

# What Factors Do Players Perceive as Methods of Retention in Battle Royale Games?

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## Abstract

Battle Royale (BR) games are well known for their ability to not only attract but also retain a large number of players. In this paper, we attempt to identify the common themes which BR players identify as methods of retention through a qualitative thematic analysis with 11 participants. Data was gathered using semi-structured interviews and analysed through thematic analysis. Seven common themes were identified, where (1) draw of new content, (2) mechanics and action of BR games, and (3) reward systems were suggested to impact retention. Additionally, (4) social dynamics and (5) mastery were external factors outside the game that may impact retention in BR games. However, the other themes of (6) aesthetic preference and (7) unique selling points were not contributing factors in our sample. Further work is needed to understand the impact of these retention factors and how to design for these factors in game development.

## Keywords

Battle Royale games; player retention; game design; system design; mechanics.

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## Player Retention

Player retention is a prominent point of discussion within game design (Gu & Jia, 2018; Narinen, 2014; Straat & Verhagen, 2018). The games industry is striving to understand how to retain players in live service games, and serious games are looking to increase retention or adherence (Haaranen et al., 2014). Various theories attend to individuals' motivations to play, including self-determination theory, social cognitive theory, and uses and gratifications theory (Reid, 2012; Ryan et al., 2006; Van Rooij et al., 2017). However, scholarship has not yet researched whether specific game mechanics or interactions play a predominant role in retaining players over a long period of time. This study aims to identify the common themes within mechanics and dynamics that keep players coming back.

A popular genre of live service games are Battle Royale (BR) games. BR games are online multiplayer video games that are typically a sub-genre of first- or third-person shooter games that feature last-man- or last-squad-standing gameplay. It is also worth noting that most BR games have adopted a "live service" approach (also known as "games as a service"): These games employ an evolving development strategy, providing content that is sometimes locked behind a subscription (Jarrett, 2020). In this paper, we focus on BR games over live service games as a whole due to live service games encompassing a multitude of different genres, including Multiplayer Online Battle Arena (MOBA) games such as *DOTA 2* (Valve Corporation, 2013), and First-Person Shooters such as *Star Wars: Battlefront II* (DICE, 2017). Therefore, to attain a manageable set of game features for analysis, only BR games have been investigated.

The purpose of this study was to investigate what factors were perceived by players as methods of retention in BR games. Eleven participants were interviewed, and interview results were analysed to extract common themes as to why the participants kept playing their chosen BR games. However, it should be noted that this study functions as a basis for future work, only suggesting perceived factors that may impact retention. It is also not without its limitations, such as the small sample size and whether the themes can be generalised to different BR games, which present implications for future research. The results present the following themes that were identified from participant interviews: (1) draw of new game content; (2) reward systems; (3) mechanics and actions of BR games; (4) social dynamics; (5) mastery; (6) aesthetic preference; and (7) unique selling points.

## Background

BR games are a popular game genre with large player retention rates, as demonstrated by games such as *PlayerUnknown's Battlegrounds* (*PUBG* hereafter; *PUBG Corporation, 2017*), retaining hundreds of

thousands of players each month and selling over 70 million copies in 2020 (Steam Charts, 2020). However, there is a lack of evidence as to why BR games, like *PUBG* and *Valorant* (Riot Games, 2020), have successfully retained players. Hunicke et al. (2004) present a tool to analyse games through three components: mechanics, dynamics, and aesthetics (MDA). In their work, mechanics refer to actions directly related to the gameplay (e.g., going prone, crawling, and selecting a weapon), dynamics refer to interactions not directly related to the gameplay (e.g., battle passes,<sup>1</sup> social pressure, and daily challenges), and aesthetics refer to emotional responses evoked in the player in the MDA framework.

### Player Retention

Player retention can be defined as “how effective are you at getting users to come back to your game” (Lovell, 2011, para. 1). Studies have explored player retention in genres like Massively Multiplayer Online games (MMOs), such as *World of Warcraft* (Blizzard Entertainment, 2004; Debeauvais, 2011; Muntner, 2016) and free-to-play online social and mobile games (Gu & Jia, 2018; Narinen, 2014). However, there is a general lack of research within the BR genre regarding this topic. Toledo (2020) found that during COVID-19, some older players reported moving away from certain BR games, including *Apex Legends* (Respawn Entertainment, 2020), *Fortnite* (Epic Games, 2017) and *PUBG*, due to the influx of younger players. Despite this, an increase in players was reported overall (D’Angelo, 2020). There is some evidence that player retention in games is difficult to achieve, especially over a long period of time. Straat and Verhagen (2018) used a longitudinal study to investigate player retention in recent Triple-A<sup>2</sup> releases and found that player count decreased well below the initial baseline over five weeks. This is echoed by Park et al. (2018), who stated that “retaining players over an extended period of time is a longstanding challenge in the game industry” (p. 445).

Commonly identified themes in player retention are achievements and social dynamics. These themes were discussed by Park et al. (2018), who analysed in-game logs of 51,104 players in an online multiplayer game. Muntner (2016) also identified the theme of social dynamics through the analysis of a survey of 368 *World of Warcraft* players. Similar concepts of competitive and social elements within games are thought to sustain retention, as suggested by Narinen (2014). Narinen further suggested that retention in games is based on incentives and acquisition—that is, “hooking” players into the game—that create

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<sup>1</sup> Battle passes and season passes are a form of subscription payment for content, a common feature seen in multiplayer online games.

<sup>2</sup> Triple-A (or AAA) is an informal classification used for video games produced and distributed by large publishers that typically have larger development teams and budgets.

anticipation and motivation. How players perceived the ways in which BRs achieve this has not been investigated. Debeauvais and Lopes (2016) surveyed 2,865 *World of Warcraft* players from North America, Europe, Taiwan, and Hong Kong using an online questionnaire. The results highlighted that mechanics used to gain revenue may come at the expense of retention. The idea that some interactions, or “gating mechanics,” were put into place to earn revenue rather than retain players was expressed (Debeauvais & Lopes, 2016). Studies regarding “churn,” the point a user (or player) leaves a service, have tried to predict when player churn occurs over a duration of play/session time (Hadiji et al., 2014). Although studies have sought to develop models to predict player churn or loss of retention, more work needs to be done if we want to understand what factors impact player retention.

### Battle Royale Games

Previous research on BR games has investigated their “addictive” nature (Carter et al., 2020). For example, King et al. (2020) investigated the gaming motivations and behaviours of 428 *Fortnite* players as well as online social network influences and how they related to micro-transaction spending and gaming disorder symptoms. These findings suggested that spending may possibly be more related to social pressures rather than to the actual game mechanics (King et al., 2020). Unfortunately, no suggestions or conclusions regarding player retention, in relation to these mechanics, were made. Furthermore, a qualitative study involving student athletes that investigated their motivating factors for playing *Fortnite* found six themes associated with *Fortnite* (Sanderson et al., 2020). These included: competition, addiction, shared athletic experience, social bonding, social connections, and relaxation. Motivation, although not the same as retention, could be considered a driving factor of retention. Free-to-play games have long adopted this method in order to generate revenue. A qualitative thematic analysis by Alha et al. (2014) explored player and developer perspectives on the free-to-play model. They reported that the developers’ approach was favourable to the free-to-play model, but that players responded negatively to the idea of paying for content. However, the case study by Jarrett (2020) reported a much more positive perspective on live service or free-to-play games.

BR games have seen some changes since their conception, with changes to progression, reward systems, and content. *Fortnite*, for instance, went through seasons where the map changed and new themes, equipment, weapons, and vehicles were added, whereas *PUBG* released new maps and progressively focused on improving the shooting mechanics and movement (Alston, 2020; GameCentral, 2020). In most examples, BR games have employed a form of season pass or battle pass as an option for players to earn extra experience and in-game resources. However, these have had a mixed reception within the media and among players (Zendle et al., 2020).

## Method

The objective of this study was to investigate the factors that cause retention in BR games. Through semi-structured interviews, participants were asked what factors players perceived to affect retention in BR games. These interviews allowed for open-ended questions, where participants were encouraged to detail their experiences and thoughts. Interviews were recorded, and participants' personal information was anonymised to adhere to the University of York code of practice and principles for good ethical governance. These interviews were then transcribed for analysis.

## Design

The study design was qualitative in nature, since the lack of background suggested a gap in knowledge surrounding what factors may affect player retention in BR games. Interviews were conducted remotely from November to December 2020 due to COVID-19 restrictions. Remote interviews allowed for a wider sampling of participants within the United Kingdom and allowed for participants to talk about their experiences in an ecological setting (i.e., at home, where they would play these games). The remote interviews were conducted via Discord, Zoom, or Messenger. Ethics approval was submitted and approved in line with the guidelines of the University of York with minimal risks to both participants and researchers.

## Participants

A total of 11 participants were recruited through social media advertising and opportunistic sampling. The circulated posts stated: "Looking for #BattleRoyale UK players, if you can spare a maximum of [a] half hour it would assist with a research study. Reply if you are interested." The participant information sheet was attached so that prospective participants would understand what may be asked.

Hagaman and Wutich (2016) suggested that saturation of common themes usually occurred within 16 interviews and that the top themes could be identified in as few as three to five interviews. As this was an investigation into players' perceptions of retention, the aim was to capture as many interviews as possible in the allowed time. After nine days of recruitment, a resulting 11 interviews were captured. The mean average length of interviews was 13 minutes. The shortest interview lasted just over 8 minutes, and the longest interview was nearly 22 minutes.

Participants were asked to complete the consent form, and upon completion an interview date was arranged. In the beginning of each interview, the consent form and summary were again used to ensure the participants were comfortable with what was being asked. Participants were asked their age, ethnicity, and socioeconomic status to capture a wider background of players.

## Procedure

The interview process was adapted from Cote and Raz (2015), who detailed a semi-structured approach to interviewing participants on games. Warm-up questions, such as what BR games they were playing and what they liked about them, were intended to ease the participants into a comfortable setting. This was done so that when the substantive questions were asked, participants would be more open with their answers. The warm-up questions were included as part of the data collection, as, in some cases, they addressed the substantive questions, and participants were encouraged to carry on with their thoughts. Substantive questions were framed with the purpose of directly understanding what mechanics or dynamics resulted in player retention but were also positioned with follow-up questions to explore any points of interest made by participants.

## Coding

A qualitative thematic analysis was carried out on the transcribed interviews. The analysis process was inductive (formalising theory from the data) and semantic, wherein data-derived code provided a succinct summary (Braun & Clarke, 2013). The following process was adhered to for qualitative thematic analysis of the transcribed interviews as detailed by Creswell and Creswell (2018): The interviews were carried out remotely by both researchers using the same interview script to generate codes and themes, after which both researchers came together and shared the results of their coding. Similar themes were checked for agreement in the codes. After discussion and deliberation, a single set of themes was selected.

## Results

After all interviews were conducted and data were coded, seven main themes were identified. These themes consisted of (1) draw of new content; (2) reward systems; (3) mechanics and actions of BR; (4) social dynamics; (5) mastery; (6) aesthetic preference; and (7) unique selling points.

### Draw of New Content

A significant theme identified from the sample was the draw of new content as a factor of retention. This theme encompassed codes where participants suggested how new content, characters, maps, and events impacted retention in BR games. In addition, this category encompassed seasonal updates and gameplay updates. For example, two participants expressed how content releases and general content updates were a large draw for them:

P11: "Well if they keep going with their regular content releases, I think I would be playing *Apex Legends* for a lot more time, yeah."

P3: "The idea of new content brings a lot more to it. So, if new levels dropped, or like certain new characters, it can certainly give you more of an appeal to literally come back [and] spend more time investment to earn those new things."

Participants further suggested that when new content like maps and characters were added, they offered something new to explore when returning to BR games:

Interviewer: "Any reasons why you came back to them [BR games]?"

P9: "There'll be new characters in your items, new skills, or something to explore."

Similarly, a code was used to label when new content raised participants' interest in returning to BR games:

P2: "I've had a look at the new content online if it's piqued my interest."

Another participant suggested that new content releases would push them to investigate them before playing:

P5: "I'll check it out at the start of release, so if they're announcing it on their pages or when I load up the game, if I'm seeing something like 'on such-and-such a day we're [developer announcing new content] going to be doing' this I'll wait around and go to see what that's like."

As mentioned, other codes within this theme were the seasonal and gameplay updates. Participants expressed interest in continued play or returning to a BR game once updates had been made, whether these were related to new content or gameplay updates:

P3: "They've kept up to date with new seasonal stuff and they've just added a little bit to keep coming back."

When asked what prompted them to come back to a BR game, specifically *PUBG*, the same participant answered:

P3: "Updates [to] certain features [that] were broken in it [referring to bugs and balance in weapon strengths] and just kind of made it about, more smooth, more streamlined, and quite more of an enjoyable experience."

The other predominant code encapsulated by this theme was that vehicles, items, and weapon changes or additions were a factor for retention. These changes suggested new ways to play:

P1: "New vehicles, new ways of playing, so . . . in general, it's just, it's new upgrades, whether it be weapons or it'll be vehicles

so there'll be POIs [points of interest], like different areas that they've added or taken out and it's so fresh."

Coding identified that participants expressed "liking the idea of change" as it presented a "level playing field" and "something new to learn." Finally, an unexpected code of interest within the "draw of new content" category was "nostalgia," where participants mentioned that seeing "old maps" or earning specific skins were perhaps a factor in retention:

P1: "As I said, there's the old map (rumoured) but maybe that's just me being nostalgic, could be nice to come back."

### Reward Systems

Some of the participants of this study came back to play BR games and seemed to view reward systems as fairly crucial in their perception of retention. However, a few stated that they were indifferent towards the mechanics that this theme encompassed. The following theme captured the participants' perceptions towards in-game reward systems and challenges, and the impact on retention. These include daily challenges, battle passes, and items unlocked via player progression. Many participants noted that daily challenges in particular were a motivating factor in playing BR games; this is due to the way daily challenges fed into player progression:

P10: "I was a bit motivated with them . . . [I] wanted to try and get as much XP [experience points] as possible just to rank up as much as possible."

Another participant expressed how they found themselves "logging in daily" to complete the challenges. They suggested that the linked reward system of daily challenges and the battle pass influenced them to come back to the game:

P5: "The daily challenges relate to the battle pass on top of that one there being, that, I've got something that I can focus on for the first few games and that almost warms me up to the game. It also gives us, like, different ways of playing because it'll ask you to play certain characters, certain weapons go to certain locations, and it keeps the game fresh if they're done correctly."

### Mechanics and Actions of BR: "The Bread and Butter"

Perhaps the most common theme discussed were the mechanics and actions of BR games. Choi and Kim (2018) identified specific features of BR games where the final goal is survival to last-man standing, which include actions for the player such as movement, searching for opponents, shooting, farming and use of items, exploration, elimination, and controlling vehicles. These features helped identify codes in the participant transcription. In addition, other codes were identified, such as world design, balance, and survival mechanics. The theme of



“mechanics and actions” suggested that participants found core gameplay mechanics and actions contributed to their perceived retention:

P5: “They’ve changed the rank system a little bit for us, given more ranks and changed a couple of the issues that we had with cheaters.”

Conversely, another participant made a comment towards how BR games are only skill-based, which make them feel more balanced:

P3: “Lots of games where the more time you invest into it gives you a slight or major advantage so you can unlock high tier guns, or give you advantages over players whereas . . . the BR style games [are] all kind of skill based, so there’s not really anything you can get to give you an advantage over another player, so from playing it from day one you’ve got just as much of a chance as we’ve been playing it for months and months on end.”

When participants were asked what parts of BR games brought them back to play, the code “shooting mechanics” was identified across eight participants. This code was used in instances where the participant mentioned the importance of shooting mechanics to the general gameplay of BR games and how it factored into them continuing to play:

Interviewer: “So, the shooting mechanics are the main kind of focus for what draws you to a Battle Royale?”

P2: “For me, yeah, I would probably say that.”

When another participant was asked to expand on their comments regarding movement and shooting mechanics, their response was:

P3: “I think it should be like a very smooth action because it’s basically the bread and butter of the game.”

Also identified was the “movement mechanics” code. With only a handful of instances across three participants, it was suggested that the fast-paced action and movement of specific BR games was a particular draw:

P11: “*Apex Legends* is really fast paced and keeps you moving around a lot and has like these really like adrenaline rush kind of moments that I really enjoy, so it’s really, despite them being very similar games in certain aspects, they are various different draws for me per game.”

Another participant suggested how intuitive the movement controls were:

P9: “Whereas . . . [in] *Apex Legends* there’s nothing for me to re-learn; I’ve already got the information there is, it doesn’t

change that drastically and it's not as convoluted, in terms of its control mechanics."

Another code assigned was "survival mechanics." Survival mechanics encompassed the looting, survival, and collection part of BR games. Two participants mentioned that survival elements were a draw for them:

P7: "PUBG is more a survival game, so it's land, pickup stuff . . . I think as you progress there's more chance of getting better items."

P5: "That's what draws us to a Battle Royale games, it's that survival instinct . . . in a game."

An interesting code that surfaced was identified among two participants. They described playing from game-to-game as having a "nice flow":

P1: "It's easy to just ready up onto the next one then you know within a few minutes you forgot about that last game and [you're now] in a new one and so I like how flawless or, not flawless, like flow-y, I guess is the word, maybe like how easy it is to flow from like game to game to game to keep playing."

These factors of mechanics and actions of BR games suggested that the core gameplay factors were strong perceptions for why players kept playing BR games.

### Social Dynamics

Social dynamics refer to playing with friends, making friends over games, and developing communities. Not surprisingly, there were a number of participants who expressed that their main reason for returning to BR games was due to social interactions with friends. A broad range of codes related to social dynamics were included in this theme. For example, four participants expressed that playing with friends was a large part of why they kept playing BR games. One participant was almost entirely motivated by social dynamics:

Interviewer: "Was there anything else that you'd like to add regarding BRs, like what features keep you playing or any reasons that keep you playing?"

P2: "Not really, like I said before I just enjoy playing with friends."

Not only were some participants playing BR games just to speak with friends, some were also influenced to come back and play due to friends convincing or "hyping" up BR games. Additional social interaction themes were identified where participants were retained due to the influence of friends:

Interviewer: "What other Battle Royale games have you played, or have you gone back and played?"

P9: "Like my friends really enjoy it so if they're playing a game and they ask me to kind of join in I might do so."

Other participants echoed that their reason for retention was playing with friends:

P7: "[*Call of Duty*] *Warzone* . . . it's more being and playing online with friends."

P8: "I think it's more fun to play together only because you can do more with friends."

### Mastery

Coding of the interviews revealed that individuals in the sample were motivated to play BR games as they wanted to "learn strategy" or "earn more wins." Participants indicated that they returned to BR games in order to progress themselves as much as possible:

Interviewer: "So, it's like it's an important factor for you is mastering the Battle Royale games?"

P1: "Yeah, I would agree with that."

In addition, the theme of mastery reflected the urge to win and be the "last man standing":

P4: "To win is absolutely incredible; the more wins you get the more, the more you enjoy it."

A predominant code within mastery was the recurring idea of learning strategy with BR games. A number of participants specifically stated that the element of strategy or tactics was a draw to them:

P5: "With *Valorant* and *PUBG* and *Apex* and what keeps bringing you back to those games, with those kinds of games it's trying to learn strategies."

P4: "When you come off the plane and go wherever you want which adds an element of strategy to it."

The element of strategic choice in BR games suggested that player retention was impacted by the choices that players can make and the freedom they experience. Another code within mastery was labelled as "likes to be good at Battle Royales," which was a recurring theme across three of the participants. Each participant had expressed that they wanted to improve or "be the best" in some manner:

P5: "Trying to improve myself, trying to get KD [kill to death ratio], like seeing the stat gain, and it's just a comfortable way of

playing; it's something that I've grown to know more than any other genre."

P1: "Fortnite, I probably get too involved like, . . . I don't like just being quite average. I like to be really good at something and then when I play it, I just get . . . I don't know . . . I try a bit too hard."

P3: "I like to try hard, kind of, focused on a way to be the best."

### Aesthetic Preference

Aesthetic preference referred to the participants' preferences for the visual style of the game, in addition to their preferences for certain perceived experiences, such as unpredictability and realism. Several participants noted this was a factor in the BR games they had played. For example, participants suggested that the realism of the shooting mechanics and the realism of general gameplay was a large contributing factor to them to play BR games.

Player character customisation was stated to be one reason why a participant kept coming back to a BR game. The codes: "customisation" and "character mechanics" were found in several statements over multiple participants. This indicated that customisation was also a factor in player retention among the sample.

### Unique Selling Points

Unique Selling Points (USPs) refer to the individual mechanics or systems that a BR game may introduce that differentiate it from other BR games (e.g., the building mechanic in *Fortnite* or the character selection in *Apex Legends*). These mechanics and dynamics were individual to each participant's perception of a game and, therefore, were not included as part of the wider mechanics and actions in BR theme. USP codes were highlighted when a participant suggested a specific mechanic or system factored into their retention. Several codes highlighted that character mechanics that were unique to each game were reacted to in a positive manner. However, some of these factors were reacted to in a negative manner. One participant, after being asked why they would play by themselves, stated:

P9: "Now [I] have to think about which character am I picking and what is their skill set."

The tone of P9 suggested that picking characters based on skill set was a potential frustration when they are playing by themselves, as they need to consider what character will benefit their solo play. Furthermore, when this participant was asked if character choice is what kept bringing them back to BR games (*Apex Legends* specifically), they responded:

P9: "Yes, yeah, definitely it's a strategy . . . and just the characters are pretty cool themselves; they've got cool designs."

Therefore, there may be a conflict in character choice in BR games, where they introduce a new strategy to the game but present considerations for how a character's skill set may impact their game. There was disparity amongst participants regarding the building mechanic in *Fortnite*. Some participants enjoyed the creativity offered by this mechanic, but others were disappointed:

P2: "How it required it, in terms of *Fortnite* if you could build better you seem to win more, which I don't particularly find enjoyable in a BR."

## Discussion

This study captured 11 semi-structured interviews and applied a thematic analysis approach to investigate what factors of retention were perceived by players in BR games. The results suggest there are multiple factors that affect participants' retention in BR games. Firstly, participants mentioned that updates in terms of balancing, new items, and mechanics adjustments were welcomed and that these updates and fixes were a draw of new content to return to BR games. In addition, it is suggested that the mechanics and actions in BR games are important for retention. The mechanics and actions detailed by Choi and Kim (2018) were discussed by participants as important factors in retention as they were strongly described as "the bread and butter" of these games. Interestingly, Choi and Kim reported the mechanic of a closing play area as a defining part of BR games, but none of the participants sampled described any urgency or commented on the shrinking play area. On the other hand, balance and the "flowy" nature of moving game-to-game was not a factor in Choi and Kim's work. The frequency of codes associated with the mechanics and actions of BR theme suggests the factors that define a BR game are a contributing factor to retention.

Consequently, the mechanics and actions identified in BR games may extend to other genres in live services games such as MOBAs or mobile games. For example, Legner et al. (2019) discussed the game mechanics for user retention in mobile games. They suggested the top 10 (current) mobile games shared mechanics such as levelling, quests, resources, item acquisition, gifts, rewards and content unlocking. These games varied in genre, with puzzle, strategy, and simulation to name a few (Legner et al. 2019). These mechanics identified by Legner et al. share similarities in item acquisition and potentially crossover with reward systems with mechanics such as levelling, quests, and rewards. In another instance, Strååt and Verhagen (2018) explored retention in *Tom Clancy's The Division* (Massive Entertainment, 2016) through a longitudinal study where participants stated a disconnect between the actions performed in game play and the setting of the game. The

participants stated the lack of realism in combat “broke” the suspension of disbelief. Strååt and Verhagen’s observations relate to the “realism” that was echoed by the participants in this study. Therefore, in the wider literature there could be a connection between mechanics and actions and the intended setting. In addition, the overlap between rewards and item acquisition/collecting could suggest that these mechanics impact a wide genre of games.

Although this research cannot provide strong evidence of a potential relationship between the mechanics and actions of BR games and the draw of new content, the sample suggested some association between the two themes. Previously, Alha et al. (2014) had reported negative responses from players in regard to free-to-play models and subscriptions. Nonetheless, participants in the aforementioned study who played free-to-play BR games generally responded positively to season/battle passes. One participant in particular mentioned they were looking forward to *Fortnite’s* move to a subscription model. These observations relate to Jarrett’s (2020) case study, where participants did not mind supporting free-to-play games and compared paying for passes/content to a television subscription. In relation to season/battle passes, Petrovskaya and Zendle (2020) discussed the prevalence and attitudes of *DOTA 2*, where they reported that despite the rising profitability, it had minimal effect on player uptake. In addition, their findings indicated complex player attitudes, similar to the disparity in our study. For example, where some were positive towards the rewards and additional features of the battle pass, others perceived the battle pass as elitism where the rewards were “out of reach” (Petrovskaya & Zendle, 2020). From the sample interviewed, new content was described by players as a way to keep their chosen BR games “fresh,” adding elements of uncertainty which created a “level playing field” (Jarrett, 2020).

Furthermore, the theme of reward systems could be suggested as a related item to the draw of new content. Rewards and challenges were received with mixed opinions. Some participants indicated that challenges and rewards created a “warm-up” to their games and in some cases provided “a different way to play.” Another study has also suggested that achievement and social dynamics were factors in retention for other genres (Park et al., 2018).

An expected code/theme was social dynamics, as identified in the transcripts. Eight participants stated that a main factor for retention in BR games was the ability to play with friends. Social dynamics link back to the need for relatedness in self-determination theory (Ryan et al., 2006). These social dynamics, friendships, and communities that develop through playing BR games echo the findings for other genres, like MMO games (Jia et al., 2015; Muntner, 2016). A study by Sanderson et al. (2020) reported social bonding within their sample, and the same could be said of the sample interviewed in this study.

Moreover, the theme of social dynamics echoes the findings in the data by Jia et al. (2015), who found that “rich social relationships emerge and can be used to improve gaming services such as match recommendation and game population retention” (p. 2). In our study, participants leaned heavily into playing with friends as an important factor. However, few of them discussed the systems that afforded the social interactions. Game-chat, ping systems, emotes, and squad systems are various systems BR games share in some aspect to help players communicate in-game. It could be that our participants did not mention these systems due to the expectation that these systems are in place in the majority of BR games and other multiplayer shooter games. Further study could explore the impact of these systems on social dynamics or whether it is purely the social aspect of playing with friends that is important.

Ryan et al. (2006) reported on the motivational pull of video games using self-determination theory. In their study, they theorised that factors like autonomy, competence, related enjoyment, and future-gameplay affected player motivation. In our study, mastery was identified as a theme for some individuals who expressed notions of mastery over a game, which could suggest coherence with the findings of Ryan et al. However, mastery was not mentioned very much by participants, which may be due to the steps game developers take in designing tutorials, training missions, incremental goals, and levelling. It may also be that participants struggle to articulate their mastery, or if they are even aware of their mastery improving over time. The participants that did mention mastery codes alluded to “learning a strategy” or “improving” their score or kill to death ratio.

Both USP and aesthetic preferences were the themes least mentioned by participants. It appeared that USP was a defining characteristic that affected individual preferences on BR games. For example, some really liked the building mechanics of *Fortnite*, whereas others did not like them at all. Aesthetic preference emerged from participants describing BR games in terms of “realism” or the customisation options, both of which are individual to specific BR games.

In summary, social dynamics and mastery present external factors for player retention that require further exploration. Both social dynamics and mastery may be impacted by game development in designing systems of increasing challenge and multiplayer features. Additionally, players’ literacy of mastery may be a reason why some participants struggled to articulate factors of retention. Further research could consider upskilling and training participants in game design aspects, where concepts of mastery are defined and explained so that participants are more informed of what aspects impact retention. In addition, we cannot suggest that USP and aesthetic preference impacted retention as these appeared to be subjective to each participant. However, we can suggest from our study that the mechanics and actions

of BR games, draw of new content, and reward systems could impact player retention—the latter two of which could be impacted by esports, streaming, marketing, and community management.

## Conclusion

This study identified several common themes in relation to player perception of retention in BR games, spanning across multiple participants who play these types of games regularly. To the researchers' knowledge, only a few other researchers have examined the topic of retention in live service games, specifically in BR games (e.g., Lin et al., 2021; Lovell, 2018). The implications surrounding the draw of new content presented a plausible suggestion as to why players are retained in their chosen BR game. With the development of live service games and "roadmaps" for future additions to these games, this theme could have research implications for the marketing of live service games. The interest associated with the draw of new content suggested a clear relationship between new game content and what players perceive as methods of retention in the results of this study.

Social dynamics, as stated by Park et al. (2018), also appeared to have a strong relationship with what players perceive as methods of retention. Existing literature has already explored the toxicity in multiplayer games and their social impact on education and mental health (Romo Flores, 2020). The perception of mastery seemed to have some relation with player retention. Participants expressed notions of mastery and competence when describing what factors resulted in retention. As previously mentioned, this theme resonates with the literature surrounding self-determination theory (Ryan et al., 2006). In addition, aesthetic preference seemed to be related with initial player attraction, as well as with player retention. It is difficult to suggest how this theme may have any relation to what players perceive as methods of retention, as this seems dependent on the individual game.

Arguably the most important concept, mechanics and actions of BR games have a clear relationship with what players perceive as methods of retention, though subjective preferences in mechanics and actions were present. It was difficult to pinpoint which aspects of the mechanics and actions were perceived as player retention factors due to ambiguities in the participants' statements. Participants were frequently uncertain in their answers and some participants struggled to articulate what factors impacted retention.

## Limitations

These results only offer a suggestion for different themes that players may perceive as methods of retention in BR games. There are several limitations that prevent this study from making broadly generalisable claims. Further investigations to improve generalisability could explore a longitudinal study with diaries of what games were played and what factors kept players engaged.



This study represented a particular sample in terms of location (United Kingdom), gender, ethnicity, and age. Therefore, it explored only a handful of views towards player retention in BR games. For these reasons, no claims are made about reliability in the statistical sense. In addition, due to the relative cultural homogeneity of the research sample (most participants being culturally British), the themes identified here may not be generalisable for perceived player retention methods for BR players from other cultures.

There is also not enough evidence to determine if these themes are generalisable to all BR games. As discussed within the USP theme, there are subtle differences between BR games which result in different perceptions. Further research is suggested to include the testing of these themes in relation to specific, individual BR games, as this study covers a broad range, such as *Call of Duty: Warzone* (Infinity Ward, 2020), *Fortnite*, *Hunt: Showdown* (Crytek, 2019), *PUBG*, and *Apex Legends*.

It should be noted that both researchers possess bias in terms of coming from a game design background with a passion for games. In addition, the researchers were familiar with a few examples of BR games, which may have influenced follow-up questions in interviews. Furthermore, it is plausible that the interpretation of the resulting themes is shaped by both researchers' personal and academic backgrounds.

### Future Work

Future work investigating retention methods in BR games could involve informed participants on game design concepts and factors of retention, as they may provide less ambiguous statements. In addition, co-user studies involving BR game developers and players could explore what mechanics are perceived as important to retention in both groups. Comparing the results of a co-user study to that reported by Choi and Kim (2018) could provide a comparison to what is perceived as valuable to retention. Moreover, future studies could consider measuring retention by analysing self-determination theory in BR players. A similar study by Zak-Moskal and Garrison (2020) measured whether self-determination theory needs were met and their impact on college student retention. Adopting a similar methodology to Zak-Moskal and Garrison may provide evidence for how self-determination theory concepts like autonomy and competence relate to retention in BR games.

Each of the themes presented here could be analysed further to determine their impact on retention with greater accuracy. The interviews with game players were shorter than expected, due to some of the participants struggling to elaborate what factors impacted their retention. Future studies could consider either screening members of the public on the context of the research or introducing focus groups to

create more discussion. It is also advised that further research explores genres other than BR games. As this paper detailed, a number of studies reported on MMO and MOBA's retention methods. Overall, this study has suggested possible factors as to what players perceive as methods of retention. Promising areas of interest lie in how new content generation and reward systems impact retention in BR games, but there is additional work to be done in terms of validity and generalisability.

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