that contains a random selection of unknown items that can be earned through gameplay. While loot box content can be earned via regular game play, this practice becomes a dark pattern when players are expected to 'grind' to achieve a reward – i.e. when the player has to perform repetitive tasks detracting from game play.
Paid loot box	Payment for a mystery box with unknown items with the hope of receiving a reward or valued items.

Table 1. Descriptions of established dark patterns, and dark game patterns unique to digital gaming

Encountering dark game patterns



Not all games use the manipulative design tactics outlined in this report, yet enough games use manipulative tactics that nearly all players have encountered them.

In the 12 months preceding the survey, **95%** of all Australian game players reported having encountered one or more dark game patterns. Interestingly, encounters are correlated with higher intensity gaming – players who play more digital games are often able to recognise dark game patterns. These cohorts tended to be the younger age groups (less than 60 years), and players with higher socio-economic status, characterised by tertiary education, higher income, and not receiving regular government payments.

In three of the four gaming segments, almost all players had encountered dark game patterns (Figure 11). Seasoned Puzzle Masters, the segment that tends to play a small number of the same games, were the least likely to identify having encountered a dark game pattern (**82%** reported having seen a dark pattern in a game).

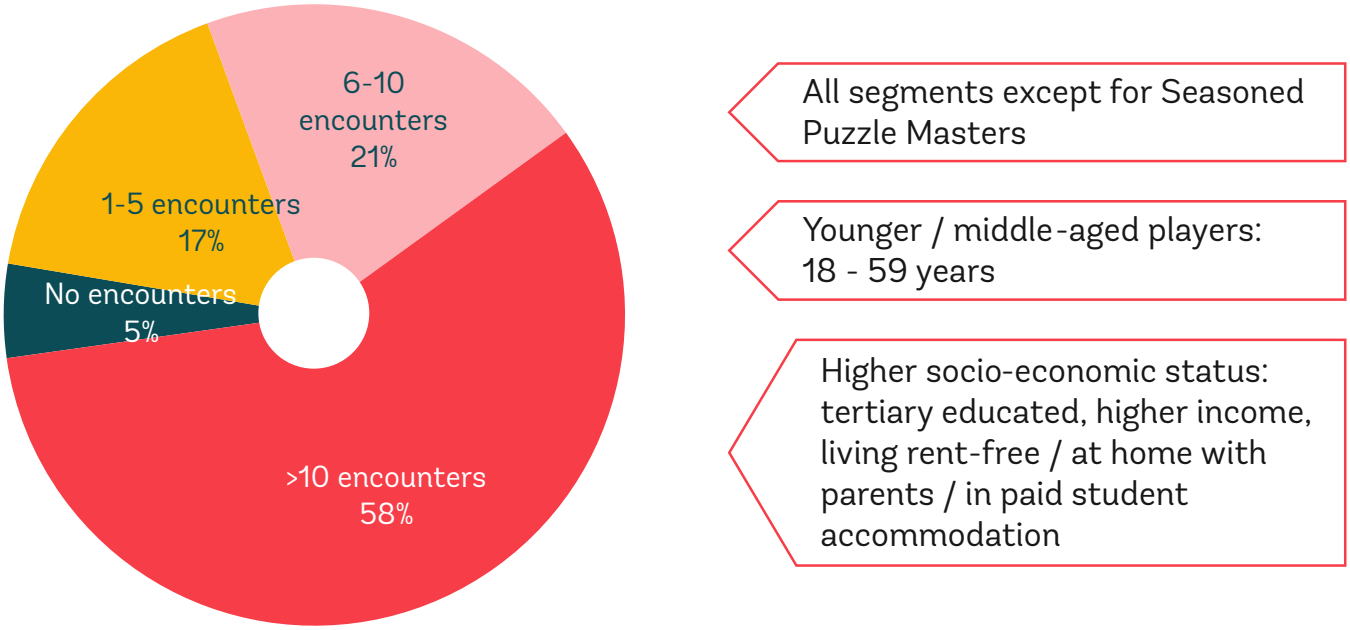


Figure 10. Frequency of players' encountering dark game patterns in the past 12 months

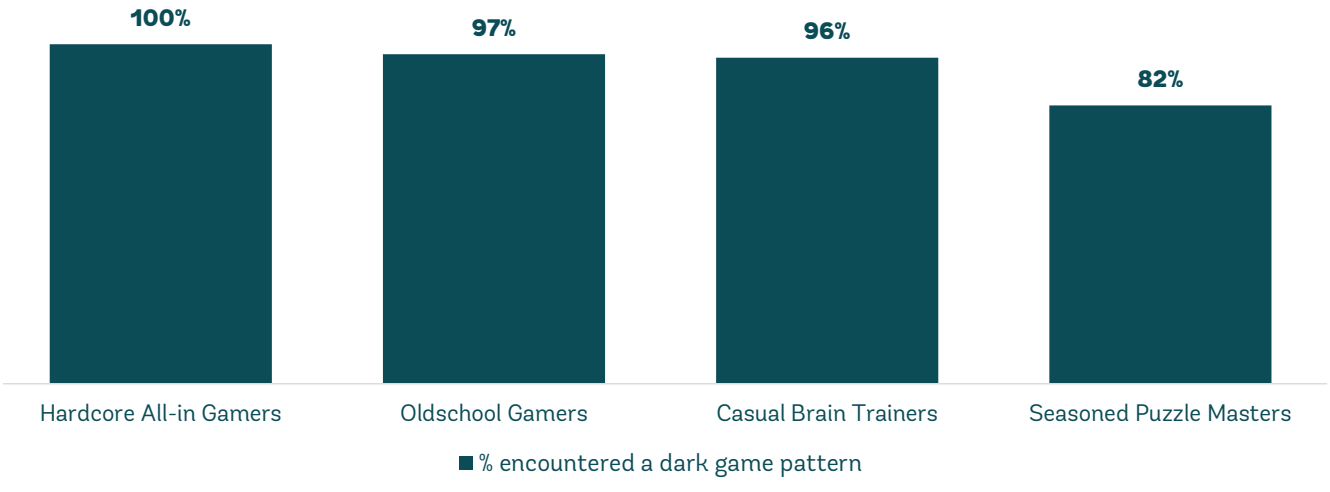


Figure 11. Proportion encountering any dark game pattern, by segment

The three most commonly encountered dark game patterns involved unforeseen or additional costs or nagging. These were freemiums, hidden costs or redirection patterns.

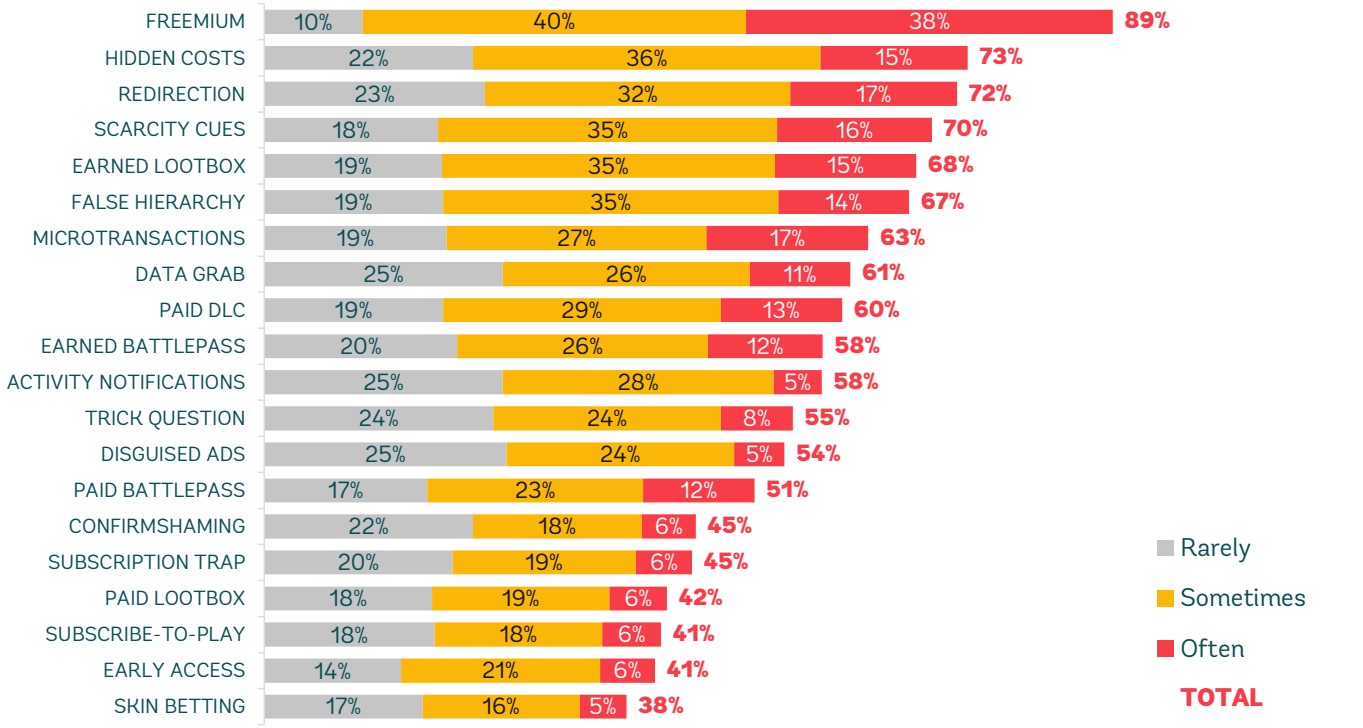


Figure 12. Presence and recognition of different types of dark game patterns

What players tell us about the impacts of dark game patterns

We asked players about the extent of impact they experienced as a result of the dark game pattern encounter.[18] We found that **83%** of players had experienced what they perceive as a negative impact as a result of encountering one or more of the 20 dark game patterns tested. This is highly consistent with CPRC's previous research, which found that dark patterns across all products and services negatively affected **83%** of consumers.[19]

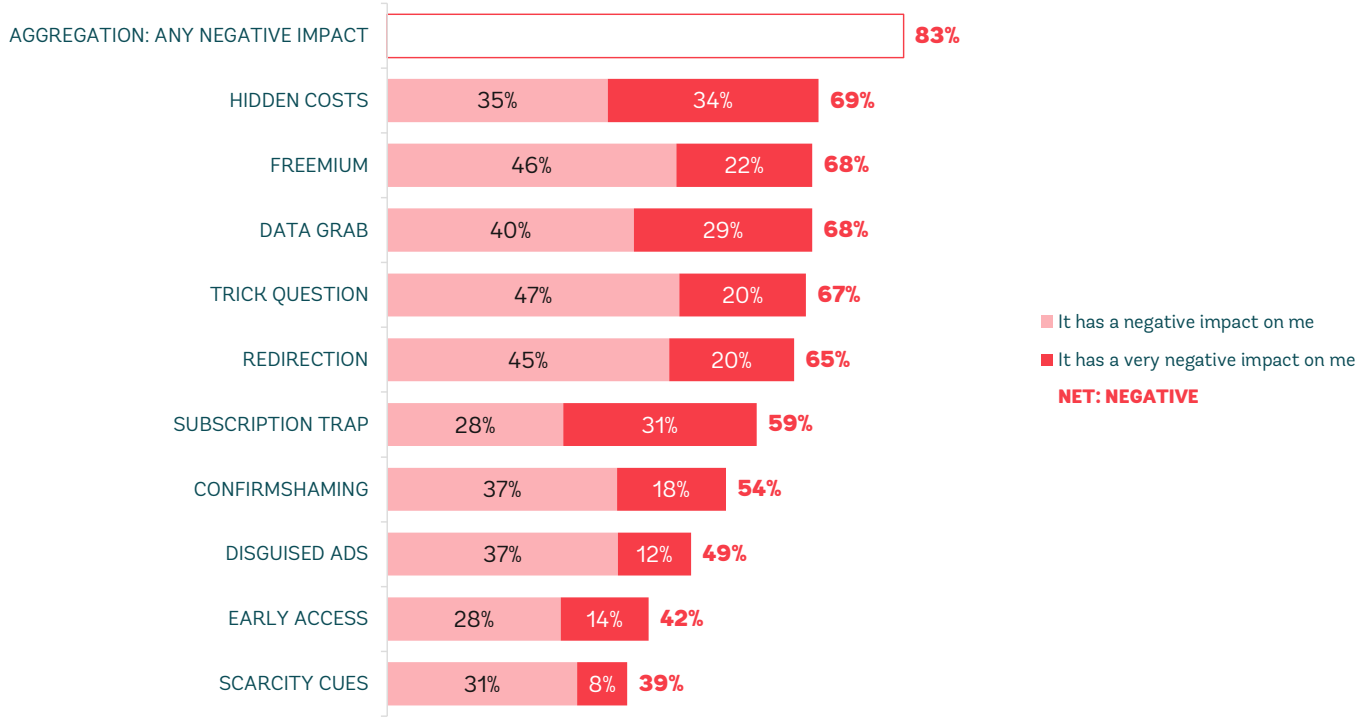


Figure 13. Top 10 dark game patterns causing the strongest negative impact to players

Index of harm

For digital gaming, context matters. Some of the digital design tactics typically identified as dark patterns may not always cause negative impacts or harm to players within the context of the game.

For example, scarcity cues are typically identified as dark patterns outside of gaming but scarcity of some items within a game can be part of the experience, rewarding players who look for creative solutions or explore certain parts of a game within a certain time period. Our survey found that scarcity cues are relatively common in gaming but less likely to be identified by players as harmful. Based on the examples provided by players, scarcity cue tactics may be more likely to be harmful when used in conjunction with other dark game patterns such as pressure to make microtransactions or earn loot boxes – common practices in digital game design.

In other cases, the harm may be present as a risk; for instance, purchasing an early access game represents a risk that a game may contain numerous bugs or may remain incomplete for many years, representing poor value for money. While many early access games will be completed eventually, there are cases where early access games may never proceed to a fully complete release. In buying early access games, players are taking on a risk by spending their money on something that might not ever eventuate.

To define the potential harm caused by dark patterns and gaming practices, and to rank each pattern in order relative to one another, an 'index of harm' was developed (Figure 14). The index is based on players' negative experiences resulting from dark game pattern encounters, combined with behavioural responses demonstrating time, effort or money costs, or game dropouts.[20]

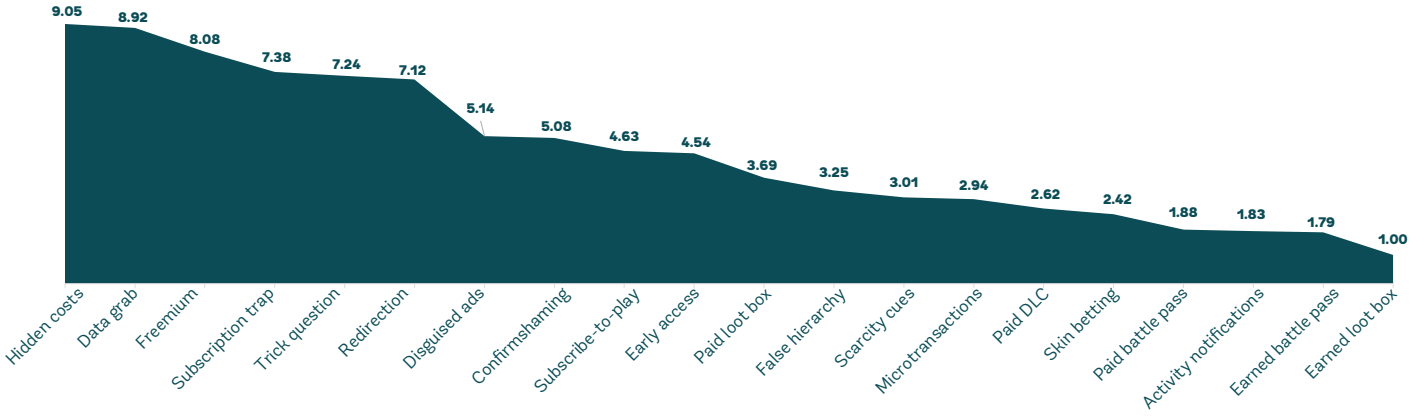


Figure 14. Index of harm of dark patterns: highest to lowest harm

To provide further context, Figure 15 shows dark game patterns distributed into quadrants based on their score of relative harm, and incidence. The dark patterns with higher relative propensity to harm (i.e. higher harm and high incidence) include hidden costs, data grab, freemiums and redirection.

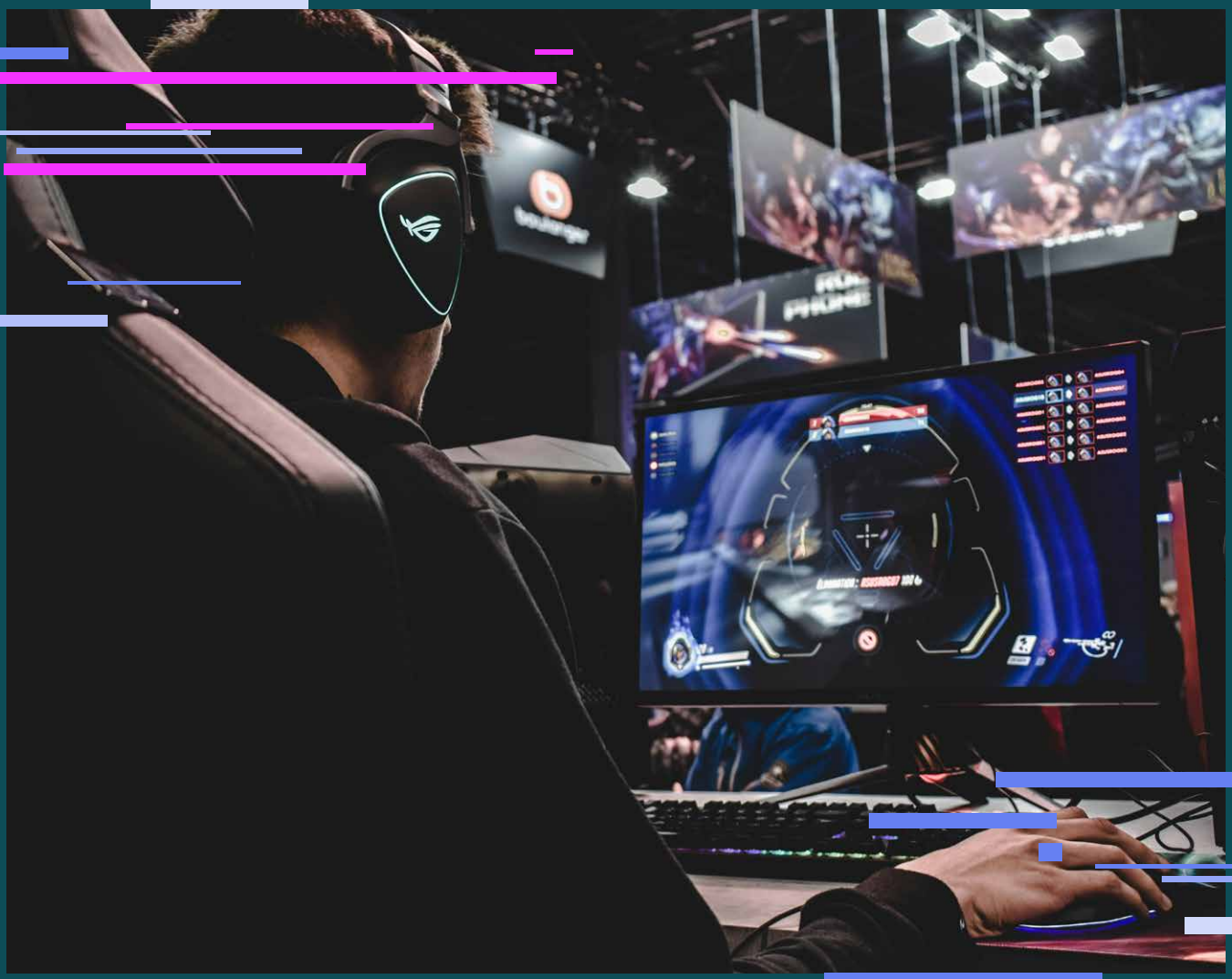
In contrast, dark game patterns including subscription traps, trick questions, disguised ads and confirmshaming all have the propensity for a high level of harm, but were found to be of lower incidence in the gaming world.

Figure 15. Distribution of incidence and harm

Dark game patterns explained

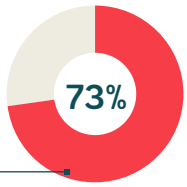
This section explores the incidence and perceived negative impacts and effort to players generated by dark game patterns and the situations where a design may be more likely to cause harm.

Dark game patterns are presented in order of harm (most to least), based on the above harm index – determined by player self-reports.



Hidden costs

Highest harm, higher incidence



● incidence

Hidden costs in games were one of the more commonly encountered dark patterns, encountered by close to three quarters of players over the past 12 months (**73%**). Hidden costs are very similar to freemiums, but the costs are not disclosed or overt to the player prior to downloading or playing. They can also include paywalls where players are asked to pay after having invested time into the game.

> ***"I have noticed quite a number of games that are advertised as free and can be easily downloaded, especially on mobile OS platforms. You proceed to download them and as soon as you try to play them, you get pop-up notifications that you need to pay to play."***
>
> – **Male, 57 years**
>
> ***"There were times when I saw some ads about a certain game. The gameplay looked very interesting, so I downloaded the game and gave it a try. It turned out that the ads that I saw were just a mini-game within that game. The main gameplay was completely different. They just used that mini-game to make more people download the game."***
>
> – **Male, 21 years**

For 7 in 10 who have encountered hidden costs in games this is a negative experience (**69%**). Casual Brain Trainers and Seasoned Puzzle Masters were most likely to call this practice out as harmful, indicating it is a practice that may be more common with mobile games, which these cohorts prefer.

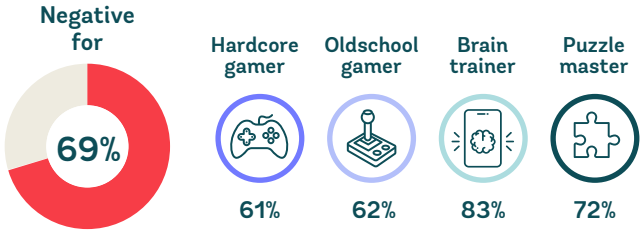


Figure 16. Negative impact experienced from hidden costs (based on n=587 players having encountered this dark pattern)

For players who were negatively affected by hidden costs, **85%** of them had spent some time, effort or money to manage this dark pattern. This dark game pattern was most likely to cause negative impacts through players dropping out and stopping play of the game permanently (**60%**), or through causing **28%** to spend time or effort trying to continue game play and override the hidden costs without paying anything. Only **3%** of players said they paid the hidden costs; however, we note that this result may be lower than in the real world, as the survey asked respondents to self-report if they had been fooled or tricked by a game.

> ***"I think the manipulative behaviour can be when you get to the end of a free game you then need to pay to play more."***
>
> – **Male, 33 years**
>
> ***"Extensive limits to the experience within the game without payment for additional features or certain functions to play the game as originally advertised."***
>
> – **Female, 33 years**

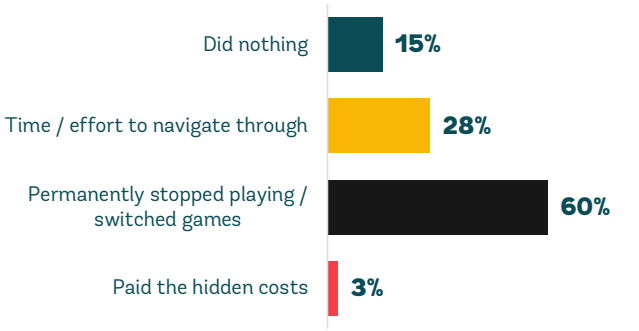
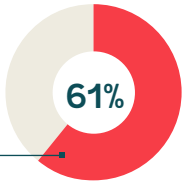


Figure 17. Behavioural responses associated with negative experience of hidden costs (based on n=407 players negatively impacted by this dark pattern)

Data grab

Higher harm, moderate incidence



● incidence

The data grab dark pattern involves requests for more personal information than what is necessary to access the game. Data grab is often presented in conjunction with an offer, e.g. players are given points or gems in exchange for their personal information.

It was encountered by 3 in 5 players (**61%**), with **68%** of players encountering it having experienced a negative impact, mostly among Casual Brain Trainers and Seasoned Puzzle Masters.

> ***"I use alternate credentials when forced to create accounts etc., when they're just for games, entertainment etc."***
>
> – **Male, 38 years**

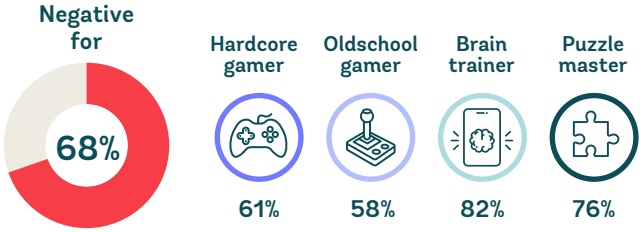


Figure 20. Negative impact experienced from data grab (based on n=489 players having encountered this dark pattern)

Again, **85%** of players negatively impacted had spent time and effort, and/or money on the game trying to avoid giving personal information. This dark game pattern is most likely to cause players to drop out and stop playing the game permanently (**60%**), with **32%** having spent time or effort trying to continue game play and avoid giving personal information.

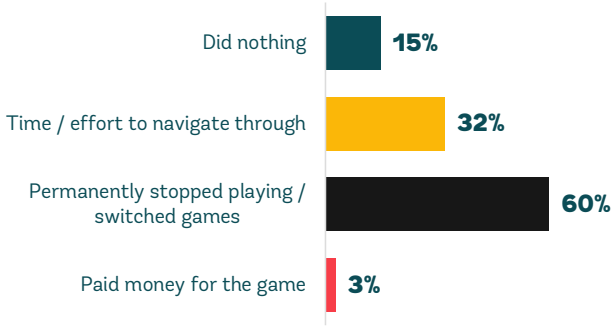


Figure 21. Behavioural responses associated with negative experience of data grab (based on n=334 players negatively impacted by this dark pattern)

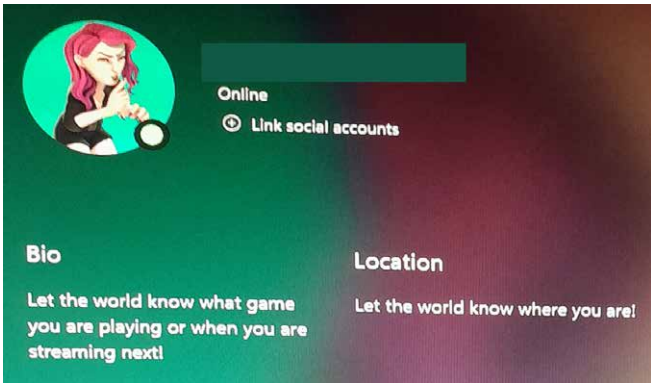


Figure 18. Example of Xbox Live platform demonstrating data grab for social media, biography and location details

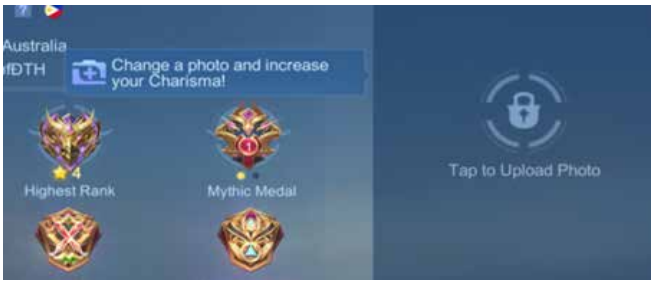
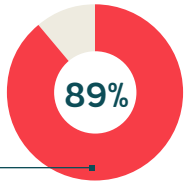


Figure 19. Example of a data grab in Mobile Legends game by Moonton, requesting the player upload a photo for a reward

Freemium



Higher harm, highest incidence

● incidence

The most commonly encountered dark pattern in this research was the freemium – also known as 'pay to unlock' (experienced by **89%** of all players). Freemium models vary – from asking for a one-off payment to access a game without advertising, to games that demand in-game purchases to continue further game play. In this way, the freemium business model exists to attract large numbers of free users which will lead to a proportion of them becoming paid users at some time.[21]

> ***"Some games do seem to have deliberate roadblocks to prevent progress and boosters need to be purchased to help pass a level."***
>
> **– Female, 47 years**
>
> ***"Candy Crush makes games harder till you pay money for boosters then gets easier, the more you spend the dearer things become."***
>
> **– Female, 66 years**

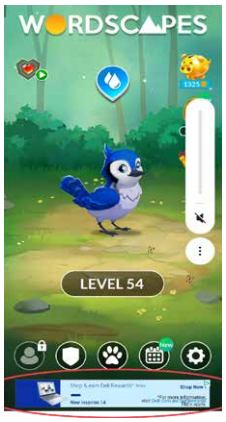


Figure 22. An example of a freemium (native banner ad) used in Wordscapes by PeopleFun

Advertising is a central component underpinning gaming revenue, and ads in freemiums can take various formats (e.g. banner ads, pop-ups). The format of an ad presented in a freemium often overlaps with other dark patterns. For example, ads that pop up and distract from game play can be categorised as redirections (discussed below), and the layout of some advertising can be done in such a way that it tricks the player into thinking the ad is part of the game play – these are categorised as disguised ads (discussed below).

> ***"The game was full of ads, which required a one-time payment to remove them. I knew that I was tricked by the ads, so I deleted the game."***
>
> **– Male, 21 years**

In some cases players may pay for an ad-free version of the game, but may still be subjected to advertising via other means, including options to collect points by viewing timed ads that the player cannot click out of (Figure 23 and Figure 24). These freemiums can be particularly harmful for children where parents or carers have upgraded from the free product to block advertising, yet the child is still exposed to ads through the lure of collecting more points or other features.

Figure 23. Texas Holdem by Zynga, utilising optional viewing of in-game advertising in exchange for the potential of earning more rewards

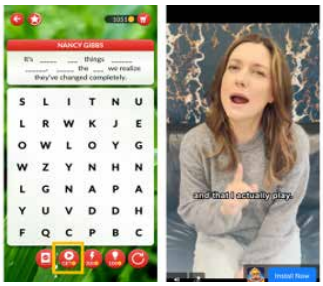


Figure 24. Paid version of Word Search Explorer by PlaySimple Games, utilising optional viewing of in-game advertising in exchange for earning more coins

This research found that freemiums caused a negative effect for **68%** of players, particularly among Casual Brain Trainers and Hardcore All-in Gamers.

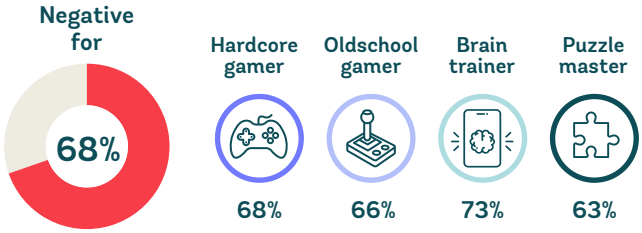


Figure 25. Negative impact experienced from freemiums (based on n=708 players having encountered this dark pattern)

Players who were negatively affected by a freemium had spent time and effort switching games, reloading, or changing settings to circumvent it (**53%**), and **38%** had dropped out and quit the game permanently. A relatively large proportion of players paid for the ad-free/premium version of the game (**13%**); mainly the Hardcore All-in Gamer segment.

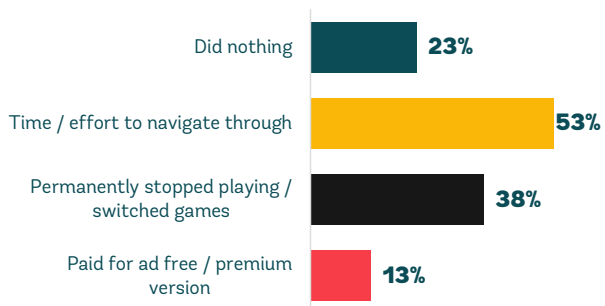
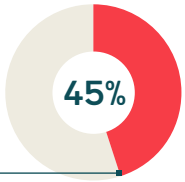


Figure 26. Behavioural responses associated with negative impact of freemiums (based on n=484 players negatively impacted by this dark pattern)

Subscription traps

Higher harm, lower incidence



● incidence

Subscription traps, also known as the forced continuity dark game pattern, describe the difficulty experienced when trying to cancel a digital game or game subscription. Although encountered by less than half of players in this research (**45%**), this phenomenon is widely experienced in the general population in relation to digital subscriptions more broadly, with recent CPRC research finding **75%** of Australians with a subscription have some form of difficulty when trying to cancel.[22]

> ***"Sometimes I request a refund or I cancel when subscription renewals come up I didn't realise I'd signed up for. "***
>
> **– Female, 33 years**
>
> ***"They were adamant to convince me somehow to continue the subscription like they would offer me a discount and stuff."***
>
> **– Female, 30 years**

While subscription traps negatively affected **59%** of players, they disproportionately affected Casual Brain Trainers and also caused a negative experience among fewer Hardcore All-in Gamers and Oldschool Gamers. The harms associated with subscription traps may be amplified if combined with other dark patterns such as confirmshaming, and disguised ads triggering microtransactions.

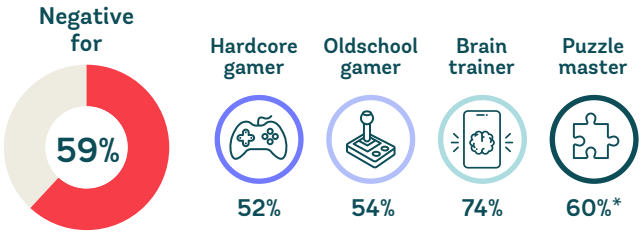


Figure 27. Negative impact experienced from subscription traps (based on n=357 players having encountered this dark pattern) *Note: Smaller sample size (<30) for Seasoned Puzzle Masters

Overall, **81%** of players negatively affected by subscription traps had spent time, effort or money in attempts to avoid their effects. Close to half of these players had dropped out of playing the game permanently (**47%**), and **34%** spent time or effort trying to cancel the game subscription, all contributing to the negative impact.

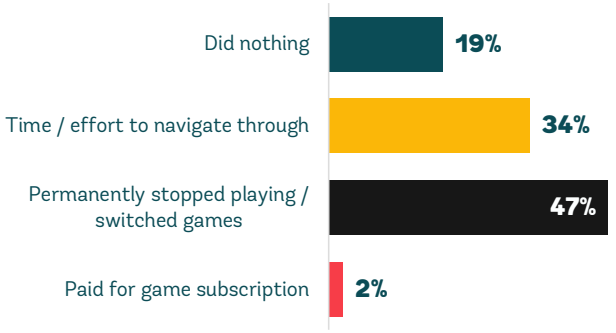
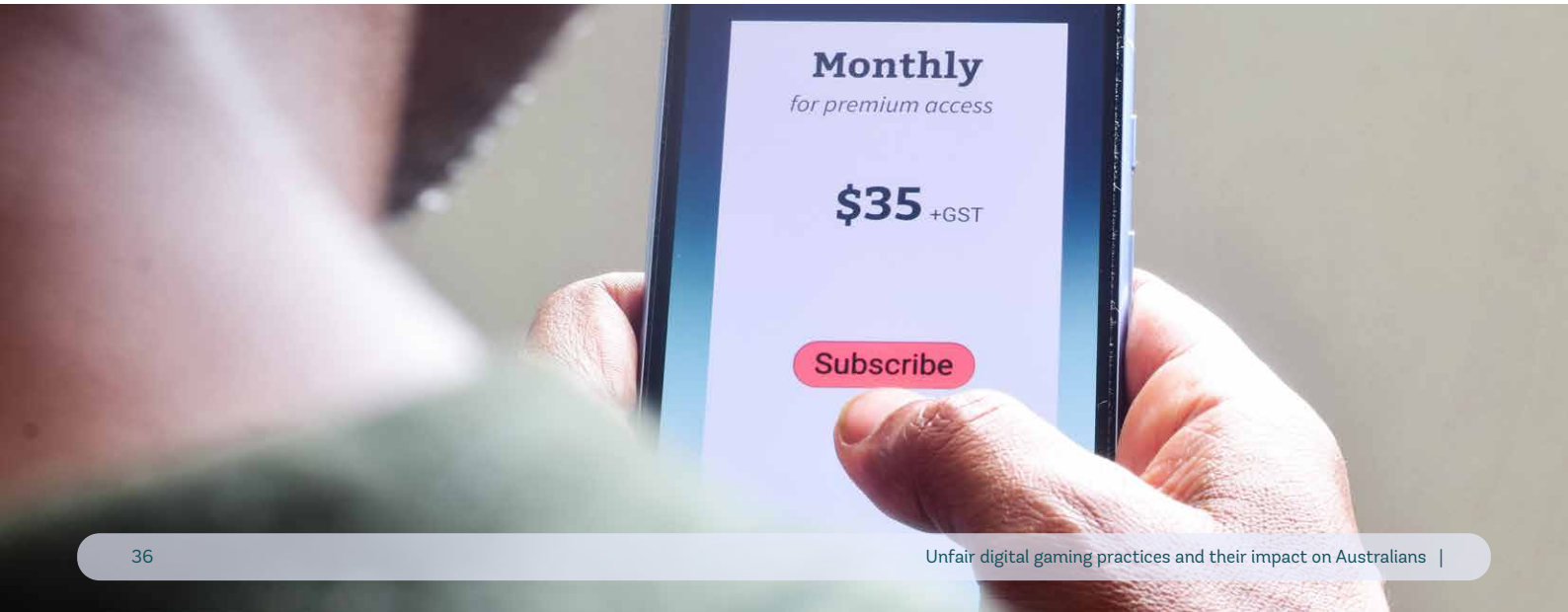
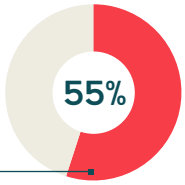


Figure 28. Behavioural responses associated with negative experience of subscription traps (based on n=212 players negatively impacted by this dark pattern)



Trick question/confusing language



Higher harm, lower incidence

● incidence

A trick question or confusing language is typically used to make choices harder to compare, or to steer player behaviour. This often results in a lack of clarity for how to select a feature that may involve payment or sharing personal information.

Just over half of players had encountered a trick question or confusing language in the past 12 months (**55%**); however, this may be an underestimate due to difficulty recognising such tactics. Figure 29 shows the use of complex and opaque mathematics in a game advertised as '9+' on the Apple Store. It shows claims of discounts used for pricing two gem offers for which a comparison is unable to be easily made. This example also demonstrates layered dark patterns, where scarcity cues and false hierarchy patterns are also present.

Figure 29. An example of confusing calculations and misleading wording used to present two side-by-side options requiring payment in Stumble Guys by Scopely

Trick questions/confusing language used in gaming have negatively impacted more than two thirds of players (**67%**), in particular Casual Brain Trainers.

Figure 30. Negative impact experienced from trick questions/ confusing language (based on n=441 players having encountered this dark pattern) *Note: Smaller sample size (<30) for Seasoned Puzzle Masters

While **30%** of players did nothing when faced with a trick question or confusing wording, **37%** spent time or effort trying to bypass it, and **37%** dropped out of the game permanently. Only **1%** made a payment.

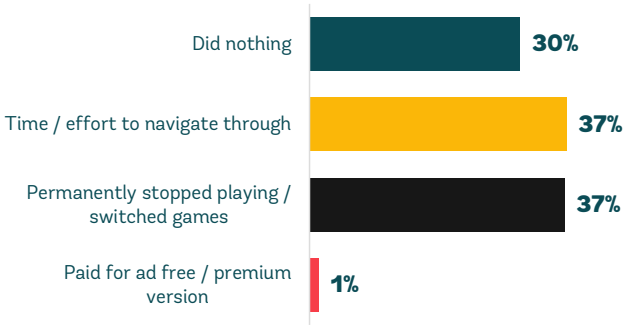
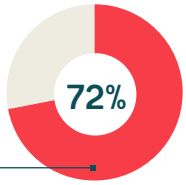


Figure 31. Behavioural responses associated with negative experience of trick questions/confusing language (based on n=297 players negatively impacted by this dark pattern)

Redirection



Higher harm, higher incidence

● incidence

A redirection is a pop-up, interruption or redirection away from what you wanted to do in the game. These may indicate new content, offers, rewards, ads, or microtransactions and were encountered by close to three quarters of players (**72%**).

> ***"Coin master has way too many pop-up in-app purchases. It's hard to play the game without constantly closing a pop-up window."***
>
> **– Female, 39 years**
>
> ***"I've just noticed that mostly these days in online games there are lots of little pop-ups, or 'purchase gold coins' in games that kind of harass you to a point to get better skins."***
>
> **– Male, 30 years**

Harm from redirections may be exacerbated when layered with other dark patterns including timed advertising used in freemium models, where players are forced to sit through advertising and wait for game play to resume, or are promised a reward after watching an ad.

Figure 32. Example of a redirection used in Wordscapes by PeopleFun

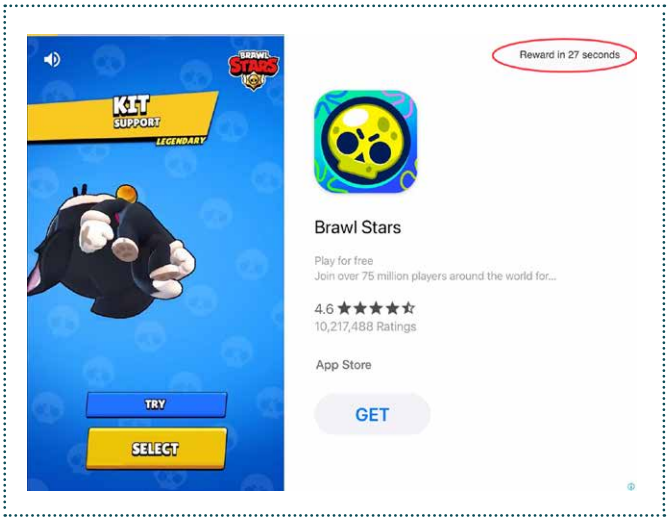


Figure 33. Example of a timed ad redirection/pop-up with the promise of a reward used within Stumble Guys by Scopely

Two thirds of players have experienced a negative impact from redirections in games (**65%**), particularly Casual Brain Trainers and Seasoned Puzzle Masters.

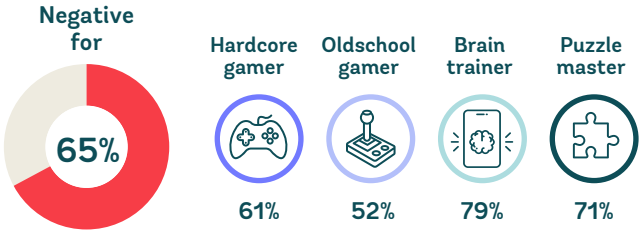


Figure 34. Negative impact experienced from redirections (based on n=578 players having encountered this dark pattern)

More than half of players had spent time and effort trying to avoid or overcome the redirection (**53%**), but one in five had been turned off the game, permanently dropping out (**20%**).

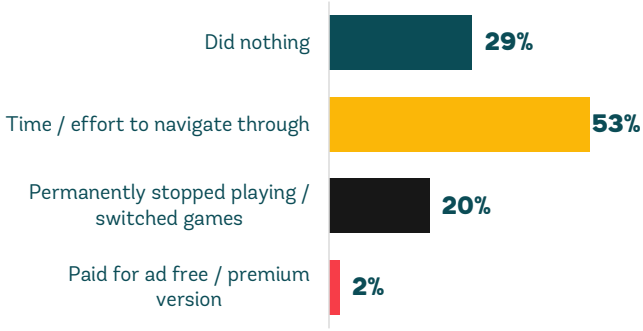
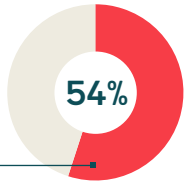


Figure 35. Behavioural responses associated with negative experience of redirections (based on n=378 players negatively impacted by this dark pattern)

Disguised ads

Moderate harm, lower incidence



● incidence

This dark pattern comprises ambiguous ad design and placement making it difficult to distinguish the ad from the game. While encountered by **54%** of players, this may represent an underestimate, as the nature of the ad presentation is disguised.

In terms of impact, half of the players encountering this dark pattern reported a negative impact (**49%**), particularly Casual Brain Trainers.

While a large proportion of players who were negatively affected had done nothing (**32%**), close to half had spent effort and time to avoid this dark pattern (**47%**), and one in five had stopped playing permanently (**20%**).

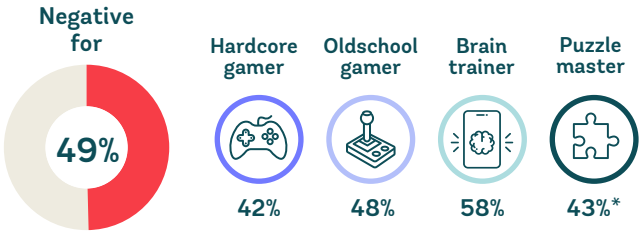


Figure 37. Negative impact experienced from disguised ads (based on n=434 players having encountered this dark pattern) *Note: Smaller sample size (<30) for Seasoned Puzzle Masters

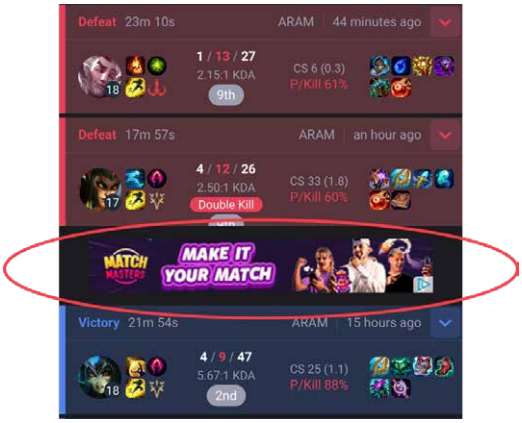


Figure 36. Example of a disguised ad used in League of Legends by Riot Games

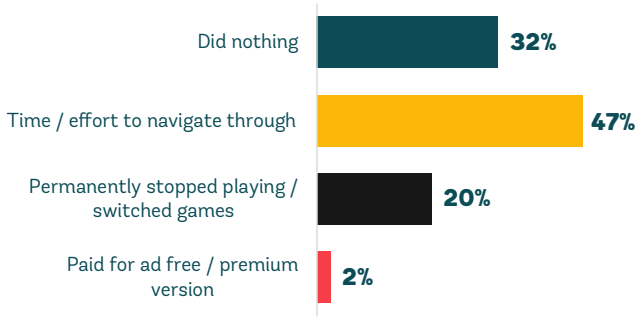
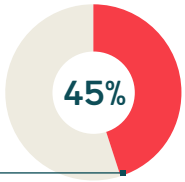


Figure 38. Behavioural responses associated with negative experience of disguised ads (based on n=212 players negatively impacted by this dark pattern)

Confirmshaming

Moderate harm, lower incidence



● incidence

Another example of a dark pattern used in the broader digital environment is confirmshaming, which involves using guilt or shame to pressure users into confirming a purchase, retaining a subscription, or providing personal information. Similarly, in the digital gaming world, confirmshaming can be used to encourage a microtransaction, steer a player away from quitting the game, or discourage cancellation of a subscription.

Confirmshaming was encountered by **45%** of players. This may be an underestimate as it can be difficult to spot manipulative language. On the surface confirmshaming can appear to be socially desirable – "Everyone else is doing it!", in the player's best interest – "Don't quit now, you're doing so well!", or can involve begging or guilt manipulation – "You don't want to leave us hanging, right?" Hardcore All-in Gamers were most likely to recognise this tactic, with **68%** having encountered this dark pattern in the past year.

For players who encountered confirmshaming, it negatively affected more than half (**54%**); with Casual Brain Trainers particularly sensitive to the impact.

Two in five had spent effort or time to avoid it (**39%**), and more than a quarter had turned their back on the game permanently (**26%**).

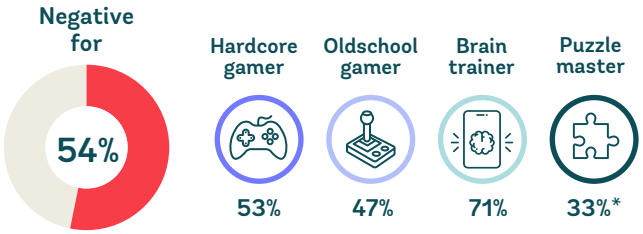


Figure 39. Negative impact experienced from confirmshaming (based on n=360 players having encountered this dark pattern) *Note: Smaller sample size (<30) for Seasoned Puzzle Masters

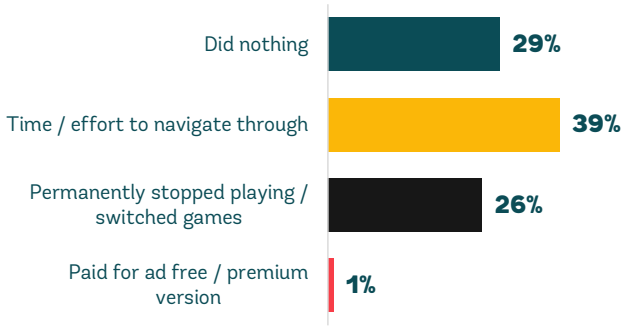
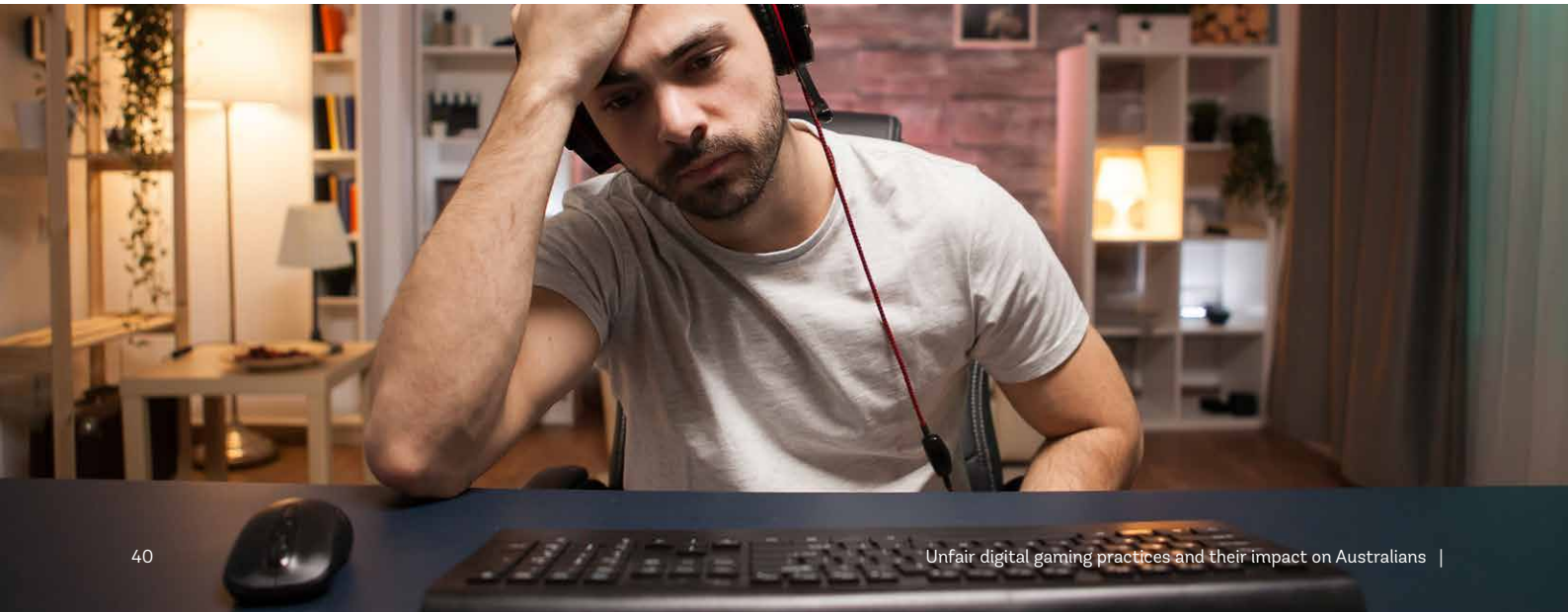
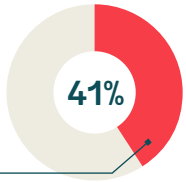


Figure 40. Behavioural responses associated with negative experience of confirmshaming (based on n=196 players negatively impacted by this dark pattern)



Subscribe-to-play



Lower harm, lower incidence

Some games offer paid subscription models to play the game. Subscriptions in the digital gaming environment are increasing, with an October 2023 report showing there were more than 180 million global game subscriptions active in 2023, up from about 171 million the previous year. That number is projected to reach 318.5 million by 2030. In 2023, subscription services generated more than US$11.7 billion and direct game sales brought in US$40 billion.[23]

One reason streaming subscriptions may represent an increasing revenue stream for gaming could be due to the changing relationships of players towards digital gaming and game ownership.

> *"Now, we are seeing games developed with the aspiration of never being finished – it's not necessarily something to 'beat', but something to 'exist' in."*
>
> – Karol Severin[24]

> *"New versions of Android don't allow me to access my Minecraft worlds so that I can copy them over to play on PC. Have to do it through a paid Realms subscription."*
>
> – Male, 60 years

> *"Designs are becoming more tailored to a subscription model."*
>
> – Male, 66 years

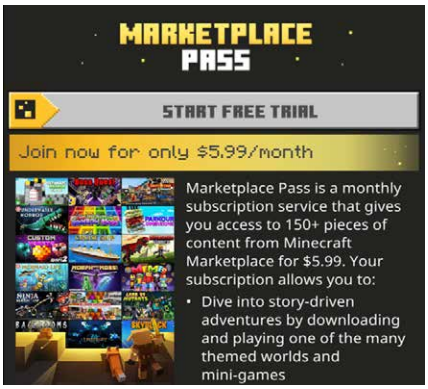


Figure 41. Marketplace Pass paid monthly subscription available in Minecraft by Mojang Studios

Subscriptions may be layered with other dark patterns, such as freemiums or hidden costs, so they appear at first to be a free game, but require a subscription payment at a certain level of game play.

> *"I find it manipulative for WoW [World of Warcraft] to allow you to get to level 30 for free which makes you enjoy and like the game then to continue you have to pay monthly subscription... I feel almost coerced to do so!"*
>
> – Male, 22 years

While incidence of subscriptions is relatively low among players (**41%** overall), Hardcore All-in Gamers, and Oldschool Gamers are most familiar with subscriptions (**65%** and **47%**, respectively).

Players appear to accept subscriptions, with a relatively low proportion of players having experienced a negative impact from a subscription (**38%**). Casual Brain Trainers were the segment most likely to feel negatively affected and quit the game permanently as a result.

Overall, **18%** of players negatively affected had spent time and effort navigating how to play without a subscription; around half had quit (**51%**), and **15%** had paid for a subscription.

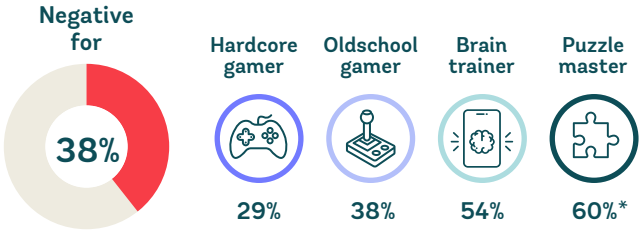


Figure 42. Negative impact experienced from subscribe-to-play (based on n=331 players having encountered this dark pattern)
*Note: Smaller sample size (<30) for Seasoned Puzzle Masters

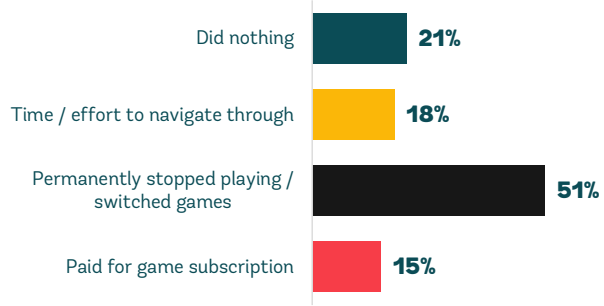
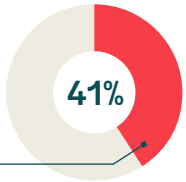


Figure 43. Behavioural responses associated with negative experience of subscribe-to-play (based on n=126 players negatively impacted by this dark pattern)

Early access

Lower harm, lower incidence



● incidence

Early access to a digital game is a funding model in the digital game industry that enables developers to gather feedback, generate revenue and build a community around their game.[25] It involves paying extra (usually for a deluxe edition) to access the game a few days or weeks early, or payment in full for a game in development, e.g. beta stage, before its full release (sometimes with no known date for full release).

Early access relies on gamers' motivations to be first to check out new games and game play, but players risk paying for games with bugs or incomplete functionalities.

> ***"Releasing a game at a premium price before it has been completed (e.g. Pokemon Scarlet & Violet). The quality and gameplay is awful for the price paid for it."***
>
> **– Male, 32 years**

While only **41%** of players overall have encountered early access games, **71%** of Hardcore All-in Gamers had seen these releases in the past 12 months. Two in five encounters were deemed negative (**42%**), and of these experiences, **39%** had spent time or effort to try to navigate through it, a third had quit permanently (**33%**), and **4%** had paid for the early release.

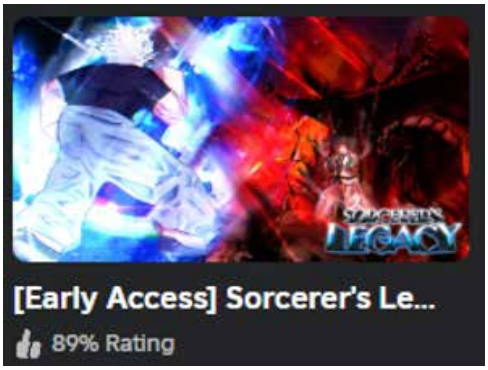


Figure 44. Early Access for Sorcerer's Legacy by Roblox

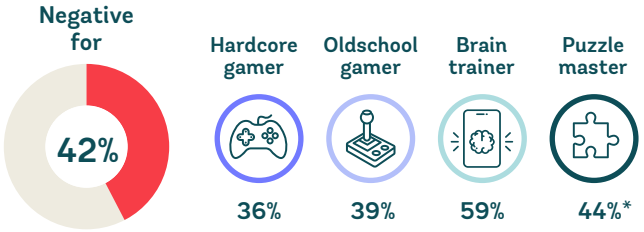


Figure 45. Negative impact experienced from early access games (based on n=326 players having encountered this dark pattern)
*Note: Smaller sample size (<30) for Seasoned Puzzle Masters

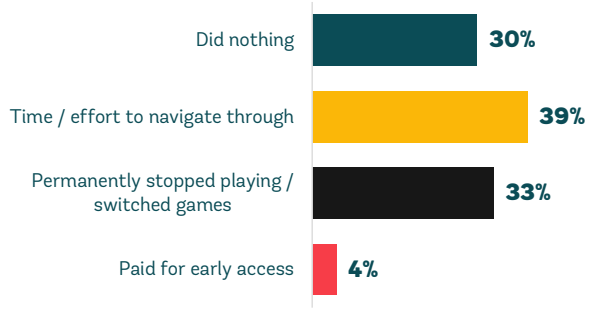
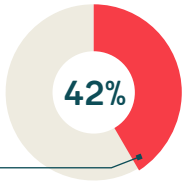


Figure 46. Behavioural responses associated with negative experience of early access games (based on n=137 players negatively impacted by this dark pattern)

Paid loot box

Lower harm, lower incidence



● incidence

Loot boxes are a common feature across digital gaming and take the form of a 'mystery package' with unknown items. The contents of loot boxes are randomised, and contain in-game content giving players advantages such as in-game currencies (e.g. gems or tokens), or cosmetic items such as skins.

Players can earn in-game currency to pay for a loot box (discussed below in the earned loot box section) or players can pay real money for the box with the hope it contains a reward or specific items. Some games even use masked in-game currencies which can only be purchased with real money (Figure 47).

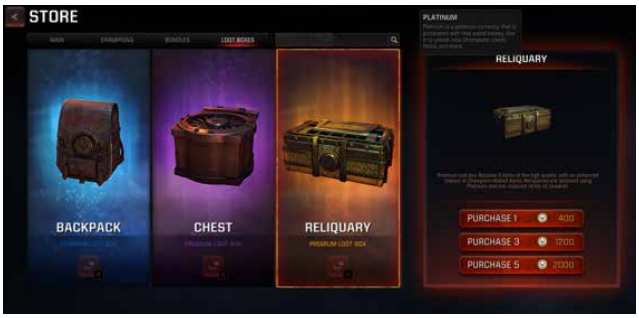


Figure 47. Example of a loot box in Quake by id Software, that uses a secondary currency (Platinum) that can only be purchased with real money

Our research found that close to half of Australian players (**42%**) had recalled seeing a paid loot box, although this was much higher for Hardcore All-in Gamers, **69%** of whom had encountered a paid loot box in the past 12 months.

Overall, among all encounters of a loot box for purchase, **38%** of players felt this was a negative experience. The remaining **62%** deemed this a positive or neutral experience, which may be a sign of changing gaming expectations and culture.

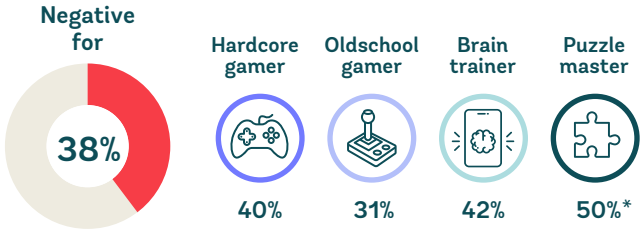


Figure 48. Negative impact experienced from paying for a loot box (based on n=336 players having encountered this dark pattern)
*Note: Smaller sample size (<30) for Seasoned Puzzle Masters

Of the players who had a negative experience encountering a paid loot box, **38%** had spent time and effort trying to navigate through it, **14%** quit for good, and **13%** paid for it.

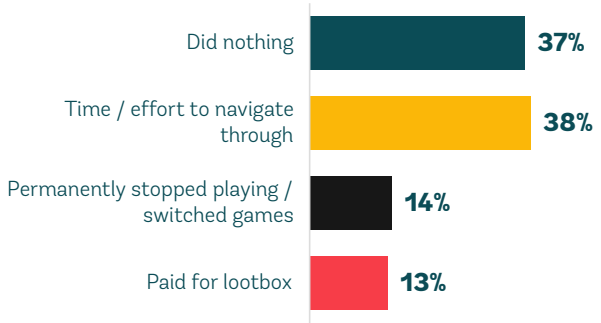


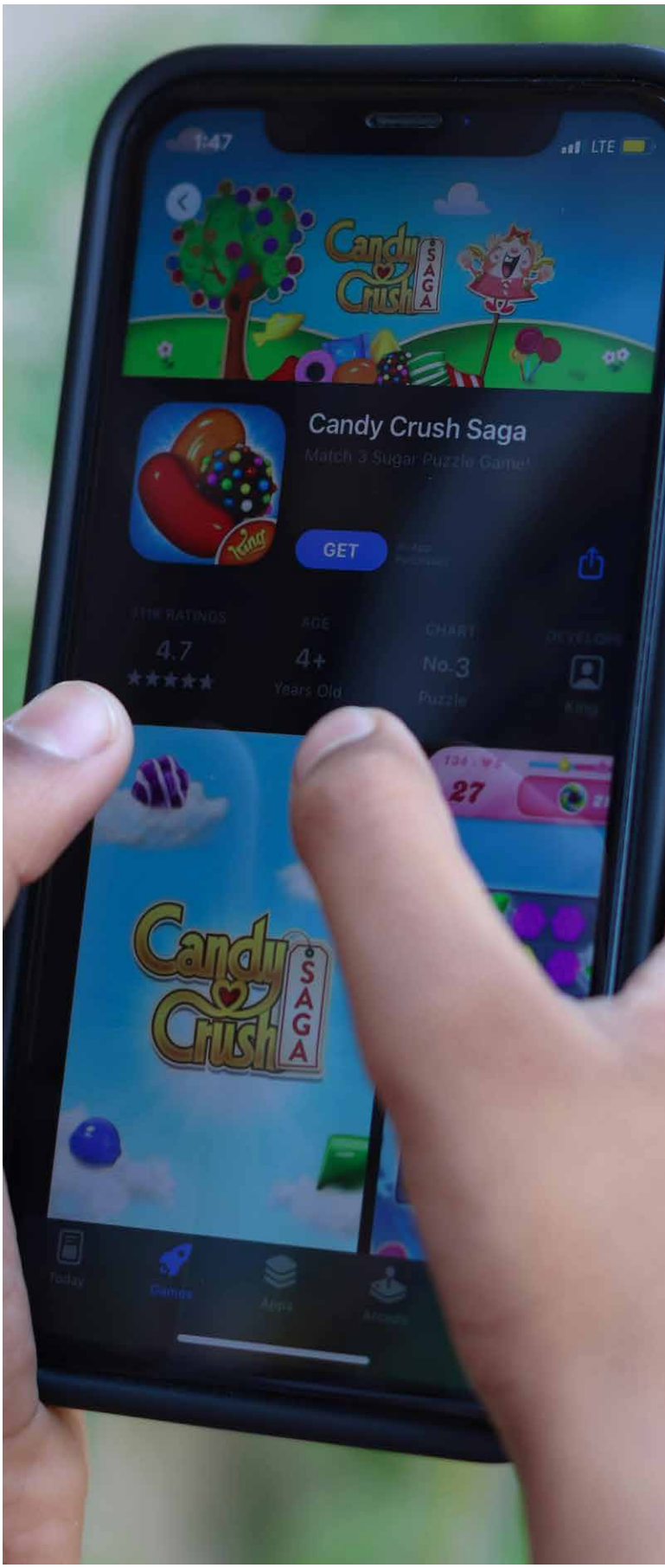
Figure 49. Behavioural responses associated with negative experience of paying for a loot box (based on n=127 players negatively impacted by this dark pattern)

Paid loot box (cont.)

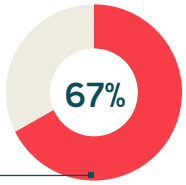
Despite our research showing relatively low levels of perceived negative impact and harm, research by the Norwegian Consumer Council demonstrated that loot boxes often involve some form of exploitation, which can be predatory and underhand. They have further confirmed that artificial intelligence (AI) may be used to schedule the time a loot box is offered to a player, based on their actions within the game.[26] Players engaging in games that are based on true randomisation and chance is considered acceptable, but it is unethical to use algorithms and AI to artificially modify odds and chances of winning without disclosing this to the player.

Player interactions with loot boxes – e.g. spinning a wheel, making a payment for unknown items – can be likened to using an electronic gaming machine (commonly referred to as a poker machine). However, in Australia, electronic gaming is a heavily regulated industry governed by the Gaming Machine National Standard which provides guidance to manufacturers for the design of gaming machines, game software and related equipment. A core part of this standard is an audited return to player policy, requiring that all gaming machines must provide a minimum per cent return to the player (RTP range is between 85% and 90% depending on state or territory) – information which is publicly available.[27] This regulation does not exist in digital gaming. There is no restriction on how much a randomised reward must return to players. With access to player data and technology that allows developers to understand the likelihood of future gamer behaviour, existing technology allows developers to generate different outcomes based on the likelihood that the player will spend more later. There is no transparency about whether technology is being deployed in this manipulative way and no transparency about the returns to players when buying loot boxes.

Figure 50. Example of a loot box, the contents 'randomly' based on the spin of a wheel, found in Stumble Guys by Scopely



False hierarchy



Lower harm, higher incidence

● incidence

False hierarchy describes a gaming design where multiple options are available but one option (often the deluxe or premium option) is displayed more prominently than the others, and does not always steer the player to the best value choice.

Two thirds of players identified having seen false hierarchy architectures in the past year (**67%**), and **37%** of these players reported having been negatively affected by it.

Figure 51. Example of a 'regular offer' requiring in-game currency payment, beside a 'deluxe offer' requiring real money payment, found in Stumble Guys by Scopely

The largest proportion of players had done nothing upon encountering false hierarchy during their gaming, while more than a third had spent time and effort to try to navigate through it, and **22%** had stopped playing the game permanently.

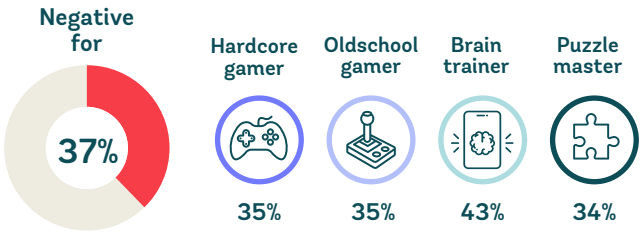


Figure 52. Negative impact experienced from false hierarchy (based on n=538 players having encountered this dark pattern)

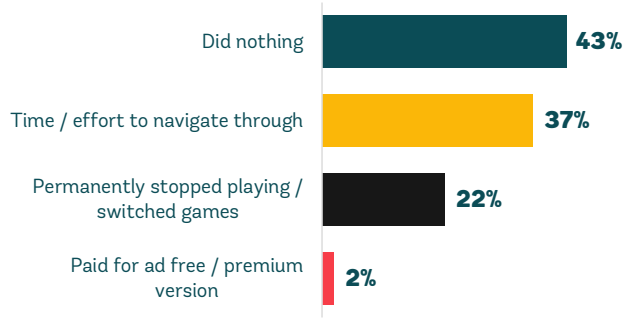
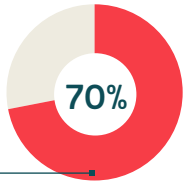


Figure 53. Behavioural responses associated with negative experience of false hierarchy (based on n=200 players having negatively impacted by this dark pattern)

Scarcity cues

Lower harm, higher incidence



● incidence

Scarcity cues describe features or options that are promoted for a limited time only, and may be accompanied by timers or countdowns, or wording suggesting exclusivity or scarcity, e.g. 'Available for a limited time only', 'Only one left!'

Seven in ten players had encountered a scarcity cue in the past 12 months, and two in five experienced a negative impact (**39%**).

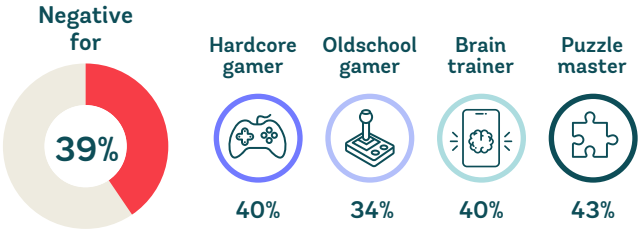


Figure 56. Negative impact experienced from scarcity cues (based on n=557 players having encountered this dark pattern)

Figure 54. Example of different types of a scarcity cues used in Farm Heroes Saga by King

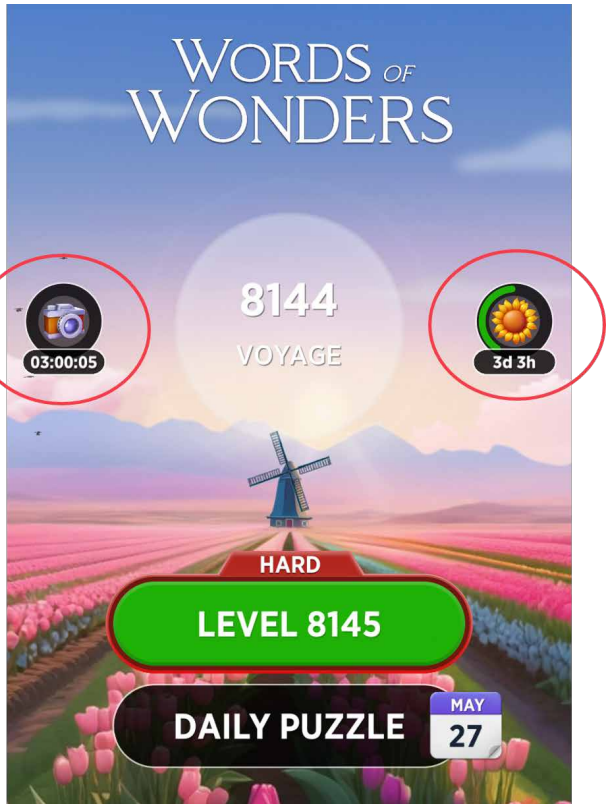


Figure 55. Example of different types of scarcity-cue timers used in Words of Wonders by Fugo Games

Half of all players negatively affected by a scarcity cue encounter had done nothing in response, while a third had spent time or effort trying to navigate through it, and **5%** had paid for a premium or ad-free version of the game.

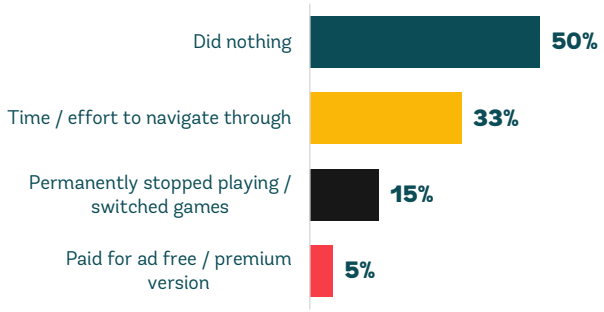
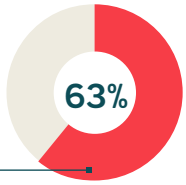


Figure 57. Behavioural responses associated with negative experience of scarcity cues (based on n=215 players negatively impacted by this dark pattern)

Microtransactions



Lower harm, moderate incidence

● incidence

A microtransaction is a small payment using in-game currencies (e.g. gems or tokens) or real money to purchase in-game digital items. Games have virtual 'shops' that sell items such as avatars, experience boosts, gameplay shortcuts – available for cosmetic motivations as well as game play advantage. Often individual transactions are small; however, it can take little to no time for the value of transactions to accumulate.

> ***"Some games heavily promote microtransactions, giving paying players a significant advantage over non-paying players."***
>
> **– Male, 19 years**
>
> ***"Some games have in-game offers that are very expensive, and players purchase them which gives them an advantage in challenges or passing a level."***
>
> **– Female, 47 years**

Traditionally, the digital gaming industry generated revenue primarily through game sales, but in the last 2 decades, in-game purchases have become a significant revenue stream. The global video game industry generated approximately US$223 billion in revenue in 2023, with around US$125 billion driven largely by in-game microtransactions, in-game advertising and product placements.[28]

Microtransaction architecture can be particularly manipulative if a game uses a variety of in-game currencies within a freemium model. This makes it harder for a player to assess the value they receive if they choose to purchase in-game currencies.

> ***"Online games tend to use microtransactions or gacha as monetisation models which is very predatory and frustrating."***
>
> **– Female, 20 years**

Figure 58. Example of microtransactions available in Clash Royale by Supercell

Figure 59. Multiple in-game currencies available in the form of gems or tokens available to purchase with real-world money, found in Stumble Guys by Scopely

A 'gacha' game is a video game that implements the Japanese gachapon machine style mechanics. Similar to loot boxes, gacha games entice players to spend in-game currency to receive a random in-game item. Some in-game currency generally can be gained through game play, and some by purchasing it from the game publisher using real-world funds.[29]

Microtransactions (cont.)

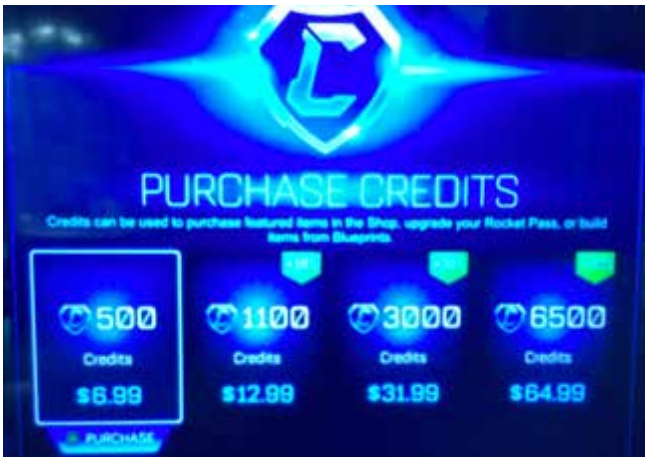


Figure 60. Microtransactions forcing conversion of real-world money into in-game currency (credits) in Rocket League by Psyonix

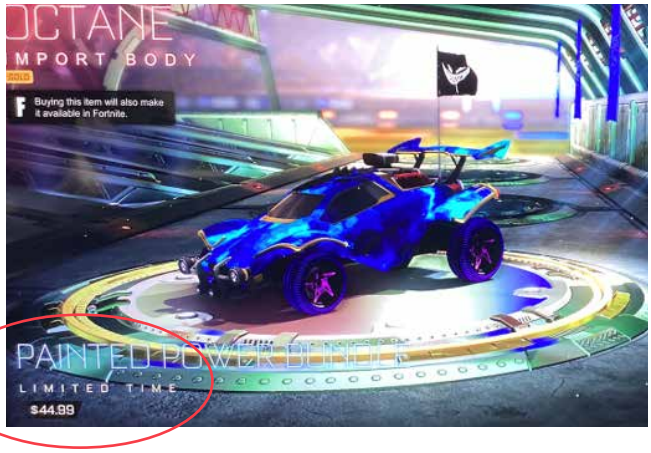


Figure 61. Bundle available in Rocket League by Psyonix, layered with scarcity cue ('limited time') and enabled across another game (Fortnite by Epic Games)

While **63%** of players had encountered a microtransaction in a game, more than a third of these players experienced a negative impact resulting from this (**34%**).

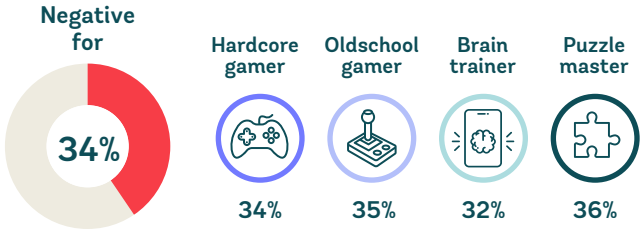


Figure 62. Negative impact experienced from microtransactions (based on n=504 players having encountered this dark pattern)

Among players who had experienced a negative impact, the largest proportion had done nothing, more than a third had spent time and effort trying to navigate around it, **16%** had quit the game permanently, and **8%** had made a microtransaction.

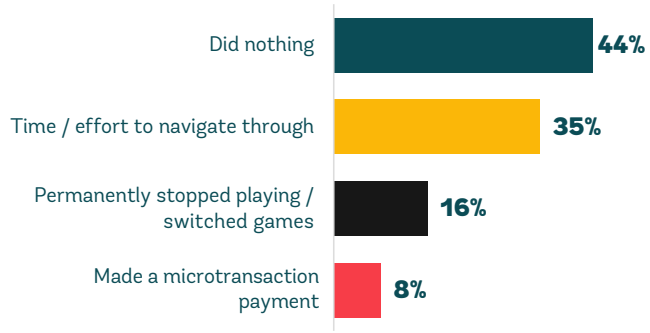
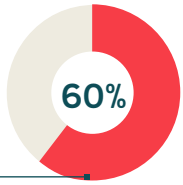


Figure 63. Behavioural responses associated with negative experience of microtransactions (based on n=171 players negatively impacted by this dark pattern)

Paid downloadable content (DLC)



Lower harm, moderate incidence

● incidence

This game design practice comprises a payment for downloadable content such as a significant expansion or addition to an existing game. In some instances, DLCs can offer fair value as they expand on an existing enjoyable game experience. The practice can be frustrating to players if the content is not adequately disclosed or understood by the player.

Harms from DLCs can be amplified when layered with other dark patterns. For example, a free game may include paid DLC drip-fed in the form of microtransactions required to access additional parts of the game.

> ***"Gaming has become very manipulative... Instead of selling a game outright, these days, you get a game for 'free' and overall pay way more money in downloadable content like expansions, add-ons, cosmetic extras etc. Legally, all of this virtual stuff you paid for can be shut down, removed or taken away at any time. It's akin to throwing money away."***
>
> – **Female, 40 years**

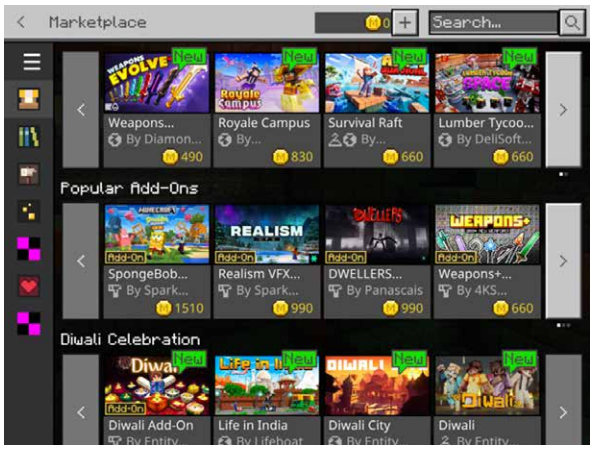


Figure 64. Paid downloadable 'add-ons' available in Minecraft by Mojang Studios

Overall, **60%** of players had encountered a paid DLC in the past 12 months. For a third of these players, the experience was a negative one (**32%**). The largest proportion of players had done nothing, while **30%** had spent time and effort trying to navigate through this stage, **18%** had stopped playing, and **9%** had paid for the downloadable content.

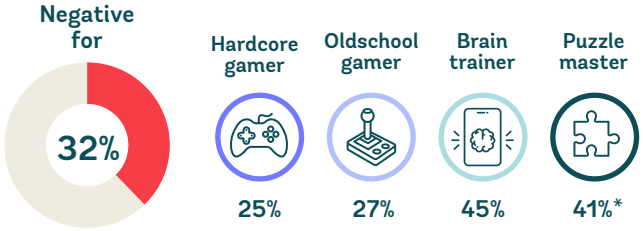


Figure 65. Negative impact experienced from paid DLC (based on n=482 players having encountered this dark pattern)
*Note: Smaller sample size (<30) for Seasoned Puzzle Masters

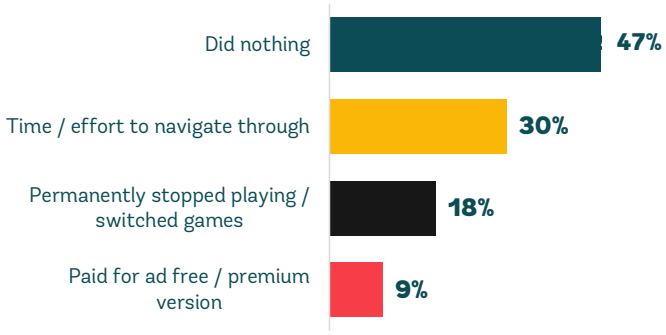
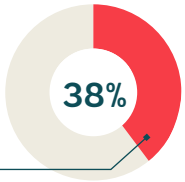


Figure 66. Behavioural response to negative experience of paid DLC (based on n=152 players negatively impacted by this dark pattern)

Skin betting



Lower harm, lowest incidence

● incidence

Skin betting refers to the use of virtual goods (e.g. skins) in a digital game to bet on the outcome of games of chance.

Overall, this dark game pattern was familiar to only **38%** of players (mainly Hardcore All-in Gamers), and negative to **25%** of this group. Most reported having done nothing, while **31%** had spent time and effort trying to navigate through this stage, and **5%** had made a payment.

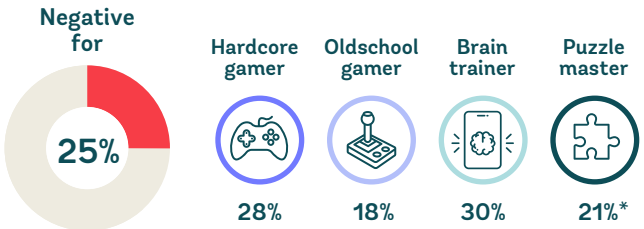


Figure 67. Negative impact experienced from skin betting (based on n=302 players having encountered this dark pattern)
*Note: Smaller sample size (<30) for Seasoned Puzzle Masters

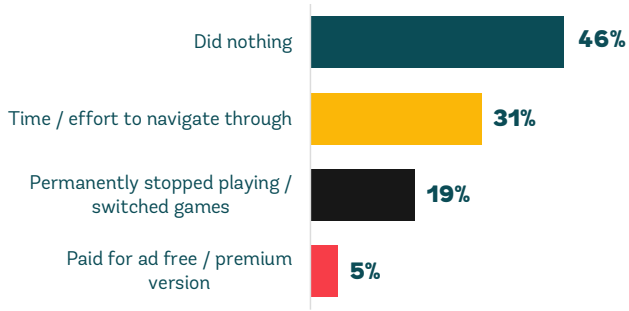
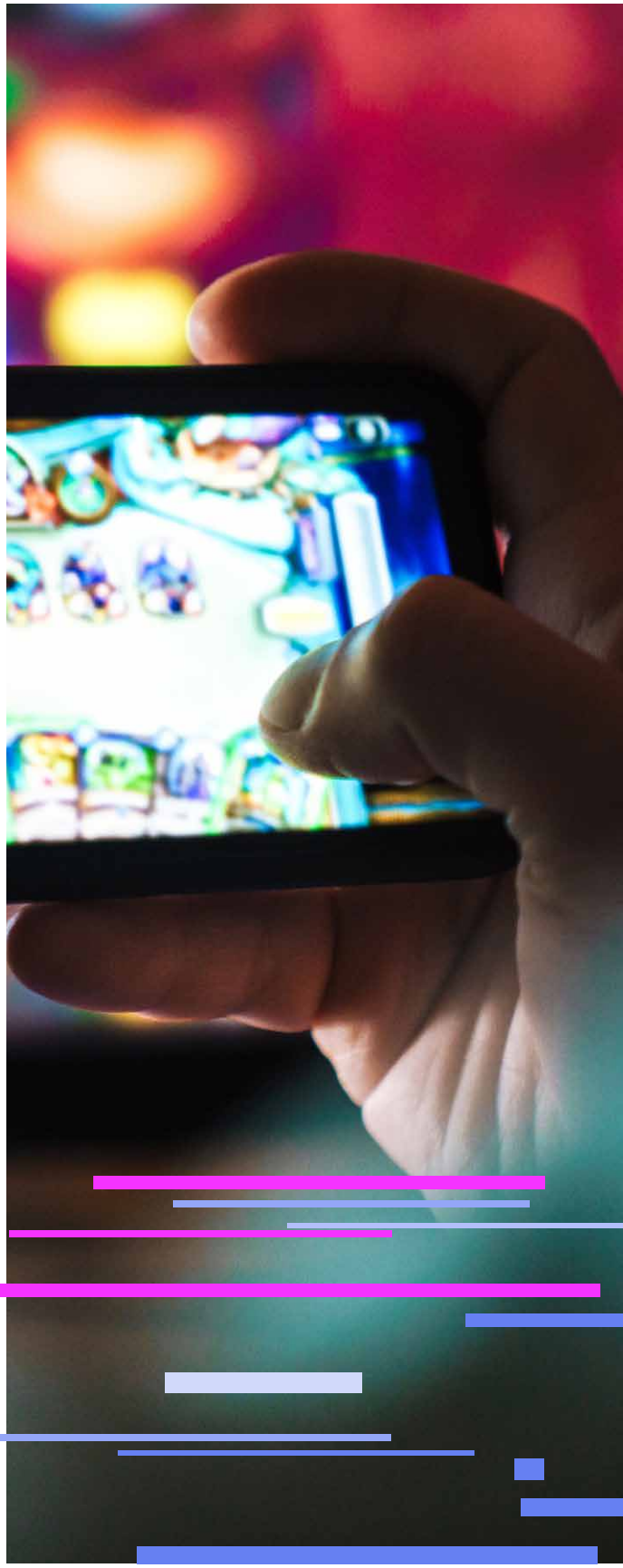
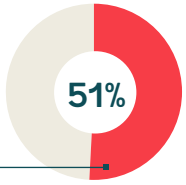


Figure 68. Behavioural responses associated with negative experience of skin betting (based on n=74 players negatively impacted by this dark pattern)



Paid battle pass



Lower harm, higher incidence

● incidence

Battle passes are often seasonal passes enabling players to participate in exclusive tournaments. Some battle passes provide additional content for a game such as periodic rewards, characters and challenges in exchange for payment (paid battle pass), or for playing the game and completing specific challenges (earned battle pass, discussed below).

A battle pass can require players to complete daily and weekly challenges to unlock in-game items at various levels, thereby incentivising regular game play.

Since loot boxes were regulated across several jurisdictions, the incorporation of battle passes into games has increased.[30] Battle passes vary in cost, format and value, with inclusions and rewards not always clear. The lack of transparency can also create a sense of FOMO (fear of missing out) followed by disappointment when the pass fails to deliver the value it promises. Battle passes (whether free or paid) are considered problematic by gaming researchers as the pass will typically create a sense of 'time investment', urging players to visit the game (often daily) to benefit fully from the battle pass.[31]

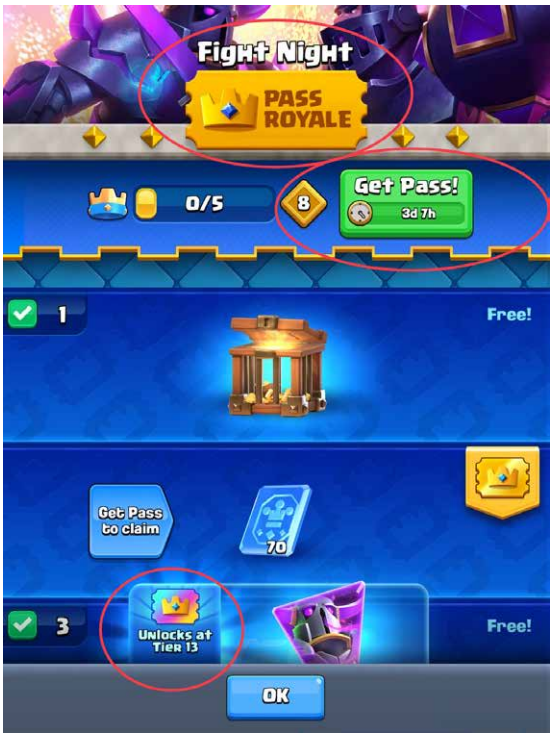


Figure 69. An example of a battle pass available for purchase in Clash Royale by Supercell, layered with scarcity cues and promises to unlock additional game play

Figure 70. An example of a battle pass 'Rocket Pass' available for purchase in Rocket League by Psyonix, layered with a scarcity cue and additional tier rewards

More than half of Australian players (**51%**) recall encountering a battle pass when gaming, with **40%** spending time and effort navigating it that would otherwise be time spent on just playing the game. Close to a quarter of players (**23%**) also experienced some form of negative impact associated with a battle pass.

Figure 71. Negative impact experienced from a paid battle pass (based on n=409 players having encountered this dark pattern)
*Note: Smaller sample size (<30) for Seasoned Puzzle Masters

Players experiencing negative impacts from encountering a paid battle pass were likely to have done nothing, with **10%** having paid for the battle pass.

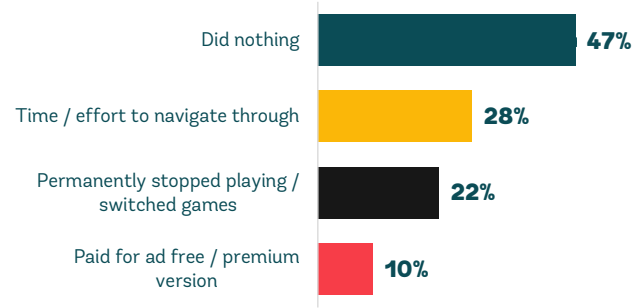
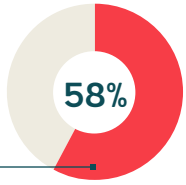


Figure 72. Behavioural responses associated with negative experience of a paid battle pass (based on n=93 players negatively impacted by this dark pattern)

Activity notifications



Lower harm, moderate incidence

● incidence

These in-game notifications are a common practice in multiplayer gaming and often provide details about what other players are doing in the game (e.g. earnings, purchases, activities).

Activity notifications can be about other players' game activity, or present as badge notifications showing what prizes or rewards are available. They can be distractions working on competitive and FOMO motivations of players, designed to enhance engagement with adjacent parts of games not directly associated with game play.

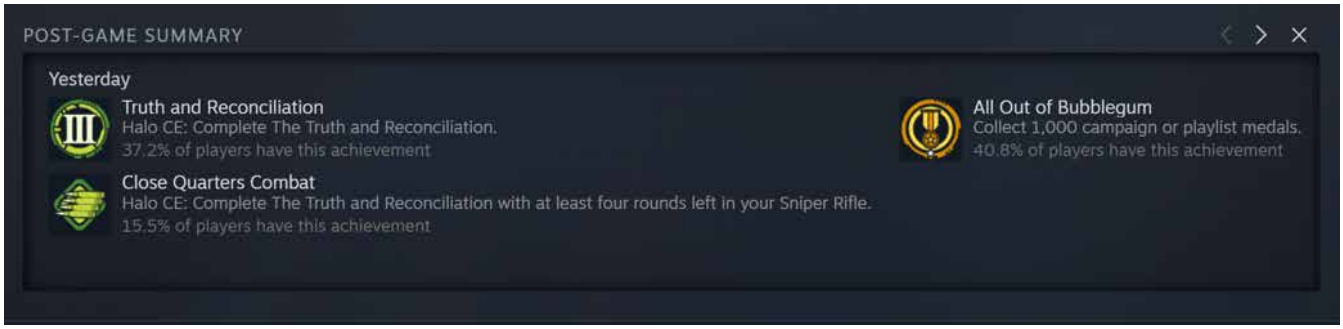


Figure 73. Activity notifications about other players' activities in Halo by Halo Studios

Figure 74. Activity notification badges of events and microtransactions in Candy Crush Saga by King

Figure 75. Negative impact experienced from activity notifications (based on n=465 players having encountered this dark pattern)

Negative impacts were experienced by **22%** of players encountering activity notifications. Close to half did nothing (**46%**) and a similar proportion spent time or effort to avoid and navigate through the notification (**44%**).

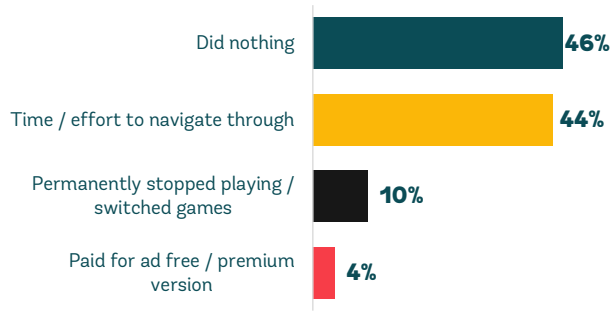
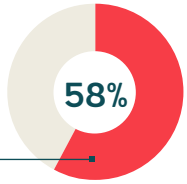


Figure 76. Behavioural responses associated with negative experience of activity notifications (based on n=103 players negatively impacted by this dark pattern)

Earned battle pass

Lower harm, moderate incidence



● incidence

In some games, battle passes are offered for free. While unpaid, they may require other efforts from a player, such as grinding or extended game play, often needing to be completed by a certain date or within a number of days. These seasonal battle passes include periodic rewards, characters and challenges.

Figure 77. Battle pass available on Stumble Guys by Scopely, for grinding/extended game play, providing 'exclusive rewards'

Negative impacts were experienced by one in five players encountering earned battle passes (**20%**). The largest proportion spent time or effort trying to navigate past the battle pass (**44%**); while many did nothing (**42%**).

Figure 78. Negative impact experienced from earned battle passes (based on n=466 players having encountered this dark pattern. *Note: Smaller sample size (<30) for Seasoned Puzzle Masters

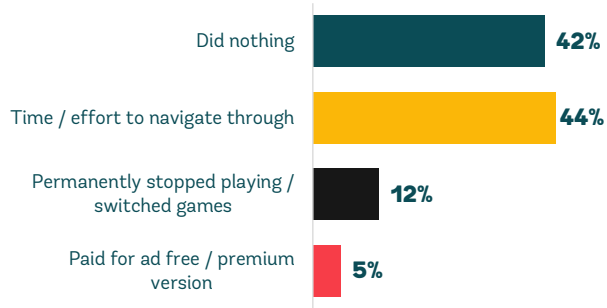
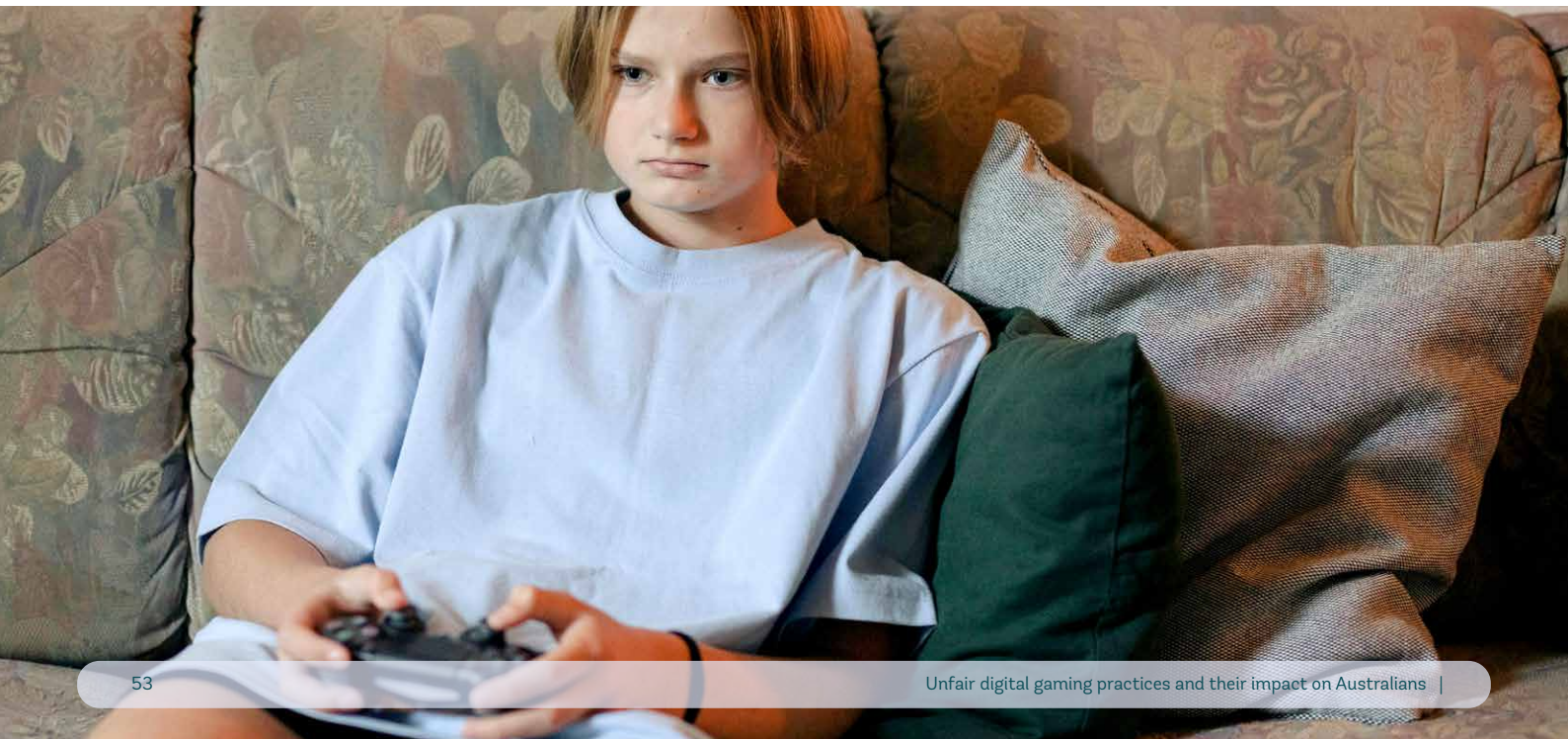
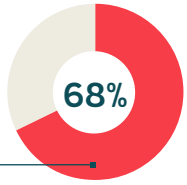


Figure 79. Behavioural responses associated with negative experience of earned battle passes (based on n=93 players negatively impacted by this dark pattern)



Earned loot box

Lowest harm, higher incidence



● incidence

Instead of paying, players can earn random or unknown in-game objects through playing for longer or completing certain tasks. These types of loot boxes can be earned via normal game play, but can often be associated with 'grinding' – i.e. performing monotonous tasks which detract from the enjoyment of game play – in order to earn random in-game objects.

While the incidence of encountering earned loot boxes is relatively high (**68%**), the reported negative impact is relatively low (**12%**) suggesting both positive and neutral experiences with this gaming design pattern. The largest proportion of players reporting a negative impact did nothing (**46%**), while more than a third spent time or effort trying to navigate beyond the loot box (**37%**).

Figure 80. Loot box available in Clash Royale by Supercell, in exchange for gems OR waiting for access for 3 hours and 32 minutes

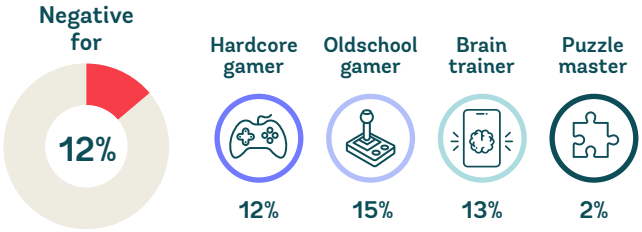


Figure 82. Negative impact experienced from earned loot boxes (based on n=544 players having encountered this dark pattern)

> ***"It just feels like a raw deal, especially given how time-consuming it is. The main features I'm talking about are in generally hyper-competitive game design in stuff like League of Legends, CSGO, Valorant, etc. that makes it feel like something that's entirely made for people who can dedicate their damn lives to it."***
>
> **– Male, 18 years**

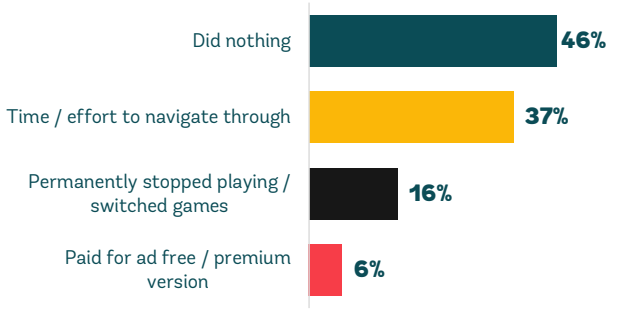


Figure 83. Behavioural responses associated with negative experience of earned loot boxes (based on n=67 players negatively impacted by this dark pattern)

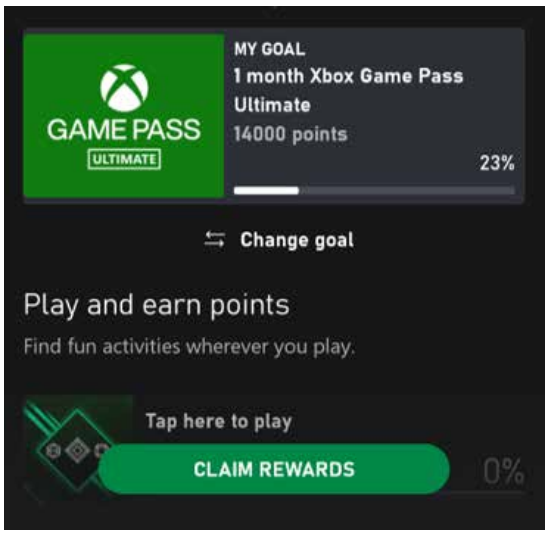


Figure 81. Xbox Game Pass available from extended game play

What is it like to complain about harm caused by digital games?

When players experience negative consequences due to unfair gaming practices, one option is to contact the company and seek redress. The survey findings show that people who have a problem with games rarely seek redress or are not successful in contacting or receiving help from the game developer or platform.

Close to half of Australian players (**42%**) did nothing when they experienced a negative consequence from a manipulative tactic in a game, including when someone experienced financial loss (Figure 84). Reasons for not pursuing some form of redress included:

- being unsure of the redress process or point of contact
- an assumption/acknowledgement that it would not lead to any outcome
- the likely imbalance between time and effort required against the potential return.

Of players who pursued redress, only **26%** sought a refund, with mixed success. Other actions included cancelling or unsubscribing from the game, cancelling payment methods or stepping away from the game completely.

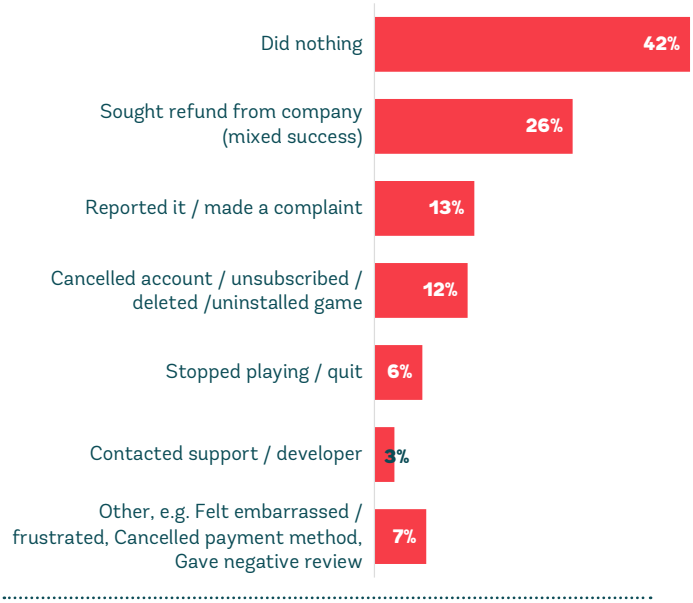


Figure 84. Steps players take after experiencing a negative consequence

"I did try and contact the game provider but it was very difficult, the process is not at all user-friendly and they can takes months to respond to you, if at all. Customer service is very poor in the game industry."

– Male, 65 years

"Didn't do anything, I wasn't sure who to contact to discuss my issues and felt like it would cost me more time than the money I accidentally spent."

– Female, 25 years

"No I did nothing, assuming they don't care and won't help."

– Male, 39 years

"I tried to report this however it was ignored. When I tried the financial ombudsman they told me that it was an offshore company so they couldn't do anything to help me."

– Male, 45 years

"I just left the purchase because it was only small and couldn't be bothered going through the refund process."

– Female, 50 years

As evident in other CPRC research, these results highlight a severe lack of post-purchase consumer care and service. There is a mismatch between what consumers need customer service to deliver and what is provided by businesses. The poor consumer experience is further exacerbated in digital settings where the supply chain is complex and the path to redress is unclear.

When is game design harmful?

With many of the dark game patterns investigated in this research, the potential for harm and unfairness is likely to vary depending on context, transparency and the audience.

Many games include mechanisms that are highly random and involve chance and risk as their main forms of fun, with or without dark patterns. Players of all sorts may not see all of these mechanisms as exploitative or deceptive due to the nature of current tendencies in the games industry.

For example, a game with a subscription model is an acceptable business model; however, if cancelling that subscription is difficult because it utilises the subscription trap dark pattern, then the practice is deemed deeply unfair as the player is being asked to continue paying for a game they no longer wish to play.

Similarly, paid downloadable content and early access can offer a unique and interesting gaming experience, but if the offering is unclear upfront or delivers low-value content when compared to the cost, it can lead to a negative experience for players that detracts from the spirit of the gaming pastime.

Activity notifications are another common practice that can be innocuous and, in a multiplayer setting with players based remotely, can enhance the social aspect of the gaming experience. Here the harm is related to content and frequency. For example, if the notifications create FOMO between the 'haves' and 'have nots' relating to what other players are purchasing, and the game is also layered with the dark pattern of confirmshaming, it can exacerbate the potential for harm.

Our research found that a significant proportion of Australian players have experienced a range of these dark patterns, with varying degrees of negative impact and harm. The highest relative harms were found for hidden cost, data grab and freemium practices.

Hidden costs, freemiums and data grabs are similar in that the transaction points and amounts are not clearly disclosed prior to game play. Players can be 'held hostage' unless they pay, provide personal information, wait, or watch ads, to unlock further game play. Games exploiting these dynamics and restricting game play are manipulative as they are monetising players' investment in and commitment to the game.

These patterns have crept into modern game design, creating an environment where players have become used to intrusive and exploitative mechanisms as a part of the cost of playing. Games can be made without these systems, and still be fun, challenging and rewarding.

Intersections between play and pay

The world of digital gaming has many similarities with electronic gambling, from the appearance and layout of some games to the inclusion of interactive features, and elements of skill and chance.

"Games with microtransactions, especially gacha games that are basically gambling, are extremely predatory and exploitative. These games especially target vulnerable people like those prone to addiction (including people with ADHD, etc.) or gambling, and use dark patterns to make you feel like you have to pay to get anything. They may shower you with freebies at the beginning to hook you in and make you play the game but then drastically make the progression curve steeper to deprive you of that dopamine rush they provided you at the beginning. In order to progress, you feel like you have to pay."

– Female, 20 years

"I have ADHD so impulse buying is a problem for me that I try to control by what games I play. I usually avoid in-game purchasing ones but sometimes I get one by mistake."

– Female, 32 years

Research has found that simulated gambling products have the potential to normalise and encourage monetary gambling, especially among children and young people, yet few studies have examined this relationship.[32] It is well established that gambling can lead to a range of negative consequences or gambling harms, including financial, relationship, social, health and emotional/psychological effects. Gambling-like features that instil sunk-cost fallacies, overlayed with dark patterns in game design, increase the risks of financial harms.

"They basically want you to gain a gambling addiction which can be ruinous for people, making them spend all their savings on a game."

– Female, 20 years

Of key concern are gaming design practices including loot boxes, battle passes and skin betting, especially when included in games accessed by children. Many designs feature gambling-like aesthetics, and are often positioned to the player as providing rewards and items that may improve a player's chance of winning, thereby priming players towards gambling.

Microtransactions are another key concern, particularly when allowing in-game purchases with primary (real-world) or secondary (in-game) currencies, and obfuscating the amount spent.

Aggregations and layering of additional dark patterns, including redirection, trick questions, confusing language, false hierarchy and disguised ads – observed extensively across many games in this research – can be considered predatory, especially in the context of games that would be played by children, or are even targeted at children. They could also be seen as unfair if these features are designed to specifically exploit a player's vulnerability.

"It sucks that a lot of these games at least partially pander to kids, which screws with their development early in my opinion (certainly screwed with mine)."

– Male, 18 years

Figure 85. Loot box available for purchase in Stumble Guys by Scopely (rating 9 years+), with words 'Spin now for chances at Mythic Dream Dragon!'

The mods we need for fairer gaming practices

If we want to create a gaming environment where challenges, chance and the thrill of the unknown are about the game, and not dark game patterns and design tactics that cause harm, then we must mitigate dark patterns within games.

Specifically, Australia needs stricter regulation to address the following harmful practices:

- targeting of manipulative practices towards children
- exploiting cognitive biases and vulnerabilities through deceptive design
- utilising designs and rewards dynamics akin to gambling (loot boxes, battle passes, skin betting)
- using layers of in-game currencies to mask or distort real-world monetary costs (microtransactions)
- lack of clear and easy dispute resolution and redress by gaming developers and platforms.

Safeguards for children who play digital games

The research in this report highlights that some gaming practices which may be acceptable for adults in some circumstances, are likely to be harmful for children in most or all circumstances. Game developers need to be mindful of vulnerable consumers, including children and elderly people.

Digital gaming is popular among children in Australia, with research showing that nearly all boys (96%) and most girls (90%) play digital games at ages 12–13. More than half of boys (53%) and more than a third of girls (36%) play daily at this age.[33]

Of particular concern is the exposure of children and young people in Australia to simulated gambling and gambling-like elements and activities in digital games. Teenagers who play simulated gambling games at ages 16–17 are 40% more likely to spend real money on gambling in subsequent years.[34] We also know that young adolescents may be particularly vulnerable to gaming disorders. Of Australians aged 13 and 14 years, 15-16% were reported to have a gaming disorder in 2022.[35]

Digital games that limit play and demand attention, energy, time or money can be seen as predatory. Under some circumstances, these games can be seen as exploitative, inducing players experiencing vulnerability to make a purchase to speed up game play.

Introduce a digital gaming industry duty of care for children and other vulnerable consumers

A collective duty of care (or best interests duty) for children should be built into the *Online Safety Act 2021*, to address digital game developers and games that are accessible and played by children (not just games targeting children).

As part of the Australian Government's commitment to introducing a new Digital Duty of Care under a revised Online Safety Act,[36] the government should invest resources to undertake a comprehensive assessment and review of what a duty of care should entail in a gaming context, with the end goal of mandating that game developers also adhere to appropriate duty of care principles. Such a duty should include transparency and disclosure in design practices, specific guidelines on ethical algorithm use, and regular external reviews to ensure compliance.

CPRC supports the following proposals which prioritise transparency, safety and fair treatment of young players:

1. Players and caregivers need to clearly see and understand all relevant information affecting gameplay dynamics before playing the game, e.g. chances of winning, what payments are needed, what payments achieve.
2. Algorithms should be transparent, meaningful, tested for comprehensibility and disclosed, with details regarding how they interact with and treat players, e.g. are odds random?.
3. There should be regular testing and auditing of choice architecture, made available to external auditors, to evaluate impacts on players.

By enforcing these standards, the government can hold developers accountable for prioritising player welfare, fostering a safer digital gaming environment for young players.

Disclosures are missing and mediocre at best

While there has been increased scrutiny over freemium games targeting children, and changes in app store policies regarding greater disclosure of in-game purchases since the Smurfs' Village freemium controversy, our research suggests disclosure is inconsistent and insufficient on its own.[37]

Application and digital game stores disclose some information on games, e.g. 'Contains ads' 'In-app purchases', but there are discrepancies between disclosures in terms of content, positioning and wording. For example, the App Store (Apple) gives the game Stumble Guys an age rating of 9+ (a detail at the bottom of the page in fine print), whereas there is no age rating on the Google Play store. Current disclosures do not let parents know about the full range of manipulative tactics children will be exposed to within the game, from activity notifications to hidden costs.

Does the National Classification Scheme go far enough?

Classifications and ratings for computer games consider aspects such as violence, sexual content or other mature themes. As of September 2024, the new minimum classifications for digital and video games with gambling-like content are:

- M (Mature – not recommended for children under 15) for video games containing in-game purchases linked to elements of chance, including paid loot boxes
- R 18+ (Restricted to adults 18 years and over) for video games containing simulated gambling.[38]

However, there are several gaps in the classification scheme. Classifications introduced in September 2024 are required only for new video games developed from September 2024. The classifications do not require existing games to be classified, unless they are updated with new content and need to be reclassified. This means that popular games aimed at children may still include paid loot boxes without updating their rating. For example, Stumble Guys has a G rating despite the presence of loot boxes (paid and earned).

Furthermore, we have observed many children's games in this study alone (e.g. Minecraft, Rocket League, Stumble Guys) that use in-game currencies purchased with real-world money. The use of microtransactions using primary and secondary, or direct and indirect purchasing dynamics needs further disclosure.

A more meaningful information disclosure approach that utilises an enhanced version of the existing rating framework could provide better signals to parents and guardians for making informed decisions based on the extent of manipulation content that may be present in a game.

Regulation in the electronic gaming industry requires that electronic gaming machines and games comply with many disclosure requirements, e.g. odds, chance, game rules, credits, free games.[39] There is potential to explore whether the game classification and rating framework could consider other aspects such as:

- prominence and frequency of in-game purchases – including purchase schedules
- specific pricing of in-game items/bundles
- types of currencies used in games and any forced choices or restrictions on currency use in the game
- presence of challenges relating to chance or simulated gambling features
- the need for players to participate in repetitive activities ('grinding') for rewards.

All disclosures should be written in plain English and tested for comprehension. Further research is needed to test the best form of disclosure to help players understand which harmful practices are present in games and to identify which practices will be most relevant to parents when choosing games for children.

Disclosures alone do not assist players to distinguish between games with one-off purchase options and fair trades, and manipulative freemium models that still exist, especially when used for games targeting children. Additional restrictions and independent regulations are needed.

A step in the right direction – Make unfair illegal

Under the Australian Consumer Law (ACL), the Australian Competition & Consumer Commission (ACCC) can take legal action against businesses for 'misleading or deceptive conduct'. If a business is found to have engaged in misleading practices, the ACCC can seek penalties, enforce corrective measures, or secure compensation for affected consumers through the Federal Court.

For example, in 2018, the ACCC took Valve to court, arguing that the company misled consumers by stating they were not entitled to refunds on the Steam platform under any circumstances. The Federal Court ruled in favour of the ACCC, finding Valve in breach of the ACL and holding it accountable for its misleading practices. This led to Steam implementing an international change to allow refunds for all players, no matter their country.[40]

Despite the ACL providing consumer protections against misleading and deceptive conduct, there is still a need in the ACL for measures to protect consumers against business conduct or practices that are unfair, including dark patterns. One clear way to mitigate the use of dark patterns across the digital economy and address exploitation of cognitive biases and vulnerabilities by deceptive design, is through the introduction of an unfair trading prohibition in Australia, a law that has been in place in many other countries for decades.

In 2023, CPRC, in partnership with consumer organisations from across Australia, led a submission to the Australian Government's consultation on introducing an unfair trading prohibition under the ACL.[41] On 16 October 2024, the Australian Government announced the plan to ban unfair trading practices, legislating a general prohibition, in addition to a list of specific prohibitions on a range of practices.[42] While the exact drafting for this new legal protection was not available at the time of developing this report, it is likely that at least some dark patterns will specifically be 'called-out' as unfair and therefore deemed illegal in the near future. Our submission recommended the following definition of unfair business practices:

'Unfair business practices include business practices that:

- **unreasonably distort or undermine the autonomy and economic choices of consumers**
- **take unreasonable advantage of a lack of consumer understanding or ability to protect their own interests, or consumers' reasonable reliance on the trader**
- **omit, hide, or provide unclear, unintelligible, ambiguous, or untimely material information, or unreasonably inhibit access to, or enjoyment of, a good or service already purchased.'** [43]

The last aspect of the definition connects the primary reason for why Australians engage in gaming with the need to ensure that a product or service delivers the enjoyment that a consumer seeks and expects.

These reforms should grant the ACCC and state and territory consumer protection agencies the authority to issue infringement notices.

Countries in the European Union have further strengthened their laws by codifying dark patterns within other laws (e.g. Digital Services Act, Digital Markets Act) or incorporating further guidance on dark patterns within their current laws on unfair business practices.

This is a step in the right direction to protect Australian consumers, including players of digital games, as we have seen success in other countries, where regulators can take direct enforcement action in the digital gaming environment. For example, in 2024, the Netherlands Authority for Consumers and Markets (ACM) imposed a fine on Epic Games International for using unfair commercial practices aimed at children in its Fortnite game. ACM's investigation revealed that children playing the game were subjected to various forms of pressure to make purchases. This included ads directly urging children to buy items, as well as misleading countdown timers for 'limited time' offers. ACM determined that Epic Games exploited children's vulnerabilities through specific design choices in its Item Shop, breaching the standards of professional diligence. It issued a binding directive and imposed 2 fines on the company, totalling more than 1.1 million euros.[44]

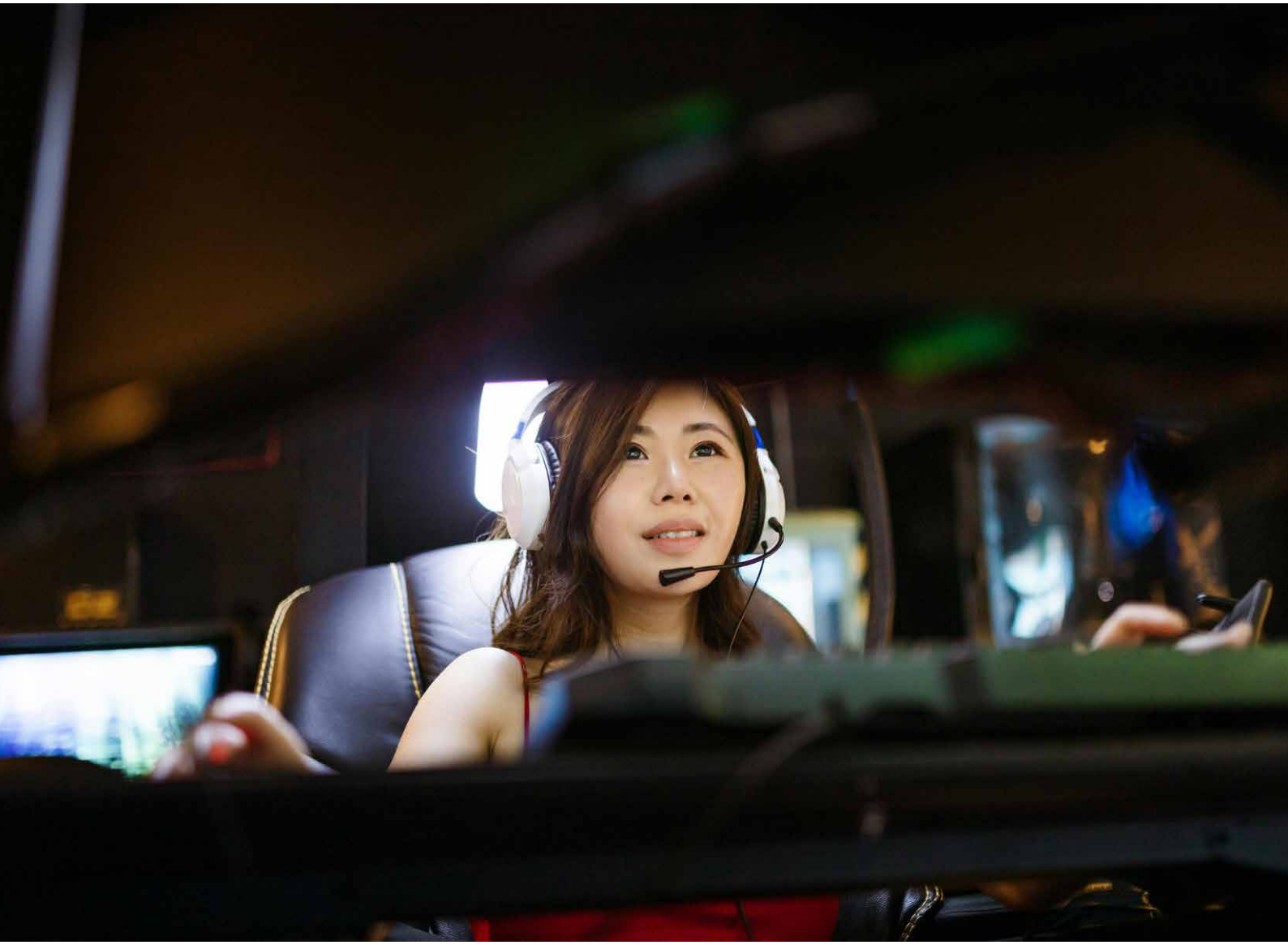
Also in relation to Fortnite, in 2022 the US Federal Trade Commission (FTC) reached a US$245 million settlement with Epic Games on the alleged use of dark patterns that enabled credit card charges for virtual in-game items in Fortnite without the payee's express consent.[45] The specific law that the FTC relied on to achieve this settlement was Section 5 of the Federal Trade Commission Act that deals with unfair or deceptive practices.[46]

A much needed step further – Privacy protections for the 21st century

The privacy harms identified through this research provide another example of why Australia can no longer rely on privacy protections that predate the digital economy. Australians deserve privacy protections that place a clear obligation on businesses to:

- implement genuine privacy by default measures, specifically a right to opt in instead of imposing the burden to opt out
- ensure they are collecting and using consumer data that leads to fair and safe consumer outcomes
- only collect data that is essential for providing the product or service, and ensure it is not used for any other purposes.

In addition, the definition of personal information must be modernised to cover information obtained from any source and by any means that has the ability to identify an individual.[47]



Introduce specific bans or restrictions on gambling-like designs in games

Restrictions on loot boxes

In addition to introducing and enforcing laws against unfair business practices, EU countries such as Belgium and the Netherlands have taken further steps to mitigate the use of loot boxes.

In 2018, the Belgium Gaming Commission banned the inclusion of loot boxes in gaming for adults and minors noting that loot boxes violate the country's gambling legalisation.[48]

In 2020, the Netherlands' regulator, Authority for Consumers and Markets, released guidelines on online architecture, including loot boxes, under enforcement of the Dutch Civil Code which is based on the EU Unfair Commercial Practices Directive. The guidelines state that rules on price indications apply to loot boxes, which means that games must display the cost of a loot box in euros instead of in-game currencies such as points or gems, and that the probability of winning must also be stated upfront before the purchase of a loot box.[49]

These reforms are similar to the recommendations made by the Senate Committee on Social Policy and Legal Affairs following its inquiry in 2022, which recommended spending controls by default, transparency regarding probability, and disabling of algorithmic loot box features, meaning players can opt in by choice instead of by default.[50]

While the relative success of these proactive prohibitions is yet to be seen, what is clear is that such prohibitions need to be complemented by well-resourced enforcement, where surveillance of the market is proactive instead of reactive. A study in 2023 found that a significant majority of mobile games in Belgium still featured loot boxes. The study notes that '…82% of highest-grossing iPhone games in Belgium continued to sell loot boxes for real-world money…'.[51]

Microtransaction restrictions in freemiums

When microtransactions are made using a range of currencies from in-game currencies and real-world money it can be unclear to the player just what amount is being spent for the value received. Similar to the Dutch Civil Code relating to loot boxes, costs for in-game purchases should be stated in terms of real money, and not just in gems or tokens.

In 2024, the Norwegian Consumer Council, together with 21 consumer organisations from 17 countries, submitted a complaint to EU authorities on the unfair practices of leading video game companies, behind games such as Fortnite, EA Sports FC 24, Minecraft and Clash of Clans. They asked for a ban on the sale of premium virtual currencies in digital games, and a ban on hidden, algorithmically driven systems in digital games that aim to influence the economic behaviour of consumers.[52]

Similar to calls for regulation of sports betting in Australia, players of digital games should be able to determine the pricing and value of any in-game purchase before they make a purchase, and also be able to see their total spend in real-world currency at any time. Studies show that gamblers who received activity statements showing their spend reduced their bets between 4.9 and 7.6%.[53]

Further research is needed to test the most effective form for this disclosure.

Penalties for consumer guarantees need to apply to digital games

A recurring theme across CPRC's recent consumer research is the lack of support for consumers to obtain a fair resolution when something goes wrong. Forty-two per cent of players did not do anything after encountering a loss of money, privacy or a deterioration of wellbeing as a result of a digital game.

This research demonstrates a clear need in Australia for digital gaming platforms to be accountable and take greater responsibility for managing complaints.

Under the ACL, a consumer guarantee includes a range of guarantees that a business must meet including that products and services are of good quality, match the description and are fit for purpose.[54] When these are not met, consumers have the right to seek a refund, replacement or repair.[55]

While these protections should mean that consumers have access to redress, there are four limitations that make it difficult for consumers to exercise their rights if something goes wrong, both broadly, and in the delivery of a digital game:

1. There are no specific obligations in consumer guarantees that relate to any form of technology embedded in products or its associated updates.
2. There are no civil penalties and no pathway for a regulator to enforce consumer guarantees. The law relies on individuals pursuing companies through state-based tribunals, with the consequences to companies for breaching the law limited to addressing the problem.
3. There are no specific obligations on what good customer service should entail, especially within a digital market.
4. There is no clear pathway for complaint escalation within digital markets. Many complaints about games will be about international companies that can be very difficult to engage through state fair trading and tribunal or court processes.

These limitations mean that the onus currently is largely on individuals to pursue a refund, remedy or replacement under the ACL framework when things go wrong, and as we observed, the largest proportion of digital game players are not doing anything due to a lack of know-how, insufficient time, and scepticism about being able to obtain a remedy.

Enable regulators to seek penalties for breaches to consumer guarantees

Technically, a regulator can take legal action against a business for failure to comply with the guarantees, but the courts can merely direct the business to offer the consumer the appropriate remedy. There is no option for courts to apply the multimillion-dollar penalties that can be applied for other breaches of the consumer law, such as when businesses mislead their customers. The ACL needs to be amended so regulators can seek pecuniary penalties for breaching consumer guarantees, which will help incentivise compliance.

In 2021, the Federal Treasury consulted on draft reforms to introduce penalties for consumer guarantees.[56] This work has since been revisited to address current and potential future harms to consumers, and at the time of publication is amid consultation.[57]

Establish clear pathways for dispute resolution

When it comes to customer service, governments, businesses and civil society need to work together to identify clear principles and expectations of effective and supportive internal dispute resolution processes. At a minimum, principles should reflect:

- one-touch-point frameworks so consumers do not need to relay their situation to multiple people at multiple points
- a range of clear options to access customer service
- the support to be heard and treated with empathy, care and respect
- the right to communicate with a human.

As a first point, there is an opportunity to explore and analyse the various international standards on customer service and to consider consolidating these standards into a set of mandatory obligations.

In addition to clear internal dispute resolution frameworks, Australians need a clear and accessible pathway to redress within the digital economy. Currently there is no easy, independent way of resolving disputes in the online setting. In other settings, when consumers are unable to resolve issues directly with a utility service like an energy provider or a telecommunications company, they have access to independent support for redress through an ombudsman. However, in the case of redress relating to digital services and technologies, this type of support is not available. Consumers are frequently left to navigate any form of recourse themselves or simply give up.[58] For some complaints, consumers may be able to raise issues through state-level tribunals, but these processes tend to be difficult to navigate and take a long time.

There is merit in the Australian Government considering a more holistic approach to dispute resolution. One option is to consider appointment of a Digital Ombudsman that can provide support on all facets of a digital experience, as identified in previous CPRC research.[59]

A Digital Ombudsman would provide a centralised, impartial body to address concerns of digital game players, ensuring they have a fair and independent channel for resolving any disputes that may not be adequately addressed by the industry or existing regulatory frameworks. The body could foster transparency and adherence to best practice principles, encouraging the gaming industry to adopt higher standards of customer service and complaint management. Developers and platforms would be incentivised to comply with these principles, which would in turn increase consumer confidence in the digital gaming industry, and promote accountability among industry players.

Future funding of digital game development in Australia

Even though dark patterns are prevalent in the games industry, often at a significant cost to consumers, Australia's digital game development industry should not need to rely on such exploitative mechanisms to remain competitive.

Funding for digital games in Australia should be contingent on Australian developers creating games that do not utilise dark patterns, ensuring both player trust and sustainable growth for the local industry.

Endnotes

1. See Table 1 for descriptions of each dark pattern

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5. Brand, J.E., Wilson, T.W., Jervis, J., & Huggins, P.M. (2023). *Australia Plays 2023*. Interactive Games and Entertainment Association (IGEA). Accessed: **https://igea.net/2023/08/australia-plays-2023/**

6. A sandbox game refers to a video game genre emphasising creativity and interaction, often without a predetermined goal or with player-defined objectives. These games may lack explicit objectives, enabling emergent gameplay. They are frequently associated with open-world designs, granting players freedom in movement and progression.

7. A shooter game focuses on combat involving ranged weapons, typically firearms or other projectile-based weapons. Players engage in battles that test their reflexes, accuracy, and tactical thinking, often in real-time.

8. Zagal, J.P., Bjork, S. & Lewis, C. (2013). *Dark Patterns in the Design of Games*. Accessed: **http://www.fdg2013.org/program/papers/paper06_zagal_etal.pdf**

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12. Note: Average ages may show a higher skew as the survey was of adults 18 years or more; children were not surveyed as a part of this study.

13. Cross-play: playing the same game across more than one device type – dictated by the game developer

14. Participants were asked not to refer to winning or losing.

15. CPRC (2022). Duped by design – *Manipulative online design: Dark patterns in Australia*. Available: **https://cprc.org.au/report/duped-by-design.**

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18. Participants self-selected from ordinal categories from very negative, neutral, to very positive.

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20. Index of harm = % negative impact x % action taken to overcome; indexed against lowest scored dark pattern (earned loot box) to observe differences in harm relative to this. For example, player data shows that hidden costs are considered 9 times more harmful than earned loot boxes.

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