



The Impact of Game Design and Monetisation Strategies on Player Engagement in Online Games

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ABSTRACT :

Free-to-play titles cost nothing to install, so whatever a developer earns arrives after the download, and only if players stay long enough for some of them to start paying. The present study asks two linked questions. How strongly are game design and monetisation strategies related to how engaged players say they are, and do those relationships look different for experienced and inexperienced players? A structured questionnaire was completed online by 240 adult gamers. Three five-item Likert scales captured engagement, game design and monetisation, and all three proved reliable (Cronbach's alpha 0.866 to 0.878). The hypotheses were tested with multiple linear regression, chi-square tests and one-way ANOVA. Game design was the stronger of the two predictors of engagement ($\beta = 0.48$, $p < 0.001$), although monetisation also contributed ($\beta = 0.26$, $p < 0.001$), and the two together explained just over a third of the spread in engagement scores ($R^2 = 0.363$). More experienced respondents reported greater engagement ($F = 6.40$, $p < 0.001$) and were likelier to have bought something inside a game ($\chi^2 = 12.54$, $p = 0.006$). Experience, on the other hand, left both relationships unchanged in strength. The results point to the quality of play, and not pressure to purchase, as the surer route to engagement, and suggest that monetisation helps only when players regard it as fair.

Keywords: Game Design; Monetisation; Free-To-Play Games; Player Engagement; In-App Purchases; Loot Boxes; Gaming Experience

1. Introduction

1.1 Background

BGMI, Clash of Clans and Genshin Impact share one feature that is easy to overlook: none of them asks for money at the start. Their earnings depend on what happens later, once a player has settled in. Over the past decade the industry has shifted almost entirely away from charging a fixed price at purchase. Nothing is charged at the door. Revenue is gathered along the way: from advertisements, from the sale of cosmetic items and season passes, from other purchases made inside the app and, in a large share of titles, from loot boxes that players pay to open, with contents left to chance (Nieborg, 2015; Pulkkinen, 2016). A game sold this way is never really finished. It is operated like a service and refreshed with new content at short intervals, so that players keep finding reasons to log in.

Engagement is therefore what pays the bills. A user who uninstalls after a day contributes almost nothing. Another who stays for twelve months may never buy anything, yet still fills matchmaking lobbies and recruits friends, both of which matter to the studio. Developers consequently work towards two aims at once. The game has to be fun, and that depends on its mechanics, a well-judged level of challenge, a feeling of progress and opportunities to play with others. At the same time, the payment systems have to be ones that players will put up with. The two aims can clash. A paid shortcut that appears when a player is stuck may come across as good value, whereas a pay wall dropped in at the wrong moment makes people feel cheated. Researchers have been documenting manipulative design decisions that harm players since at least 2013 (Veiga et al., 2025; Zagal et al., 2013).

The issue matters particularly for India, where a vast and youthful player base spends most of its time on free-to-play mobile titles. Yet studies of how games are monetised have come almost entirely from Japan, Korea, Europe and North America, so Indian players remain largely unstudied.

1.2 Statement of the Problem

Few in the industry doubt that game design and monetisation both shape player retention. The open question is their relative weight, and the evidence on it is thin. Research has tended to split into two camps. One studies purchasing motives (Hamari et al., 2017); the other warns about loot boxes and

manipulative interfaces (Li et al., 2019; Niknejad et al., 2024). Studies that test design and monetisation together, within a single model and against engagement as the outcome, are rare. Rarer still are studies that check whether long-time players and newcomers respond to these features in different ways. This paper addresses both shortcomings with survey data from Indian gamers.

1.3 Objectives of the Study

1. To assess how much game design contributes to engagement among online gamers.
2. To assess how much monetisation strategies contribute to that engagement.
3. To compare levels of engagement and rates of in-game spending across groups with differing gaming experience.
4. To determine whether gaming experience alters the way game design and monetisation relate to engagement.

1.4 Hypotheses

Drawing on these objectives and on the studies reviewed in Section 2, six hypotheses were formulated. They appear in Table 1 with the statistical procedure applied to each.

Table 1: Hypotheses and statistical tests

Code	Hypothesis	Statistical test
H1	Game design has a positive and statistically significant influence on player engagement.	Multiple linear regression
H2	Monetisation strategies have a statistically significant influence on player engagement.	Multiple linear regression
H3	Players in different gaming experience groups report significantly different mean engagement.	One-way ANOVA
H4	There is a significant relationship between a player's gaming experience and whether they have ever paid for game content.	Chi-square test
H5	Level of engagement varies significantly with gender.	Chi-square test
H6	The strength of the design–engagement and monetisation–engagement relationships depends on gaming experience.	Hierarchical regression

2. Review of Literature

Earlier work is reviewed below under four headings (Sections 2.1 to 2.4), and Section 2.5 identifies the gaps that motivated this study.

2.1 The Economics of Free-to-Play

For Pulkkinen (2016), freemium is a textbook case of price discrimination. The base game is free, premium content is priced for the minority willing to pay the most for it, and the different versions on offer let the seller charge different players different amounts. Sunk costs and players' limited attention, he notes, are among the levers these games use to encourage payment. Liu, Au and Choi (2014) took a market-level view. Examining 711 apps ranked on Google Play, they found that having a free edition available was linked with stronger sales of its paid counterpart, contrary to the worry that free content would cannibalise revenue. Nieborg (2015) offered a less favourable reading. Taking Candy Crush Saga as a case, he described free-to-play games as a connective commodity: something closer to an ongoing service bound up with app stores and social networks than a product sold a single time. These accounts make sense of the model's fast rise, yet they leave the player's own experience largely out of the picture.

2.2 Why Players Spend Money

Hamari et al. (2017) asked 519 players why they bought in-game content and identified six groups of motives. Three stood out as predictors of spending: wanting to progress without obstacles, social considerations, and believing the purchase represented a sensible use of money. When Hamari, Hanner and Koivisto (2020) returned to the topic with a sample of 869, one result ran against expectations. Players who enjoyed a game were more inclined to continue but less inclined to pay; social value, on the other hand, pushed both intentions upward. The authors attributed this to inconvenience-driven demand. People buy their way past irritations; enjoyment alone gives them little reason to pay.

The idea that paying players form a tiny fraction of the audience was disputed by Vanhala, Hyrynsalmi and Kasurinen (2023). Of the 462 gamers they

surveyed across several countries, a majority had spent money on at least one free-to-play title, while views on grinding, ads and pay-to-skip options were not the same everywhere. Soroush, Hancock and Bohns (2014) examined spending at the level of the individual Candy Crush player: heavier spenders described themselves as having less self-control, yet spending bore no relation to time played. Guitart, Fernández del Río and Periañez (2019) forecast churn from behavioural logs with ensemble machine-learning models, and discovered that a good number of apparent quitters eventually return. Measuring engagement is therefore less straightforward than it seems.

2.3 Loot Boxes, Random Rewards and Dark Patterns

Loot boxes dominate the recent literature. Nielsen and Grabarczyk (2018) proposed a typology of random reward mechanisms that turns on a single question: can the items a player wins be converted into money or its equivalent outside the game? They grant that every such mechanism resembles gambling to some degree, but reserve the label of gambling, in its strict sense, for mechanisms embedded in an economy of real money. Drummond and Sauer (2018) reached a comparable conclusion on psychological grounds, noting that both depend on uncertain rewards and similar reinforcement. The scattered terms in use for these mechanics, gacha included, were consolidated by Xiao et al. (2021). Koeder, Tanaka and Mitomo (2018) used the Japanese experience of gacha, which goes back further than most, to conclude that the dispute is about more than chance-based purchases: it also marks a change in the way players and developers relate.

The players' perspective is central to Hodge et al. (2022). From their work with 21 UK participants, six themes emerged, and among them were the parallels with gambling, some explicit and some implicit, that participants raised themselves. Lee, Imteyaz and Savage (2025) analysed Korea's 40 top mobile games and found that time gates, social pressure and conflict-driven design were layered together to retain players and steer them towards purchases, usually with scant information on drop rates.

An early application of the dark-pattern concept to games came from Zagal, Björk and Lewis (2013), who defined such patterns as design choices that run counter to the interests of the person playing. A survey of 1,496 mobile games by Niknejad et al. (2024) found these patterns in widespread use, even in titles perceived as harmless. Asked to judge the harm caused by different dark patterns, the players studied by Veiga et al. (2025) placed the money-related ones, in particular pay walls along with loot boxes, among the most damaging.

2.4 Monetisation and Problematic Play

On the clinical side, the reference point is the DSM-5 definition of Internet Gaming Disorder (IGD). An international expert consensus on how its nine criteria should be measured was published by Petry et al. (2014), and in a follow-up review Petry et al. (2015) covered what was then known about its treatment, its risk factors and how common it is. Dreier et al. (2017) screened 3,967 teenagers in Germany against these criteria. Among free-to-play players in that sample, 5.2 per cent fulfilled the criteria, and their average spending was higher. Meschik et al. (2026) later surveyed 2,308 Austrian students and found spending to be highly concentrated: the heaviest-spending tenth generated 61.4 per cent of the total amount spent in games, and gaming and gambling disorder were both more prevalent in that group.

Li, Mills and Nower (2019) found that 44.2 per cent of the 618 adult gamers they surveyed were loot-box buyers, and that this group had higher scores for problem gaming, for problem gambling and for psychological distress. The same pattern was observed in adolescents by Zendle, Meyer and Over (2019). Using a preregistered design and 1,200 participants, Zendle et al. (2020) demonstrated that the link between loot-box spending and problem gambling held regardless of whether the boxes allowed cashing out or conferred pay-to-win advantages. Finally, Arnedo-Moreno et al. (2026), in a systematic review covering 15 studies, argued that reward structures may interact with traits typical of 15- to 24-year-olds, such as impulsiveness and a readiness to yield to social pressure.

2.5 Research Gap

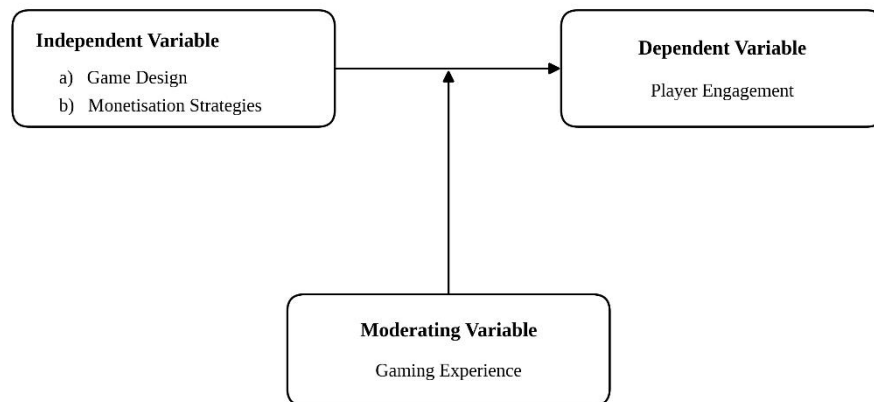
Taken together, the studies above leave three questions unanswered. Because design and monetisation are almost never analysed side by side, it is not known which of them carries more weight for engagement. Because the usual outcomes are spending, gambling and disorder, engagement in its plain sense, a player's wish to keep coming back, has been neglected. Finally, the reviewed work contains no Indian sample, and no study tests whether gaming experience moderates these relationships. The present study was built to address all three.

3. Conceptual Framework

Figure 1 sets out the framework. Two independent variables are each expected to influence the dependent variable, player engagement, directly: game design (H1) and monetisation strategies (H2). Gaming experience is the moderating variable (H6). Its arrow points at the path between the independent

and dependent variables, not at engagement itself, because experience is thought to alter how strong that relationship is. H3 and H4 cover the other role of experience, testing whether it is related directly to engagement and to spending.

Figure 1: Conceptual framework of the study



The framework rests on two findings from earlier research. The first is that players value games that are enjoyable, of good quality and socially connected (Hamari et al., 2020). The second is that monetisation can either ease a player's path through a game or obstruct it, and fairness largely decides which (Lee et al., 2025; Zagal et al., 2013). Experience was added as a moderator because people who have played for years have sunk effort, practice and frequently money into their accounts, and such a stake could shape how they judge a game's design and its prices.

4. Research Methodology

4.1 Research Design and Sampling

A survey design was adopted, quantitative in approach and cross-sectional in timing. Its purpose was partly descriptive, to characterise the respondents, and partly explanatory, to test the hypothesised relationships shown in Figure 1. Respondents had to be adults (18 or over) who play online games every week or more often. With no sampling frame available for this population, participants were recruited by snowball and convenience sampling through WhatsApp groups of college students, gaming servers on Discord and other online player communities. Responses that were incomplete, or that gave an identical answer to every statement, were discarded, and 240 usable cases remained. A power analysis ($\alpha = 0.05$, power = 0.80, $f^2 = 0.15$ for a medium effect, five predictors) indicates a minimum of about 92 cases, a threshold the sample clears by a wide margin.

4.2 Research Instrument

The questionnaire was administered as a Google Form with two sections. Part A collected background details: gender, age, length of gaming experience, typical weekly playing time, and a yes/no item asking if they had ever paid for anything in a game. Part B presented 15 statements, and respondents rated each on a Likert scale with five points (1 = strongly disagree, 5 = strongly agree). The constructs and their measurement are summarised in Table 2, and the full instrument is reproduced in the Appendix.

Table 2: Constructs and their measurement

Construct	Role	Items	Aspects covered	Adapted from
Game Design (GD)	Independent	5	Mechanics, challenge, progression, visuals, social features	Zagal et al. (2013); Hamari et al. (2017)
Monetisation Strategies (MS)	Independent	5	Price fairness, pay-to-win, advertising, battle passes, loot-box transparency	Hamari et al. (2020); Vanhala et al. (2023)
Player Engagement (PE)	Dependent	5	Enjoyment, time spent, intention to continue, recommendation, belonging	Hamari et al. (2020); Guitart et al. (2019)
Gaming Experience (GE)	Moderator	1	Years of regular online gaming (four groups)	Developed for this study

4.3 Tools of Analysis

Python was used for every analysis, with the pandas, SciPy and statsmodels libraries; SPSS offers equivalent procedures. Descriptive statistics (frequencies and percentages) summarise the sample. Internal consistency was checked with Cronbach's alpha, and the associations among constructs were examined with Pearson's r . Chi-square tests of independence, accompanied by Cramér's V , addressed H4 and H5. For H3, a one-way ANOVA was run after Levene's test had confirmed equal variances, and Tukey's HSD identified which groups differed. H1 and H2 were tested by multiple linear regression, and H6 by a hierarchical regression in which the interaction terms were formed from mean-centred variables.

4.4 Reliability of the Scales

Table 3: Scale reliability

Construct	No. of items	Cronbach's alpha	Interpretation
Game Design	5	0.866	Good
Monetisation Strategies	5	0.871	Good
Player Engagement	5	0.878	Good

Each coefficient exceeds the commonly used threshold of 0.70 by a comfortable margin, so all three scales can be considered reliable. A composite score for each construct was then calculated as the mean of its five items.

5. Data Analysis and Interpretation

5.1 Profile of the Respondents

Table 4: Respondent characteristics (N = 240)

Variable	Distribution: n (%)
Gender	Male 165 (68.8); Female 75 (31.2)
Age (years)	18–20: 77 (32.1); 21–23: 99 (41.2); 24–26: 39 (16.2); 27 and above: 25 (10.4)
Gaming experience	Under 1 year: 38 (15.8); 1–3 years: 76 (31.7); 3–5 years: 65 (27.1); over 5 years: 61 (25.4)
Weekly gaming hours	Under 5: 70 (29.2); 5–10: 92 (38.3); 10–20: 50 (20.8); over 20: 28 (11.7)
Ever spent money in a game	Yes 124 (51.7); No 116 (48.3)

Most respondents are young adults; 73.3 per cent fall in the 18–23 age range, unsurprising given that the questionnaire spread largely through college contacts. Men make up 68.8 per cent of the sample. Playing for 5–10 hours a week is the single most common pattern (38.3 per cent). Slightly more than half of the respondents (51.7 per cent) have used real money to buy something in a game, a share similar to the one found by Vanhala et al. (2023) in their multinational sample.

5.2 Descriptive Statistics and Correlation

Table 5: Descriptive statistics and inter-construct correlations

Construct	Mean	SD	GD	MS	PE
Game Design (GD)	3.60	0.83	1		
Monetisation Strategies (MS)	3.10	0.83	0.267**	1	
Player Engagement (PE)	3.53	0.84	0.549**	0.386**	1

** $p < 0.01$ (two-tailed).

Respondents rated game design favourably on the whole ($M = 3.60$), whereas their view of monetisation was close to neutral ($M = 3.10$), suggesting only lukewarm approval of how games charge for content. The correlation between engagement and game design is moderate ($r = 0.549$); the corresponding figure for monetisation is lower, at $r = 0.386$. Design and monetisation are themselves only weakly correlated ($r = 0.267$), so the two scales tap separate features of the games being rated.

5.3 Chi-Square Tests of Independence

H4: Experience and spending. For each experience group, Table 6 shows how many respondents were spenders and how many were not.

Table 6: In-game spending by gaming experience

Gaming experience	Has spent	Has not spent	Total	Spenders (%)
Under 1 year	16	22	38	42.1
1–3 years	30	46	76	39.5
3–5 years	37	28	65	56.9
Over 5 years	41	20	61	67.2
Total	124	116	240	51.7

$\chi^2(3, N = 240) = 12.539, p = 0.006$; Cramér's $V = 0.229$

The chi-square statistic reaches significance ($p = 0.006$), which supports H4. Spending is least common among players with up to three years of experience, at roughly 40 per cent, then climbs to 56.9 per cent in the 3–5 year group and to 67.2 per cent among the most experienced players. By Cramér's V the association is of small-to-moderate size. A plausible reason is that long-standing players have built up accounts worth protecting, which gives them more reason to invest in them.

H5: Gender and engagement level. To run this test, each respondent's engagement score was placed in one of three bands: below 3.0 (low), 3.0–3.99 (moderate) or 4.0 and above (high).

Table 7: Engagement level by gender

Gender	Low	Moderate	High	Total
Male	42	59	64	165
Female	16	30	29	75

$\chi^2(2, N = 240) = 0.613, p = 0.736$

There is no support for H5, as the test falls well short of significance; male and female respondents have very similar engagement profiles. An additional cross-tabulation of spending status against engagement level returned $\chi^2(2) = 3.401$ with $p = 0.183$, again not significant. Although 44 per cent of spenders were highly engaged, against 33 per cent of non-spenders, the gap is not large enough to be statistically significant. Spending money is thus a poor guide to a player's level of engagement.

5.4 One-Way ANOVA

H3: Engagement and years of gaming. Descriptive statistics for each experience group are given in Table 8, and the ANOVA results in Table 9.

Table 8: Mean engagement by experience group

Experience group	N	Mean	SD
Under 1 year	38	3.12	0.93
1–3 years	76	3.45	0.78
3–5 years	65	3.59	0.79
Over 5 years	61	3.82	0.77
Total	240	3.53	0.84

The homogeneity-of-variance assumption is satisfied (Levene's $F = 1.094, p = 0.352$).

Table 9: One-way ANOVA results for engagement

Source	Sum of squares	df	Mean square	F	Sig.
Between groups	12.539	3	4.180	6.396	< 0.001
Within groups	154.205	236	0.653		
Total	166.744	239			

Effect size: $\eta^2 = 0.075$.

H3 is supported: the groups differ significantly in mean engagement ($F = 6.396, p < 0.001$). Each additional band of experience brings a higher mean, from 3.12 for the newest players to 3.82 for those with over five years, and the effect size ($\eta^2 = 0.075$) is medium by conventional standards. Tukey's

HSD locates the differences. The most experienced players score 0.71 points above those with less than a year ($p < 0.001$) and 0.38 points above the 1–3 year group ($p = 0.037$), while the 3–5 year group scores 0.48 points above the least experienced ($p = 0.021$). No significant difference separates any pair of neighbouring groups, so the contrast that matters is between beginners and veterans.

By contrast, engagement did not vary with the number of hours played per week ($F(3, 236) = 0.255$, $p = 0.858$). Years of play, rather than weekly intensity, appear to be what distinguishes the more engaged players.

5.5 Multiple Linear Regression

H1 and H2: Design, monetisation and engagement. A multiple regression with engagement as the outcome and the design and monetisation scores as predictors was estimated; the coefficients are reported in Table 10.

Table 10: Multiple regression predicting player engagement

Predictor	B	Std. error	Beta (β)	t	Sig.	VIF
(Constant)	0.995	0.224		4.440	< 0.001	
Game Design	0.481	0.054	0.480	8.931	< 0.001	1.077
Monetisation Strategies	0.258	0.054	0.257	4.783	< 0.001	1.077

Outcome variable: player engagement. $R = 0.603$, $R^2 = 0.363$, adjusted $R^2 = 0.358$, $F(2, 237) = 67.55$, $p < 0.001$; Durbin–Watson = 1.976.

The model is highly significant ($F(2, 237) = 67.55$, $p < 0.001$) and has an R^2 of 0.363, so design and monetisation together account for over a third of the differences in engagement between respondents. Each predictor is significant at $p < 0.001$, in support of H1 and H2. In unstandardised form, the regression equation is:

$$PE = 0.995 + 0.481 (GD) + 0.258 (MS)$$

Read literally, a respondent who rates design one point higher than another, with monetisation equal, is predicted to score about 0.48 points higher on engagement; one extra point on monetisation, design being equal, predicts a gain of about 0.26. In standardised terms, design ($\beta = 0.480$) carries close to double the weight of monetisation ($\beta = 0.257$). Diagnostic checks raise no concerns. Both VIFs are 1.077, well within acceptable limits; the Durbin–Watson statistic (1.976) is close to 2, consistent with independent errors; and the residuals pass the Jarque–Bera normality test ($p = 0.227$).

5.6 Moderating Role of Gaming Experience

H6: Is the effect of design and monetisation moderated by experience? Moderation was tested hierarchically. Step 1 contained design, monetisation and experience as main effects, each centred on its mean; Step 2 added the interactions of experience with design ($GD \times GE$) and with monetisation ($MS \times GE$).

Table 11: Hierarchical regression testing the moderating role of experience

Predictor	Step 1: B	Step 1: Sig.	Step 2: B	Step 2: Sig.
Game Design (GD)	0.501	< 0.001	0.498	< 0.001
Monetisation Strategies (MS)	0.237	< 0.001	0.232	< 0.001
Gaming Experience (GE)	0.227	< 0.001	0.225	< 0.001
$GD \times GE$			0.019	0.690
$MS \times GE$			–0.044	0.378
R^2	0.441		0.443	

ΔR^2 at Step 2 = 0.002; $F(2, 234) = 0.410$, $p = 0.664$.

Including experience as a main effect raises R^2 from 0.363 to 0.441, so experience matters independently of the other two predictors. The interaction terms, in contrast, increase R^2 by only 0.002, a change that is not significant ($p = 0.664$), and neither interaction coefficient approaches significance. The data thus give no support to H6. Experience is linked to higher engagement on its own, but the strength of the design and monetisation effects does not depend on it.

5.7 Summary of Hypothesis Testing

Table 12 summarises the outcome of each hypothesis test.

Table 12: Summary of hypothesis tests

Hypothesis	Test	Key result	Decision
H1: Game design → engagement	Regression	$\beta = 0.480, p < 0.001$	Supported
H2: Monetisation → engagement	Regression	$\beta = 0.257, p < 0.001$	Supported
H3: Engagement by experience	ANOVA	$F = 6.396, p < 0.001$	Supported
H4: Experience and spending	Chi-square	$\chi^2(3) = 12.539, p = 0.006$	Supported
H5: Gender and engagement	Chi-square	$\chi^2(2) = 0.613, p = 0.736$	Not supported
H6: Experience as moderator	Hierarchical regression	$\Delta R^2 = 0.002, p = 0.664$	Not supported

6. Discussion

Design emerges from this study as the more important of the two influences on engagement, with a standardised effect almost double that of monetisation. The result fits the conclusion of Hamari et al. (2020) that continued play is driven chiefly by enjoyment and quality. What brings players back is the experience of playing; the commercial machinery around it counts for much less.

Monetisation nevertheless made a positive, significant contribution, which may appear to contradict the body of research linking it to harm (Dreier et al., 2017; Li et al., 2019). The apparent conflict is probably a matter of measurement. Here, the monetisation items dealt with perceived fairness: reasonable prices, acceptable advertising and purchases that are worth their cost. Where players view a game's charging model in this positive light, it seems compatible with, and possibly supportive of, their engagement. The harmful effects reported in other studies tend to concern particular mechanics, such as pay walls, time gates and loot boxes (Lee et al., 2025; Veiga et al., 2025), and the present instrument did not measure these separately. It is also worth noting that the average monetisation score of 3.10 sits close to the scale midpoint. Respondents seem willing to pay in principle, but unconvinced by the way payment is asked of them.

The role of experience is worth a closer look. Respondents with the longest gaming histories were the most engaged group and also contained the highest share of spenders, which is consistent with commitment building up gradually over time. The amount played each week, by comparison, was unrelated to engagement. Engagement looks less like a product of intense play and more like an attachment formed over years. Experience did not, however, change how players respond to design or monetisation: someone who has played for eight years and someone who started recently react almost identically to a well-designed game and to prices they consider fair. For developers, this is convenient: there is no need to design differently for newcomers and veterans.

Engagement showed no significant difference between male and female respondents, further evidence that gaming is no longer the narrow pursuit of the popular stereotype. Nor did spending go hand in hand with significantly higher engagement, a pattern also reported by Hamari et al. (2020) and Vanhala et al. (2023), who found paying and engagement to be connected yet distinct behaviours.

7. Implications

For game developers. Investment is best directed at the substance of play: well-tuned mechanics, satisfying progression, careful level design and good social features. Monetisation is more likely to be accepted when players know exactly what they are buying, when battle passes and cosmetics reward time spent playing rather than replacing it, and when the odds behind random drops are made public. Particular attention should go to players early in their gaming careers: respondents who had been gaming for under three years had the lowest engagement of any group and the lowest rate of spending. Early impressions count, so a newcomer's first days with a game should be free of friction and of premature pay walls.

For players and parents. Paying for a random reward is, in several respects, close to placing a bet. Limits on spending and the parental controls built into phones and consoles are simple safeguards, and they matter most for younger players.

For policymakers. India's 2025 online gaming law, the Promotion and Regulation of Online Gaming Act (Government of India, 2025), outlaws online money games while promoting social games and e-sports. Because its target is gaming for stakes, the Act leaves open the status of paid random rewards in free-to-play titles. Japan and Korea have already confronted this question, and their experience suggests two practical measures: mandatory publication of drop rates and age verification for anyone buying them (Koeder et al., 2018; Xiao et al., 2021).

8. Limitations and Scope for Future Research

The findings should be read with several limitations in mind. Non-probability sampling through college-linked networks produced a young sample, and the results may differ for older players and for those in rural areas. The cross-sectional, self-report design can reveal associations but not establish cause and effect. Treating monetisation as a single scale also blurs distinctions that the literature considers important, since advertising, subscriptions, battle passes and loot boxes may each affect players differently; future studies could measure them one by one. Engagement was also captured as an attitude rather than observed directly, and linking questionnaire responses to gameplay logs or purchase histories would strengthen the conclusions considerably. Finally, potentially relevant variables such as personality, platform and game genre were not included.

9. Conclusion

The aim was to compare the weight of design and of monetisation in shaping player engagement, and to see whether gaming experience alters that balance. In this sample, design matters most. Monetisation that players consider fair also adds to engagement, though less. Players with more years of gaming behind them are more engaged, and a greater proportion of them are paying customers, but design and monetisation work on them much as they do on beginners. With the bulk of industry income now arriving after the download, the practical message is simple: games that are a pleasure to play make the best business case, and monetisation succeeds only for as long as it stays out of the way of play.

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