

ROZHDESTVENSKYY Vladyslav

 <http://orcid.org/0009-0006-1924-4875>Postgraduate Student  
at of the Department of Marketing  
State University of Trade and Economics  
19, Kyoto St., Kyiv, 02156, Ukraine[v.rozhdestvenskyy@knute.edu.ua](mailto:v.rozhdestvenskyy@knute.edu.ua)

## GAMIFICATION IN DIGITAL BRANDING

The article examines the impact of gamification on the formation of digital consumer loyalty within digital branding. It demonstrates that gamification is no longer merely a tactical tool for attracting attention but is becoming a strategic mechanism for managing users' behavioural activity and emotional interaction with a brand. In conditions of intense competition, digital saturation, and information overload, gamified interactions contribute to increased engagement, stimulation of repeated actions, and the development of long-term relationships between consumers and a brand's digital platform. The study hypothesises that the systematic use of gamification mechanics in digital branding increases consumers' behavioural loyalty by enhancing emotional engagement, interactivity, and the depth of interaction with the brand. The methodology combines a content analysis of mobile applications and digital platforms of six brands across three industries with a quantitative analysis of download metrics, review structures, average ratings, category rankings, and website traffic. To assess the impact, a system of proxy indicators is proposed: Download Index (DI), Positive Review Rate (PRR), Web Interaction Index (WII), and the integrated electronic Net Promoter Score (eNPS). The results reveal a positive relationship between the level of gamification implementation and integrated digital loyalty metrics, allowing gamification to be formalised as a structural element of digital brand strategy and substantiating the feasibility of its systematic implementation in marketing communications practice.

**Keywords:** gamification, consumer loyalty, digital branding, behavioural loyalty, mobile applications, digital metrics, digital loyalty.

**JEL Classification:** M30, M31, M37, O33.

РОЖДЕСТВЕНСЬКИЙ Владислав

 <http://orcid.org/0009-0006-1924-4875>аспірант кафедри маркетингу  
Державного торговельно-економічного  
університету  
вул. Кіото, 19, м. Київ, 02156, Україна[v.rozhdestvenskyy@knute.edu.ua](mailto:v.rozhdestvenskyy@knute.edu.ua)

## ГЕЙМІФІКАЦІЯ У ЦИФРОВОМУ БРЕНДІНГУ

Розглянуто вплив гейміфікації на формування цифрової лояльності споживачів у межах цифрового брендингу. Обґрунтовано, що гейміфікація перестає бути суто тактичним інструментом залучення уваги та трансформується у стратегічний механізм управління поведінковою активністю й емоційною взаємодією користувачів із брендом. В умовах високої конкуренції, цифрової насиченості та інформаційного перевантаження гейміфікація сприяє залученості, стимулюванню повторних дій і формуванню довготривалих взаємин між споживачем і цифровою платформою бренду. Висунуто гіпотезу, що системне застосування гейміфікаційних механік у цифровому брендингу підвищує поведінкову лояльність споживачів через посилення емоційної залученості, інтерактивності та глибини взаємодії з брендом. Методологія поєднує контент-аналіз мобільних застосунків та цифрових платформ шести брендів трьох галузей з кількісним аналізом показників завантажень, структури відгуків, середніх оцінок, рейтингових позицій та вебтрафіку. Для оцінювання впливу запропоновано систему проксі-індикаторів: Download Index (DI), Positive Review Rate (PRR), Web Interaction Index (WII) та інтегральний показник electronic Net Promoter Score (eNPS). Результати дослідження засвідчили наявність позитивного взаємозв'язку між рівнем застосування гейміфікаційних механік та інтегральними показниками цифрової лояльності, що дозволяє формалізувати гейміфікацію як структурний елемент цифрової бренд-стратегії та обґрунтувати доцільність її системного впровадження у практиці маркетингових комунікацій.

**Ключові слова:** гейміфікація, споживча лояльність, цифровий брендинг, поведінкова лояльність, мобільні додатки, диджитал-метрики, цифрова лояльність.



Copyright © 2026. The Author(s). This is an open access article distributed under the terms of the [Creative Commons Attribution License 4.0. International License \(CC-BY\)](https://creativecommons.org/licenses/by/4.0/).

### **Introduction**

In the current context of digital transformation, consumer loyalty is no longer an automatic consequence of satisfaction with a product or service. Intense competition, customer awareness, and the availability of alternatives require brands to adopt new approaches to building long-term relationships with their target audiences. One of the most dynamic tools demonstrating high effectiveness in the digital environment is gamification – the application of game mechanics in non-game contexts in order to increase engagement and stimulate repeated behaviour (Saleem et al., 2022).

Despite growing interest in gamification across educational, economic, and social spheres (Novák, 2025; Staling & Juanjo, 2020), the scholarly understanding of its role in the strategic management of loyalty in digital branding remains fragmented. Recent studies indicate that gamification is increasingly viewed as a marketing tool capable of strengthening consumer engagement, emotional experience, and repeated interaction with a brand. In particular, the study by Santos et al. (2024) demonstrates the intensive growth of scholarly interest in gamification in marketing while also revealing a lack of consistent approaches to explaining its impact on consumers' behavioural outcomes. Jacobides et al. (2024) regard gamification as a tool for achieving strategic business goals, primarily customer retention and the acquisition of new users. At the same time, Ukrainian scholars focus on related mechanisms of digital loyalty: personalisation as a loyalty strategy in e-commerce (Konoplyannykova, 2024) and digital brand marketing in social media as a prerequisite for building a loyal audience (Iankovets, 2024). Thus, the existing research provides an important theoretical foundation; however, the systemic impact of gamification mechanics on behavioural loyalty in digital branding requires further clarification. In these studies, gamification is considered as an element of UX or as a short-term marketing technique, whereas its potential as a tool for building stable behavioural brand loyalty remains insufficiently theorised and empirically studied.

Given the integrative nature of digital branding, which encompasses social networks, mobile applications, CRM platforms, and other channels, there is a need to study gamification specifically within a systemic approach to loyalty management. In particular, the effectiveness of the applied gamification mechanics and their impact on the formation of consumer loyalty in the digital space are pressing issues.

The aim of the study is to substantiate the role of gamification as a strategic tool of digital branding aimed at increasing consumers' behavioural loyalty, as well as to identify effective mechanics for its implementation in a multichannel environment.

To achieve this aim, the following objectives were set:

- to analyse conceptual approaches to gamification in marketing and branding;
- to systematise the game mechanics used in the digital environment to engage consumers;

- to examine the relationship between gamification and key digital loyalty metrics;
- to substantiate the practical advantage of applying gamification mechanics in digital branding.

The main hypothesis is that the systematic use of gamification mechanics in digital branding increases consumers' behavioural loyalty by enhancing emotional engagement, interactivity, and the depth of interaction with the brand.

To test the hypothesis, a mixed approach was applied: the qualitative analysis covers a content analysis of brand cases and an analysis of the UX interfaces of mobile applications. The quantitative component includes a comparison of loyalty metrics using open data, industry reports, and empirical findings from previous studies.

The main part of the article is structured into three sections. The first summarises theoretical approaches to the interpretation of gamification in digital branding and systematises the key game mechanics that influence consumer loyalty. The second section proposes the analytical framework of the study and substantiates the methodology for comparing brands based on the level of integration of gamification elements and on digital metrics. The third presents the results of the empirical analysis, the calculation of proxy indicators of digital loyalty, and the interpretation of the obtained results.

## **1. Theoretical foundations of gamification in digital branding**

A review of publications from 2024–2025 demonstrates the deep integration of behavioural economics into branding. Dos Santos et al. (2025) emphasise that gamification strengthens emotional and cognitive engagement. Maranchak M. and Maranchak N. (2023) focus on gamification as a driving force of consumer-generated content creation, which is one of the indicators of digital loyalty. However, as noted by Zafar et al. (2024), the literature lacks a unified model that would link psychological drivers to financial metrics and behavioural factors.

In the context of branding, gamification acts as a catalyst that links the emotional perception of a brand to practical interaction. The modern consumer expects an interactive experience that simultaneously entertains, stimulates, and informs. Gamification provides this level of interaction by combining the "reward for action" logic with elements of social communication. Empirical models demonstrate that consumer experience and brand engagement often act as mediators between gamification elements and loyalty (Singh & Milan, 2024).

The transformation of gamification from a tactical technique into a strategic tool is driven by a number of key factors:

- the growth of competition in the online environment;
- the saturation of the digital consumer experience;
- the development of analytics and personalisation, which make it possible to tailor gamified elements to a specific user.

Consumers expect personalised and digitally oriented loyalty programs, while for younger generations, a high-quality digital experience becomes a critical condition of a program's value, as stated by 75% of Generation Z representatives and millennials (Deloitte, 2024).

In the context of digital branding, gamification is increasingly viewed not as an engagement tool for entertainment but as a mechanism for strategic loyalty management that enables building stable, mutually beneficial relationships between a brand and a consumer. The modern concept of loyalty goes beyond repeated purchases or favourable reviews and includes emotional attachment, community participation, and a willingness to promote the brand organically. Empirical studies indicate that gamification elements (achievements, social interaction, leaderboards) can strengthen consumer engagement. PLS-SEM analysis (Rukshar et al., 2025) revealed a significant positive relationship between gamification and brand loyalty ( $\beta=0.792$ ).

Thus, gamification in marketing today is regarded as part of a comprehensive customer experience management (CEM) system, rather than an isolated element of UX design. Research highlights its role as a mechanism for shaping the gamification-enabled customer experience, with a subsequent impact on continuance intentions through other engagement factors (Liu et al., 2024).

Classic loyalty programs based solely on point accumulation and discounts are losing their differentiating power in the digital era: the Deloitte report emphasises that rewards remain important but are insufficient to retain attention and build lasting program value, especially against the backdrop of growing expectations regarding personalisation and digital experience (Deloitte, 2024).

The main drivers of gamification for the consumer in digital branding are scarcity and limitation, loss aversion, the desire for self-expression and social recognition, motivation and engagement, and competition (Tan et al., 2023; Hsu, 2022). These drivers make it possible to implement the following mechanics:

- point systems;
- fortune wheels and random rewards;
- progress bars and task completion indicators;
- personalised quests and missions;
- leaderboards;
- quizzes and challenges;
- recurring continuous streaks;
- virtual goods, skins, and avatars;
- interactive onboarding;
- level systems and progression.

To illustrate the use of each of the described mechanics and their impact on the consumer, a tabular systematisation with descriptions of the impact based on real brands is appropriate (*Table 1*).

*Table 1*

Examples and impact of the use of gamification mechanics in digital branding

| Mechanic                                     | Brand         | Implementation                                                                                                             | Impact                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Point systems                                | Starbucks     | Awarding "stars" for each purchase, which can be exchanged for free drinks or food through the loyalty program             | Program users made 300% more purchases compared with other customers. In 2023, 30% of the chain's purchases were made via mobile devices                                                                                                                                                               |
| Fortune wheels and random rewards            | Sephora SEA   | Introduction of the game elements DAILY ANGPAO and Spin to win in the mobile application                                   | A 132% increase in the volume of purchases by participants of the gamification mechanic over a 30-day observation period                                                                                                                                                                               |
| Progress bars and task completion indicators | ScanVault     | A progress bar for completing an online order aimed at confirming the correctness of the consumer's actions                | An increase in the conversion rate by 46%                                                                                                                                                                                                                                                              |
| Personalised quests and missions             | Starbucks     | Individual challenges in the app, for example: "buy a latte three times a week to receive 50 bonus stars"                  | An increase in the number of daily active users (DAU) and customer retention by 25% and 10%, respectively                                                                                                                                                                                              |
| Leaderboards                                 | Nike Run Club | Global and local runner rankings where users compete by distance or pace                                                   | 69% of surveyed consumers responded positively to the presence of leaderboards, which significantly contributes to brand perception                                                                                                                                                                    |
| Quizzes and challenges                       | Nike Run Club | Time-limited competitions that activate FOMO triggers                                                                      | 400,000 new app downloads at the beginning of 2026                                                                                                                                                                                                                                                     |
| Recurring continuous streaks                 | Duolingo      | A visual counter of consecutive learning days ("Daily Streak") with push notifications about the risk of losing progress   | An increase in DAU by 36% over the first 9 months of 2025, exceeding 50 million users                                                                                                                                                                                                                  |
| Virtual goods, skins, and avatars            | Fortnite      | Purchase of digital copies of clothing and accessories with in-game currency and avatar customisation in the virtual space | 58% of the company's 2025 revenue comes from purchases of in-game currency and player personalisation elements                                                                                                                                                                                         |
| Interactive onboarding                       | Hubspot       | Replacement of static instructions with a game-like interface tour featuring instant micro-rewards for the first steps     | A reduction in the churn rate of new users at the initial stage and an increase in satisfaction with the product                                                                                                                                                                                       |
| Level systems and progression                | Flipkart      | Users' transition between status levels depending on accumulated SuperCoins                                                | 49% of Plus-level participants confirmed that they began making purchases more frequently thanks to gamified progression. A strong positive relationship was established between satisfaction with the SuperCoins program and overall loyalty to the brand ecosystem (correlation coefficient = 0.603) |

*Source:* systematised by the author based on (Maijala, 2025; Braze, 2025; Azarian, 2023; Ovaisi, 2025; Rodrigues et al., 2021; Koninck, 2026; Duolingo, 2025; Younus & Mahmood, 2026; Meshram et al., 2025).

Thus, the analysed studies and brand cases confirm a statistically significant relationship between gamification mechanics and indicators of engagement, brand attitude, and consumer purchasing behaviour. At the same time, the scholarly literature lacks an analysis of recent examples, which makes it impossible to trace a direct link between individual mechanics and brands' open behavioural metrics. This necessitates an empirical verification of the impact of gamification through quantitative digital indicators.

## 2. Analytical framework for measuring the impact of gamification

To trace the impact of gamification mechanics in practical examples, it is proposed to conduct a study of brand cases, followed by a comparison of the criteria for companies' marketing performance. Accordingly, it is appropriate to select both well-known companies that widely apply the previously described mechanics and their competitors in similar markets with a low or limited level of gamification.

In general, the methodology for selecting brands for comparison is based on belonging to the same industry, a similar business model, the presence of a mobile application as the main channel of communication with the consumer, data availability, and differentiation in the use of gamification mechanics.

Based on these criteria, a sample of six brands was formed:

- Temu – e-commerce industry, extensively gamified;
- eBay – e-commerce industry, non-gamified;
- Duolingo – EdTech industry (online learning), extensively gamified;
- Rosetta Stone – EdTech industry, non-gamified;
- Monobank – online banking, extensively gamified;
- Oschadbank – online banking, non-gamified.

To illustrate the extent of a brand's use of gamification mechanics, an analysis of applications and websites was conducted, and a table was compiled that demonstrates the use of each described mechanic (*Table 2*). The logic of the description is to fill the corresponding cells with values in the range of 0–1, where 0 indicates the absence of the described mechanic and 1 indicates its presence.

*Table 2*

Audit of the application of gamification mechanics by brands

| Mechanics                                    | Temu | eBay | Duolingo | Rosetta Stone | Monobank | Oschadbank |
|----------------------------------------------|------|------|----------|---------------|----------|------------|
| Point systems                                | 1    | 0    | 1        | 1             | 1        | 0          |
| Fortune wheels and random rewards            | 1    | 0    | 1        | 0             | 0        | 0          |
| Progress bars and task completion indicators | 1    | 0    | 1        | 1             | 1        | 0          |
| Personalised quests and missions             | 1    | 0    | 1        | 0             | 1        | 0          |
| Leaderboards                                 | 0    | 0    | 1        | 0             | 0        | 0          |
| Quizzes and challenges                       | 1    | 0    | 1        | 0             | 1        | 0          |
| Recurring continuous streaks                 | 0    | 0    | 1        | 0             | 0        | 0          |
| Virtual goods, skins, and avatars            | 0    | 0    | 1        | 0             | 1        | 0          |
| Interactive onboarding                       | 1    | 0    | 1        | 0             | 1        | 0          |
| Level systems and progression                | 1    | 0    | 1        | 1             | 1        | 0          |

Source: compiled by the author based on (Temu (App Store, Version 4.30.0), n. d.; Temu: Shop like a billionaire, Version 4.29.1, n. d.; eBay – buy and save, n. d.; eBay (Version 6.245.1), n. d.; Duolingo – languages and chess, n. d.; Duolingo: foreign language lessons (Version 7.110.0), n. d.; Rosetta Stone: Learn Languages (Version 8.35.0), n. d.; Rosetta Stone: Learn Languages (Version 8.43.5), n. d.; monobank - digital mobile bank (Version 7.18), n. d.; monobank – bank in smartphone (Version 7.18.0), n. d.; Oschad (Version 1.1.2571), n. d.; Oschad (Version 1.0.2571), n. d.).

The results of the brand application audit indicate a substantial differentiation in the level of gamification use in communication with consumers, which creates a practical basis for formulating additional hypotheses:

H1. Brands with deeper integration of gamification mechanics demonstrate higher user engagement indicators in mobile applications within their industry.

H2. Gamified brands are characterised by a larger number of positive reviews.

H3. The level of a brand's gamification is related to integrated indicators of digital loyalty.

To test the formulated hypotheses, open digital data on the studied brands were collected and systematised. In particular, mobile application indicators (number of downloads, number of reviews, average rating, position in the category ranking) and web analytics (monthly visit volume and average session duration) were analysed. The obtained data serve as an empirical basis for calculating integrated indicators of the impact of game mechanics on consumers' digital loyalty.

*Table 3*

Analysis of brands' digital activity metrics

| Indicator                             | Temu   | eBay   | Duolingo | Rosetta Stone | Monobank | Oschadbank |
|---------------------------------------|--------|--------|----------|---------------|----------|------------|
| App downloads, AppStore               | 10 M   | 1 M    | 5 M      | 80 K          | 60 K     | 30 K       |
| App downloads, PlayMarket             | 24 M   | 1 M    | 14 M     | 60 K          | 100 K    | 100 K      |
| Number of reviews, AppStore           | 2 M    | 5 M    | 4.94 M   | 235 K         | 895 K    | 24.49 K    |
| Number of reviews, PlayMarket         | 11 M   | 4.99 M | 43 M     | 404 K         | 1.11 M   | 160.79 K   |
| Average rating on AppStore            | 4.6/5  | 4.8/5  | 4.7/5    | 4.8/5         | 4.9/5    | 4.4/5      |
| Reviews rated 4 and above, AppStore   | 1.89 M | 4.78 M | 4.66 M   | 225 K         | 871.94 K | 21.05 K    |
| Average rating on PlayMarket          | 4.5/5  | 4.6/5  | 4.7/5    | 4.6/5         | 4.9/5    | 4.5/5      |
| Reviews rated 4 and above, PlayMarket | 9.49 M | 4.57 M | 40 M     | 371 K         | 1.08 M   | 143.4 K    |
| Category ranking on AppStore          | 1      | 11     | 1        | 39            | 1        | 7          |
| Category ranking on PlayMarket        | 1      | 9      | 1        | 30            | 1        | 3          |
| Monthly website visits                | 1.53 B | 666 M  | 56.37 M  | 2.21 M        | 6.51 M   | 3.96 M     |

*Source:* compiled by the author based on data as of February 2026 (Sensor tower, n. d.; SimilarWeb PRO, n. d.).

The data in *Table 3* indicate noticeable differences in digital indicators between brands with different levels of integration of gamification mechanics. Gamified brands generally demonstrate higher indicators of downloads, numbers of reviews, and positions in category rankings, which may point to a higher level of digital engagement and user activity. At the same time, differences in web traffic and session duration require additional

interpretation in the context of industry specifics. To systematically generalise the results obtained, the next section calculates integrated indicators and analyses their relationship with the brands' level of gamification.

### 3. Implementation of the analysis results in practice

For the quantitative testing of the formulated research hypotheses, a system of proxy indicators is proposed to transform open digital metrics into measurable indicators of digital loyalty. Given the limited access to internal marketing performance indicators (NPS, CLV, retention rate), four aggregated indicators were introduced:

- DI (Download Index) – download index;
- PRR (Positive Review Rate) – index of positive user experience;
- Web Interaction Index (WII) – an indicator of the depth and intensity of digital interaction;
- eNPS (electronic Net Promoter Score) – an integrated indicator of digital loyalty.

These models enable assessment of the impact of gamification level on a brand's behavioural and perceptual digital indicators.

The download index reflects the relative level of installations for a brand's mobile application within its industry. The calculation of this index involves:

1. Calculation of the total number of downloads:

$$TotalDownloads_i = Downloads_{AppStore} + Downloads_{PlayMarket}$$

2. Normalisation of the indicator within the industry:

$$DI_i = \frac{TotalDownloads_i}{\max(TotalDownloads_{industry})}$$

This approach eliminates scale differences across industries and enables accurate comparisons between gamified and non-gamified brands.

PRR reflects the share of positive ratings among all reviews and serves as a proxy for user satisfaction and emotional experience. Reviews reflecting 80 per cent or more of consumer satisfaction, i.e., a rating of 4 points and above, are considered positive.

The indicator is calculated using the following algorithm:

1. Total number of positive reviews:

$$PositiveReviews_i = Reviews_{4*} + Reviews_{5*}$$

2. PRR index:

$$PRR_i = \frac{PositiveReviews_i}{TotalReviews_i}$$

The calculation of *WII* is performed using the following formula:

$$WII_i = \frac{WebVisits_i}{\max(WebVisits_{industry})}$$

To calculate the *WII* indices, an additional systematization of website visit indicators by industry is required (*Table 4*).

*Table 4*

Analysis of website metrics of the category leaders of the selected brands

| Categories of analysis                                 | Temu        | eBay | Duolingo    | Rosetta Stone | Monobank | Oschadbank |
|--------------------------------------------------------|-------------|------|-------------|---------------|----------|------------|
| Industry                                               | Marketplace |      | Education   |               | Finance  |            |
| Industry-leading brand                                 | Amazon      |      | Instructure |               | Minfin   |            |
| Number of website visits of the industry-leading brand | 2.719 B     |      | 383 M       |               | 8.5 M    |            |

Source: compiled by the author based on data as of February 2026 (SimilarWeb PRO, n. d.).

The final indicator of the impact of gamification on digital loyalty is *eNPS*, which enables direct tracking of the influence of all the listed indicators. The calculation formula is based on the sum of weighted average indicators:

$$eNPS = \alpha DI_i + \beta PRR_i + \gamma WII_i$$

$$\alpha = \beta = \gamma = 0.33$$

In *Table 5*, the results of the metric calculations for each of the analysed brands are presented.

*Table 5*

Proxy indicators of the impact of gamification on digital loyalty

| Indicator | Temu   | eBay   | Duolingo | Rosetta Stone | Monobank | Oschadbank |
|-----------|--------|--------|----------|---------------|----------|------------|
| DI        | 1      | 0.0588 | 1        | 0.0074        | 1        | 0.8125     |
| PRR       | 0.8754 | 0.9359 | 0.9316   | 0.9327        | 0.9735   | 0.8876     |
| WII       | 0.5627 | 0.2449 | 0.1472   | 0.0058        | 0.7659   | 0.4659     |
| eNPS      | 0.8046 | 0.4091 | 0.6860   | 0.3121        | 0.9040   | 0.7148     |

Source: compiled by the author.

The results of the analysis demonstrate higher *eNPS* values for brands that actively use gamification mechanics to communicate with consumers via mobile applications and websites or online platforms.

## Conclusions

The study substantiates the theoretical and applied understanding of the role of gamification as a strategic tool of digital branding. The aim of the study has been achieved, namely, the role of gamification as a strategic tool of digital branding aimed at increasing consumers' behavioural loyalty has been argued, and effective mechanics for its implementation in a multichannel environment have been identified. It has been established that

gamification in the modern digital environment is shifting from a tactical engagement element to a systemic mechanism for managing consumer behavioural loyalty.

Within the first objective, conceptual approaches to gamification in marketing and branding were analysed. It was substantiated that game mechanics in the digital environment influence not only short-term engagement but also deeper behavioural and emotional characteristics of the consumer's interaction with a brand. A synthesis of recent empirical studies confirmed a statistically significant relationship between gamification mechanics and indicators of emotional engagement, brand trust, and repeat interaction intentions.

Within the second objective, the game mechanics used in the digital environment to engage consumers were systematised. It was established that point systems, progression levels, personalized quests, challenges, leaderboards, streak mechanics, random rewards, interactive onboarding, and other mechanics affect the consumer's key psychological drivers – the need for recognition, achievement, social interaction, self-expression, and loss aversion. It is this systemic effect that creates the preconditions for sustainable digital loyalty.

The completion of the third objective enabled an examination of the relationship between gamification and key digital loyalty metrics. In the practical part of the study, an analytical framework was proposed to assess the impact of gamification on digital loyalty by comparing brands with varying levels of game-mechanics integration across three industries: marketplaces, online education, and online banking. The application audit demonstrated clear differences in the level of gamification use, providing an empirical basis for formulating and testing hypotheses.

The practical advantage of applying gamification mechanics in digital branding was substantiated within the fourth objective. The quantitative analysis of open digital metrics (app downloads, the number and structure of reviews, average ratings, category positions, and web traffic) showed that gamified brands, in most cases, exhibit higher levels of digital activity and user interaction. For an integrated assessment of the impact, a system of proxy indicators was introduced: Download Index (DI), Positive Review Rate (PRR), Web Interaction Index (WII) and the aggregated indicator electronic Net Promoter Score (eNPS).

The obtained results indicate a positive relationship between a brand's level of gamification and integrated indicators of digital loyalty. Brands with a higher level of integration of game mechanics demonstrated more significant DI and eNPS values, which provides grounds for confirming the main hypothesis of the study: the systematic use of gamification mechanics in digital branding increases consumers' behavioural loyalty by enhancing emotional engagement, interactivity, and the depth of interaction with the brand.

The additional research hypotheses received varying degrees of confirmation. Hypothesis H1, which states that brands with greater integration of gamification mechanics demonstrate higher mobile application download indicators within their industry, is partially confirmed: this trend is observed across all three studied industries, although the magnitude of the differences varies. Hypothesis H2, stating that gamified brands are characterised by a larger number of positive reviews, was partially reflected in the results: gamified brands demonstrate higher user activity and significant volumes of positive feedback, but do not in all cases have an unconditional advantage in the share of positive ratings. Hypothesis H3, concerning the relationship between a brand's level of gamification and integrated indicators of digital loyalty, received full substantiation, as a higher level of use of gamification mechanics is associated with improved eNPS values and other integrated indicators of digital interaction.

Thus, gamification can be formalised as a structural element of digital brand strategy that affects not only short-term engagement but also consumers' long-term attachment, activity, and willingness to interact repeatedly with a brand. The practical significance of the study lies in the possibility of using the proposed system of indicators to assess the effectiveness of gamification mechanics in digital products across various industries. The proposed approach can be applied both in corporate analytics and in academic research on digital loyalty.

Prospects for further research are related to expanding the sample of brands, conducting an in-depth correlation analysis using Pearson coefficients or regression models, and studying the impact of individual gamification mechanics on specific consumer behavioural indicators in long-term dynamics.

#### REFERENCES /СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Azarian, H. (2023, February 7th). *39 CRO case studies to boost conversion rates*. Azarian Growth Agency. <https://azariangrowthagency.com/39-conversion-optimization-case-studies-you-can-learn-and-get-inspired-by/>

Braze Customer Engagement Platform. (2025). *Sephora SEA case study*. <https://www.braze.com/customers/sephora-sea-case-study>

Deloitte. (2024). *2024 consumer loyalty survey* (1). <https://www.deloitte.com/global/en/Industries/consumer/perspectives/consumer-loyalty-survey.html>

Dos Santos, L. F., Oliveira, W., Corrêa de Lima, A., de Castro Junior, A. A., & Hamari, J. (2025). The effects of gamification on learners' engagement according to their gamification user types. *Technology, Knowledge and Learning*. <https://doi.org/10.1007/s10758-025-09866-2>

Duolingo – foreign language lessons (Version 7.110.0). (n. d.). [Mobile application] Duolingo, Inc. <https://apps.apple.com/en/app/duolingo>

Duolingo. (2025). *Shareholder letter Q3 2025* (1). <https://investors.duolingo.com/static-files/c9bf5861-b19d-4396-b060-c0dbeefd34f5>

*Duolingo: Languages and Chess*. (n. d.). [Mobile application]. Duolingo. <https://play.google.com/store/apps/details?id=com.duolingo&hl=uk>

*Duolingo: мови та шахи*. (б. д.). [Мобільний застосунок]. Duolingo. <https://play.google.com/store/apps/details?id=com.duolingo&hl=uk>

*EBay – buy and save* (eBay Mobile). (n. d.). [Mobile application]. <https://play.google.com/store/apps/details?id=com.ebay.mobile>

*EBay – купити та заощадити* (eBay Mobile). (б. д.). [Мобільний застосунок]. <https://play.google.com/store/apps/details?id=com.ebay.mobile>

|                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| eBay (Version 6.245.1). (n. d.). [Mobile application]. eBay Inc. <a href="https://apps.apple.com/ua/app/ebay/id282614216">https://apps.apple.com/ua/app/ebay/id282614216</a>                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                      |
| Hsu, C.-L. (2022). Applying cognitive evaluation theory to analyze the impact of gamification mechanics on user engagement in resource recycling. <i>Information &amp; Management</i> , 59(2), 103602. <a href="https://doi.org/10.1016/j.im.2022.103602">https://doi.org/10.1016/j.im.2022.103602</a>                                                                                               |                                                                                                                                                                                                                                                                                                                                      |
| Iankovets, T. (2024). Digital marketing of brands in social media. <i>International Scientific-Practical Journal Commodities and Markets</i> , 49(1), 27–52. <a href="https://doi.org/10.31617/2.2024(49)02">https://doi.org/10.31617/2.2024(49)02</a>                                                                                                                                               | Янковець, Т. (2024). Цифровий маркетинг брендів у соціальних медіа. <i>International Scientific-Practical Journal Commodities and Markets</i> , 49(1), 27–52. <a href="https://doi.org/10.31617/2.2024(49)02">https://doi.org/10.31617/2.2024(49)02</a>                                                                              |
| Jacobides, M. G., Ma, M. D., Trantopoulos, K., & Vassalos, V. (2024). The business value of gamification. <i>California Management Review</i> . <a href="https://doi.org/10.1177/00081256231218469">https://doi.org/10.1177/00081256231218469</a>                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                      |
| Koninck, J. D. (2026, February 11). Nike Run Club gamification examples. <i>Case Studies</i> . <a href="https://www.strivecloud.io/blog/gamification-examples-nike-run-club">https://www.strivecloud.io/blog/gamification-examples-nike-run-club</a>                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                      |
| Konoplyannykova, M. (2024). Personalization as a loyalty strategy in electronic commerce. <i>International Scientific-Practical Journal Commodities and Markets</i> , 49(1), 4–26. <a href="https://doi.org/10.31617/2.2024(49)01">https://doi.org/10.31617/2.2024(49)01</a>                                                                                                                         | Конопляникова, М. (2024). Персоналізація як стратегія лояльності в електронній комерції. <i>International Scientific-Practical Journal Commodities and Markets</i> , 49(1), 4–26. <a href="https://doi.org/10.31617/2.2024(49)01">https://doi.org/10.31617/2.2024(49)01</a>                                                          |
| Liu, R., Benitez, J., Zhang, L., Shao, Z., & Mi, J. (2024). Exploring the influence of gamification-enabled customer experience on continuance intention towards digital platforms for e-government: An empirical investigation. <i>Information &amp; Management</i> , 103986. <a href="https://doi.org/10.1016/j.im.2024.103986">https://doi.org/10.1016/j.im.2024.103986</a>                       |                                                                                                                                                                                                                                                                                                                                      |
| Maijala, O. (2025). <i>The growth in the gamification of digital consumer application services: A case analysis of duolingo, fitbit and starbucks</i> [Bachelor's thesis, Aalto University]. Bachelor's Programme in International Business. <a href="https://aaltodoc.aalto.fi/items/1ccae18c-14c2-4e50-80ef-b05bfc9b3ab9">https://aaltodoc.aalto.fi/items/1ccae18c-14c2-4e50-80ef-b05bfc9b3ab9</a> |                                                                                                                                                                                                                                                                                                                                      |
| Maranchak, M., & Maranchak, N. (2023). Gamification mechanics usage for UGC promotion in online library marketing. <i>Ukrainian Journal on Library and Information Science</i> , (11), 21–33. <a href="https://doi.org/10.31866/2616-7654.11.2023.282652">https://doi.org/10.31866/2616-7654.11.2023.282652</a>                                                                                      | Маранчак, М., & Маранчак, Н. (2023). Використання гейміфікованих механік для стимулювання UGC в інтернет-маркетингу бібліотек. <i>Український журнал з бібліотекознавства та інформаційних наук</i> , (11), 21–33. <a href="https://doi.org/10.31866/2616-7654.11.2023.282652">https://doi.org/10.31866/2616-7654.11.2023.282652</a> |
| Meshram, A., Juned, M., & Lakshmi, B. (2025). The role of gamification in enhancing customer loyalty: Analyzing its impact on retention and lifetime value in flipkart plus rewards. <i>International Journal of Engineering Development and Research</i> , 13(4), 313–327. <a href="https://rjwave.org/ijedr/papers/IJEDR2504798.pdf">https://rjwave.org/ijedr/papers/IJEDR2504798.pdf</a>          |                                                                                                                                                                                                                                                                                                                                      |
| monobank – digital mobile bank (Version 7.18) (n. d.). [Mobile application]. UNIVERSAL BANK, PRAT. <a href="https://apps.apple.com/ua/app/monobank-digital-mobile-bank/id1287005205">https://apps.apple.com/ua/app/monobank-digital-mobile-bank/id1287005205</a>                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                      |
| monobank – bank in smartfone (Version 7.18.0). (n. d.). [Mobile application]. Universal bank   Monobank. <a href="https://play.google.com/store/apps/details?id=com.ftband.mono&amp;hl=ru">https://play.google.com/store/apps/details?id=com.ftband.mono&amp;hl=ru</a>                                                                                                                               | monobank – банк у телефоні (Версія 7.18.0). (б. д.). [Мобільний застосунок]. Universal bank   Monobank. <a href="https://play.google.com/store/apps/details?id=com.ftband.mono&amp;hl=ru">https://play.google.com/store/apps/details?id=com.ftband.mono&amp;hl=ru</a>                                                                |
| Novák, J. (2025). Gamification in economic education at secondary schools reflecting the value orientation of students. <i>R&amp;e-Source</i> , 253–260. <a href="https://doi.org/10.53349/re-source.2025.is1.a1398">https://doi.org/10.53349/re-source.2025.is1.a1398</a>                                                                                                                           |                                                                                                                                                                                                                                                                                                                                      |
| Oschad (Version 1.1.2571). (n. d.). [Mobile application]. JSC "Oschadbank". <a href="https://apps.apple.com/ua/app/oschad/id1571479928">https://apps.apple.com/ua/app/oschad/id1571479928</a>                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                      |
| Ovaisi, A. (2025). 10 game-changing digital marketing case studies you need to see in 2025. <i>Performance Marketing &amp; More</i> . <a href="https://www.jobaalearnings.com/blog/10-game-changing-digital-marketing-case-studies-you-need-to-see-in-2025">https://www.jobaalearnings.com/blog/10-game-changing-digital-marketing-case-studies-you-need-to-see-in-2025</a>                          |                                                                                                                                                                                                                                                                                                                                      |
| Rodrigues, I., Lopes, J. M., Borges, A., Oliveira, J., & Oliveira, M. (2021). How can gamified applications drive engagement and brand attitude? The case of nike run club application. <i>Administrative Sciences</i> , 11(3), 92. <a href="https://doi.org/10.3390/admsci11030092">https://doi.org/10.3390/admsci11030092</a>                                                                      |                                                                                                                                                                                                                                                                                                                                      |
| Rosetta Stone: Learn Languages (Version 8.43.5). (n. d.). [Mobile application]. Rosetta Stone, Ltd. <a href="https://apps.apple.com/ua/app/rosetta-stone-learn-languages/id435588892?l=uk">https://apps.apple.com/ua/app/rosetta-stone-learn-languages/id435588892?l=uk</a>                                                                                                                          |                                                                                                                                                                                                                                                                                                                                      |
| Rosetta Stone: Learn Languages (Version 8.35.0). (n. d.). [Mobile application]. Rosetta Stone Ltd. <a href="https://play.google.com/store/apps/details?id=air.com.rosettastone.mobile.CoursePlayer&amp;hl=uk">https://play.google.com/store/apps/details?id=air.com.rosettastone.mobile.CoursePlayer&amp;hl=uk</a>                                                                                   | Rosetta Stone: вивчення мов (Версія 8.35.0). (б. д.). [Мобільний застосунок]. Rosetta Stone Ltd. <a href="https://play.google.com/store/apps/details?id=air.com.rosettastone.mobile.CoursePlayer&amp;hl=uk">https://play.google.com/store/apps/details?id=air.com.rosettastone.mobile.CoursePlayer&amp;hl=uk</a>                     |

- Rukshar, R., Khanam, A., Sajjad, M. D., & Nagvanshi, S. (2025). Impact of gamification on brand loyalty: Exploring the mediating role of e-WOM. In book: *Addressing Practical Problems Through the Metaverse and Game-Inspired Mechanics*, 77–96. IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-8886-0.ch004>
- Saleem, A. N., Noori, N. M., & Ozdamli, F. (2021). Gamification applications in e-learning: A literature review. *Technology, Knowledge and Learning*. <https://doi.org/10.1007/s10758-020-09487-x>
- Santos, P. M., Dias, J. M., & Bairrada, C. M. (2024). Gamification in marketing: Insights on current and future research directions based on a bibliometric and Theories, Contexts, Characteristics and Methodologies analysis. *Heliyon*, e32047. <https://doi.org/10.1016/j.heliyon.2024.e32047>
- Sensor tower. (n. d.). Digital Intelligence & App Data Analysis by Sensor Tower. <https://sensortower.com/>
- SimilarWeb PRO. (n. d.). SimilarWeb. <https://www.similarweb.com/>
- Singh, Y., & Milan, R. (2024). Utilitarian and hedonic values of gamification and their influence on brand engagement, loyalty, trust and WoM. *Entertainment Computing*, 100868. <https://doi.org/10.1016/j.entcom.2024.100868>
- Staling, Cordero-Brito & Juanjo, Mena. (2020). Gamification and its application in the social environment. *Journal of Information Technology Research*, 13(3), 58–79. <https://doi.org/10.4018/JITR.2020070104>
- Tan, C., Devilly, O., Lim, S., Divo, B., Kok, X.-F., Jasin, J., Seaw, K., & Htein, L. (2023). The effect of gamification mechanics on user experiences of adventurelearn: A self-driven learning platform. *Proceedings of the ACM on Human-Computer Interaction*, (7), 416. <https://doi.org/10.1145/3611062>
- Temu (App Store, version 4.30.0). (n. d.). Whaleco Inc. [Mobile application]. <https://apps.apple.com/ua/app/temu>
- Temu: Shop like a billionaire (Version 4.29.1). (n. d.). Temu. [Mobile application]. <https://play.google.com/store/apps/details?id=com.einnovation.temu>
- Younus, M., & Mahmood, R. (2026). *Fortnite revenue breakdown for 2026: Key insights & usage statistics*. TekRevol. <https://www.tekreval.com/blogs/fortnite-revenue-usage-statistics/>
- Zafar, A. U., Shahzad, M., Shahzad, K., Appolloni, A., & Elgammal, I. (2024). Gamification and sustainable development: Role of gamified learning in sustainable purchasing. *Technological Forecasting and Social Change*, (198), 122968. <https://doi.org/10.1016/j.techfore.2023.122968>
- |                                                                                                                                                                                                                           |                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Os Chad. (Version 1.0.2571) [Mobile application]. (n. d.). Os Chadbank. <a href="https://play.google.com/store/apps/details?id=ua.oschadbank.flumo">https://play.google.com/store/apps/details?id=ua.oschadbank.flumo</a> | Ошад (Версія 1.0.2571) (б. д.). [Мобільний застосунок]. Ошадбанк. <a href="https://play.google.com/store/apps/details?id=ua.oschadbank.flumo">https://play.google.com/store/apps/details?id=ua.oschadbank.flumo</a> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Conflict of interest.** The author declares no financial or non-financial conflicts of interest related to this publication and has no relationships with state bodies, commercial or non-profit organisations that could have an interest in the presentation of this point of view. Given that the author is affiliated with the institution that publishes the journal, which may give rise to a potential conflict of interest or suspicion of bias, the final decision to publish this article (including the selection of reviewers and editors) was made by those members of the Editorial Board who are not associated with this institution.

The author received no direct funding for this study.

Rozhdestvensky, V. (2026). Gamification in digital branding. *Scientia fructuosa*, 4(168), 103–115. [http://doi.org/10.31617/1.2026\(168\)07](http://doi.org/10.31617/1.2026(168)07)

*Received by the editorial office 23.02.2026.*

*The article has been revised 26.03.2026.*

*Accepted for printing 20.05.2026.*

*Published online 07.09.2026.*