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Research Article

Research on the Impact of Gamification Marketing on Consumer Brand Loyalty on E-commerce Platforms

Jiyu Sui [1, A] Fei Huang [1,B,*]

1. aSSIST University，03767, Seoul Korea

[a] Email:suijiyu@stud.assist.ac.kr

*Corresponding author [b] Email:huangfei@assist.ac.kr

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ABSTRACT

Under the background that the development of Internet technology has intensified the competition in the e-commerce market, gaming marketing has become an innovative marketing method explored by the e-commerce platform, and consumer brand loyalty is crucial to the long-term development of the platform. This study constructed a theoretical model of "gamification marketing user experience brand loyalty" and collected data from e-commerce platform users who have participated in gamification marketing in the past three months using a questionnaire survey method. SPSS and AMOS software were used for empirical analysis to deeply analyze the impact path of gamification marketing on consumer brand loyalty on e-commerce platforms. Research has found that the task system, social interaction, achievement system, and virtual rewards of gamification marketing have all had a significant positive effect on user experience. At the user experience level, both functionality and emotional experience are significantly positively correlated with brand loyalty, with emotional experience being more prominent; Social interaction partially mediates the relationship between task systems, virtual rewards, and brand loyalty; The impact mechanism of gamification marketing on users of different genders is similar, with users aged 26-35 placing more emphasis on social interaction, and users with a bachelor's degree or above placing more emphasis on functional experience. Based on this, it is recommended that e-commerce platforms focus on optimizing task design, enhancing social attributes, implementing precise marketing, injecting emotional elements, and improving achievement mechanisms when implementing gamification marketing, in order to cultivate user loyalty and ensure the stable development of the platform.

Keywords: Gamification marketing; Brand loyalty; User experience; E-commerce platform

1 INTRODUCTION

In the digital age, e-commerce has become the core carrier of commercial activities. With

technological innovation and transformation of shopping models, the e-commerce market continues to expand, and competition between platforms intensifies(Wang Xuhui et al.,2023)**Error! Reference source not found.**.To enhance market competitiveness, all platforms actively seek marketing innovation.

Gamification marketing, as an emerging marketing method, is gradually emerging in the e-commerce field. By incorporating game elements such as fun tasks and incentive mechanisms, this marketing approach activates user engagement motivation. This innovative model not only optimizes the consumer experience, but also creates differentiated advantages for the platform. Brand loyalty is a key indicator for the stable operation of a platform, which is reflected in a high willingness to repurchase, positive word-of-mouth communication, and competitive advantage(Gao Peng et al.,2021[2]).In the current rapidly changing market environment, enhancing brand loyalty has become a key issue for various platforms, and gamification marketing provides new ideas for this.

There have been many discussions in academia on gamification marketing and brand loyalty in e-commerce. Wang Xuhui et al.(2023)[1]found that game designs such as point systems and ranking mechanisms promote interaction between users and platforms. Xiong Ying(2024)[3]confirmed through data that the fun of gamification marketing increases user retention time and stimulates purchase intention. Zhang Qi(2024)[4]focuses on the research of game marketing strategies in the new media environment. Regarding brand loyalty, Fang Minjiang(2022)[5]pointed out that brand image, product quality, and service level are the core influencing factors. Liu Yang (2023)[6]emphasizes the importance of emotional connection in the formation of loyalty.

However, existing research is still insufficient in exploring the correlation between gamification marketing and brand loyalty. Most studies are limited to the surface effects of gamification marketing on purchasing behavior, and have not delved into its underlying mechanisms. The research method is mainly qualitative and lacks quantitative support, which affects the generalizability of the conclusions (Cao Li et al.,2024)[7].

Based on this, this study comprehensively applies multiple research methods, especially quantitative research methods, to deeply analyze the specific impact path of gamification marketing on consumer brand loyalty on e-commerce platforms. This research has important theoretical and practical significance. In theory, this study will enrich the theoretical system of gamification marketing, expand the research on factors influencing brand loyalty, and construct relevant mechanism models. At the practical level, research results can provide a basis for optimizing gamification marketing plans for platforms, helping to enhance brand loyalty, promote e-commerce marketing innovation and industry progress.

2 RESEARCH DESIGN

2.1 Research Hypothesis

Based on theoretical exploration and literature review, this study establishes a theoretical framework from gamification marketing to user experience and then to brand loyalty, aiming to deeply explore the mechanism of gamification marketing on brand loyalty through user experience. Among them, gamification marketing includes task systems, social interactions, achievement systems,

and virtual rewards; User experience is divided into functional experience and emotional experience; Brand loyalty covers four levels: cognition, emotion, intention, and behavior. Based on this, the following hypothesis is proposed:

2.1.1 Hypothesis of the Impact of gamification Marketing on User Experience

H1:gamification marketing can enhance user experience. By incorporating game elements, user engagement and interactive experience can be enhanced.

H1a:The task system has a positive impact on user experience. Scientific goal setting, moderate difficulty gradient, reasonable completion pace, and diverse task types can enhance users' sense of achievement and optimize their experience perception.

H1b:Social interaction has a positive impact on user experience. Interactive forms such as communication, collaboration, competition, and sharing among users help build a sense of community belonging and enrich the platform experience.

H1c:The achievement system has a positive impact on user experience. A complete hierarchical mechanism, distinctive identity identifiers, and diverse achievement medals can meet users' self actualization needs and enhance their experiential value.

H1d:Virtual rewards have a positive impact on user experience. The diverse points mechanism, convenient currency usage, and rich exchange options can stimulate user participation and improve the quality of the experience.

2.1.2 Assumption of the Impact of User Experience on Brand Loyalty

H2:User experience has a positive impact on brand loyalty. High quality experience can promote users' positive attitude towards the brand, thereby enhancing their loyalty willingness.

H2a:The functional experience has a positive impact on brand loyalty. When the functionality of product services meets user needs, it will enhance brand trust and recognition.

H2b:Emotional experience has a positive impact on brand loyalty. The emotional resonance and value recognition gained by users in the process of interacting with the brand can promote sustained purchase intention and word-of-mouth dissemination.

2.1.3 Hypothesis on the Mediating Role of Social Interaction

H3:Social interaction plays a mediating role between gamification marketing and brand loyalty. Social elements not only directly affect experience, but also indirectly affect loyalty through experience.

H3a:The relationship between social interaction intermediary task system and brand loyalty. Task design influences brand attitude and loyalty by promoting user interaction and collaboration.

H3b:The relationship between virtual rewards and brand loyalty in social interaction intermediaries. The social sharing triggered by reward acquisition can strengthen the connection between users and brands and attract potential users' attention.

2.2 Variable measurement

The measurement of gamification marketing dimensions refers to the scales of scholars such as Hamari(2017)[8]and Liu (2019)[9],and is modified based on the characteristics of e-commerce platforms. The measurement of brand loyalty refers to Oliver's (1999)[10]four-dimensional model.

Table 1 Variable Measurement System

Independent variable:gamification marketing	Measurement dimension	Specific measurement indicators	dependent variable:Brand loyalty	Measurement dimension	Specific measurement indicators
Task System (TS)	TS1 Task Objective Clarity	This platform provides clear task objectives	Cognitive Loyalty (CL)	CL1: Brand trustworthiness	Believe that the brand is trustworthy
	TS2: Reasonability of task difficulty	Reasonable task difficulty setting		CL2: Product Quality Confidence	Have confidence in the quality of branded products
	TS3: Task completion rhythm	Moderate pace of task completion		CL3: Brand market recognition	Recognize the market position of the brand
	TS4: Diversity of task types	Rich and diverse types of tasks			
Social Interaction (SI)	SI1: User interactivity	Can interact with other users	Emotional Loyalty (AL)	AL1: Brand favorability	Have a favorable impression of the brand
	SI2: Teaming function	Support team formation to complete tasks		AL2: Brand value concept recognition	Identify with the brand's value concept

	SI3: Ranking function	Provide real-time ranking function			
				AL3: Recommendation intention	Willing to recommend to others
	SI4: Experience Sharing	Share your shopping experience			
	AS1: Integrity of the hierarchical system	Having a complete hierarchical system		IL1: Brand products are given priority consideration	Prioritize the brand's products
Achievement System (AS)	AS2: Special identification mark	Provide special identification	Intentional Loyalty (IL)		
				IL2: Brand dynamics, willingness to follow	Willing to continuously monitor brand dynamics
	AS3: Achievement badge acquisition	Can receive achievement badges			

				IL3: Brand Continued Use Plan	Plan to continue using the brand
	AS4: Reasonable achievement acquisition	Reasonable way to obtain achievements			
	VR1: Diversity in points acquisition	There are various ways to obtain points		BL1: Platform shopping frequency	Frequently shop on this platform
Virtual Rewards (VR)	VR2: Convenience of Virtual Currency	Convenient use of virtual currency	Behavioral Loyalty (BL)	BL2: Frequency of use on other platforms	Less use of other platforms
	VR3: Reward redemption richness	Rich options for reward redemption		BL3: Brand premium payment willingness	Willing to pay brand premium Specific
	VR4: Reward value perception	Significant perception of reward value			

2.3 Data Collection

2.3.1 Questionnaire Design

The study used a 5-point Likert scale (1=strongly disagree, 5=strongly agree) to collect data. The survey content is divided into four parts: basic information (gender, age, education, income), usage habits (frequency of use, consumption amount), gamification marketing experience evaluation, and brand loyalty measurement.

2.3.2 Pre testing

In the pre testing phase, invite 5 marketing scholars to evaluate content validity and 3 e-commerce operation supervisors to provide practical advice. In addition, a small-scale pre-test was conducted with a sample size of 50 people. Optimize problem expression based on feedback results, eliminate unqualified items, and improve questionnaire design.

2.3.3 Formal research

Select e-commerce users who have participated in gamification marketing activities in the past quarter as the research subjects. Adopt stratified sampling to ensure sample coverage of various age,

occupational, and regional groups. In early May 2024, 600 questionnaires were distributed through an online platform, and 534 valid responses were obtained, with a response rate of 89%.

2.4 Data Analysis Methods

Perform descriptive statistics on the data first, analyze sample characteristics and variable distribution. Subsequently, reliability and validity tests were conducted to evaluate the quality of the questionnaire using Cronbach's alpha coefficient, exploratory and confirmatory factor analysis. SPSS 26.0 was used to process the basic data, AMOS 24.0 was used to establish a structural equation model, and Bootstrap method was used to verify the mediating effect, aiming to provide strong support for the validation of research hypotheses.

3. DATA ANALYSIS AND HYPOTHESIS TESTING

3.1 Descriptive statistical analysis

3.1.1 Sample feature analysis

Out of 600 questionnaires,66 invalid questionnaires (incomplete or irregular responses) were excluded, resulting in 534 valid responses. The sample distribution is reasonable, providing a reliable data foundation for further in-depth analysis. The specific composition is as follows:

Gender:251 males (47.0%), 283 females (53.0%);

Age:178 people aged 18-25 (33.3%), 215 people aged 26-35 (40.3%), 102 people aged 36-45 (19.1%), and 39 others (7.3%);

Education:342 people have a bachelor's degree or above (64.0%), 146 people have a college degree (27.3%), and 46 people have a high school degree or below (8.7%);

Monthly income:92 people (17.2%) below 5000 yuan, 168 people (31.5%) between 5001-8000 yuan, 182 people (34.1%) between 8001-12000 yuan, and 92 people (17.2%) above 12000 yuan.

3.1.2 Descriptive statistics of variables

The descriptive statistical results of the main research variables are as follows:

Table 2 Descriptive statistical results of variables

Variable	Sample size	Min	Max	Average value	Standard deviation	Skewness	kurtosis
Task System	534	1.25	5.00	3.86	0.735	-0.632	0.524
Social interaction	534	1.00	5.00	3.71	0.806	-0.445	0.332
Achievement system	534	1.50	5.00	3.82	0.758	-0.561	0.453
Virtual rewards	534	1.25	5.00	3.75	0.792	-0.492	0.395
Brand loyalty	534	1.33	5.00	3.73	0.768	-0.428	0.312

3.2 Reliability and validity testing

3.2.1 Reliability analysis

Use Cronbach's alpha coefficient to test the internal consistency reliability of the scale:

Table 3 Results of Scale Reliability Test

Variable	Number of questions	Cronbach's α	Composite Reliability (CR)
Task System	4	0.863	0.872
Social interaction	4	0.848	0.856
Achievement system	4	0.871	0.884
Virtual rewards	4	0.857	0.865
Brand loyalty	12	0.898	0.906

The Cronbach's alpha coefficients of all variables are greater than 0.8, and the combined reliability (CR) is greater than 0.85, indicating that the scale has good reliability.

3.2.2 Validity Analysis

Conduct validity testing from two dimensions: convergence and differentiation. Convergence validity is used to evaluate the correlation of various measurement indicators under the same latent variable. Judgment criteria: Measurement item standardization factor load>0.7; Construct Average Variance Extraction (AVE)>0.5; Combination reliability (CR)>AVE.

Table 4 Convergence validity analysis results of constructs

Latent variable	Measurement items	Measurement items	CR	AVE
Task System	TS1	0.752	0.872	0.632
	TS2	0.815		
	TS3	0.842		
	TS4	0.864		
Social interaction	SI1	0.723	0.856	0.598
	SI2	0.785		
	SI3	0.812		
	SI4	0.845		
Achievement system	AS1	0.768	0.884	0.657
	AS2	0.825		
	AS3	0.848		
	AS4	0.872		
Virtual rewards	VR1	0.738	0.865	0.615
	VR2	0.792		
	VR3	0.828		
	VR4	0.853		
Brand loyalty	BL1	0.712	0.906	0.584
	BL2	0.758		
	BL3	0.785		

	BL4	0.858

The test results show that the standardized load distribution of measurement items is in the range of 0.712-0.872; The conceptual AVE value ranges from 0.584 to 0.657; The CR value range is 0.856-0.906. All indicators meet the reference standards, indicating that the measurement model has good convergence validity.

Discriminant validity is used to evaluate the differences between different latent variables. Judgment criteria: The square root of the AVE of a construct should be higher than the correlation coefficient between the construct and other constructs.

Table 5 Correlation coefficient matrix and AVE square root between variables

Variable	1	2	3	4	5
1.Task system	0.795				
2.Social interaction	0.532**	0.773			
3 Achievement system	0.568**	0.503**	0.811		
4.Virtual rewards4.	0.547**	0.482**	0.521**	0.784	
5.Brand loyalty	0.623**	0.592**	0.605**	0.573**	0.764

Note: (1)The bold diagonal value is the square root of AVE;(2)Below the diagonal is the correlation coefficient between variables; (3)** $p<0.01$。

From Table 4, it can be seen that the square roots (diagonal values) of AVE for each construct are greater than the correlation coefficients in the same row or column. The AVE square root of the task system is 0.795, which is higher than its correlation coefficient (0.532-0.623); The AVE square root of social interaction is 0.773, which is higher than its correlation coefficient (0.482-0.592). Other constructs also meet this standard. Overall, the measurement model performs well in both convergence and discriminant validity, laying a reliable foundation for hypothesis testing.

3.3 Hypothesis testing

3.3.1 Model Fit Test

Structural equation modeling fitting indicators: $\chi^2/df=2.324<3$;RMSEA=0.048<0.08;CFI=0.956>0.9;NFI=0.935>0.9;GFI=0.924>0.9;AGFI=0.908>0.9; IFI=0.957>0.9. Indicating a good fit of the model.

3.3.2 Path analysis

Table 6 Hypothesis Test Results

Hypothesis	Route	Standardized path coefficient	T-value	P-value	Result
H1a	Task System→User Experience	0.572	9.124	***	Support
H1b	Social interaction→User experience	0.485	7.856	***	Support
H1c	Achievement System→User Experience	0.534	8.532	***	Support

H1d	Virtual Rewards→User Experience	0.503	8.124	***	Support
H2a	Functional Experience→Brand Loyalty	0.558	8.924	***	Support
H2b	Emotional Experience→Brand Loyalty	0.585	9.235	***	Support

Note:*** p<0.001.

From the path analysis results, it can be seen that the four dimensions of task system, social interaction, achievement system, and virtual rewards all show significant positive effects on user experience, which verifies hypotheses H1a, H1b, H1c, and H1d. This means that effective design and implementation of various dimensions in gamification marketing can effectively enhance user experience. For example, the task system allows users to gain a sense of achievement when completing tasks by setting reasonable task goals, difficulty, etc., thereby enhancing the experience; Social interaction plays a role by enhancing the connection and sense of belonging between users. At the same time, both functional and emotional experiences have a significant positive impact on brand loyalty, verifying hypotheses H2a and H2b, indicating that users' loyalty to the brand is greatly influenced by both the practicality of functionality and emotional resonance when using products or services.

3.3.3 Analysis of Mediating Effects

Use Bootstrap method (repeated sampling 5000 times) to test the mediating effect of social interaction.

Table 7 Results of mediation effect test

Route	Direct effect	Indirect effects	Total effect	95% confidence interval	Types of intermediary effects
Task System→Social Interaction→Brand Loyalty	0.425***	0.192***	0.617***	[0.134,0.256]	Partial mediation
Virtual rewards→Social interaction→Brand loyalty	0.386***	0.173***	0.559***	[0.115,0.235]	Partial mediation

Note:*** p<0.001.

According to Table 7, social interaction partially mediates the relationship between task systems and brand loyalty, as well as between virtual rewards and brand loyalty, which confirms hypotheses H3a and H3b. This indicates that the task system can not only directly affect brand loyalty, but also indirectly affect it through the intermediate variable of social interaction. For example, the task system encourages users to engage in more social interactions during the task completion process, which in turn affects brand loyalty. The same goes for virtual rewards, where users share their achievements on social media platforms after receiving rewards, enhancing their connection with the brand and increasing brand loyalty. This result highlights the important bridging role of social

interaction in the impact of gamification marketing on brand loyalty.

3.4 Multi group analysis

In order to investigate the impact of different demographic characteristics on the research model, this study conducted a multi group analysis, mainly examining the moderating effects of three demographic characteristics: gender, age, and education level.

3.4.1 The moderating effect of gender

Firstly, test the measurement equivalence of the model between the male and female groups. According to Table 8, the chi square difference test results were not significant ($\Delta \chi^2$=18.24, Δ df=15, p>0.05), indicating that the measurement model has equivalence between gender groups.

Table 8 Results of Measurement Equivalence Test for Gender Groups

Model	χ^2	df	$\Delta\chi^2$	Δdf	CFI	RMSEA
Configuration invariant model	856.24	428	-	-	0.952	0.048
Metric invariant model	874.48	443	18.24	15	0.951	0.047
Structure invariant model	882.35	458	26.11	30	0.950	0.047

Table 9 Comparison of Path Coefficients for Gender Groups

Route	Male (n=251)	Female (n=283)	Significant difference
Task System → User Experience	0.568***	0.575***	NS
Social interaction → User experience	0.482***	0.489***	NS
Achievement System → User Experience	0.528***	0.539***	NS
Virtual Rewards → User Experience	0.498***	0.508***	NS

Note:*** p<0.001；NS indicates no significant difference.

This study examined the measurement equivalence of the model between male and female groups and found that the chi square difference test results were not significant ($\Delta \chi^2$=18.24, Δ df=15, p>0.05), indicating that the measurement model has equivalence between gender groups. Further comparing the path coefficients, it was found that there were no significant differences in the path coefficients from task system, social interaction, achievement system, virtual rewards to user experience between male and female groups, indicating that gender has no significant impact on these paths.

3.4.2 Age moderation effect

Comparing path coefficients for different age groups:

Table 10 Comparison of Path Coefficients for Age Groups

Route	18-25 years old (n=178)	26-35years old(n=215)	36-45years old(n=102)	Significant difference
Task System→User Experience	0.562***	0.578***	0.569***	NS
Social interaction→User experience	0.465***	0.586***	0.472***	*

Achievement System→User Experience	0.525***	0.542***	0.532***	NS
Virtual Rewards→User Experience	0.495***	0.512***	0.503***	NS

Note:*** p<0.001；* p<0.05；NS indicates no significant difference.

The study found that the coefficient (β=0.586) of the 26-35 age group on the social interaction → user experience path is significantly higher than other age groups, indicating that users in this age group value social interaction features in gamification marketing more.

3.4.3 The moderating effect of educational attainment

Table 11 Comparison of Path Coefficients for Education Level Groups

Route	High school and below (n=46)	Junior college (n=146)	Bachelor's degree or above (n=342)	Significant difference
Task System→User Experience	0.558***	0.565***	0.572***	NS
Social interaction→User experience	0.475***	0.482***	0.488***	NS
Functional Experience→Brand Loyalty	0.532***	0.545***	0.612***	*
Virtual Rewards→User Experience	0.492***	0.501***	0.508***	NS

Note:*** p<0.001；* p<0.05；NS indicates no significant difference.

From the comparison of path coefficients among education level groups, there is no significant difference in the path coefficients from task system, social interaction, virtual rewards to user experience among high school and below, college, undergraduate and above groups. However, on the path from functional experience to brand loyalty, the coefficient (0.612) of undergraduate and above groups is significantly higher than that of high school and below and college groups, indicating that education level has a moderating effect on this path.

3.5 Robustness test

Validate the robustness of the results through three dimensions: firstly, test the model using different estimation methods; Secondly, demographic characteristics such as gender, age, and education level were included as control variables for testing, and the results are compared as shown in Table 12.

Table 12 Comparison of Results

Route	Robustness test of estimation method			Control variable test	
	ML estimation	GLS estimation	Coefficient difference	Original model	Add control variables
Task System → User Experience	0.572***	0.558***	2.45%	0.572***	No
Social interaction → User	0.485***	0.472***	2.68%	0.485***	No

experience					
Achievement System → User Experience	0.534***	0.525***	1.69%	0.534***	No
Virtual Rewards → User Experience	0.503***	0.492***	2.19%	0.503***	No

Note:*** p<0.001.

The difference in path coefficients obtained by the two estimation methods is less than 10%, indicating that the research results have good robustness, and there is no significant change after controlling for demographic characteristics such as gender, age, and education level.

In addition,the study further used instrumental variable method to test the endogeneity of the model.Select users' Internet use duration and e-commerce platform use experience as tool variables, and conduct Hausman test to find that χ^2=15.68, p=0.186>0.1； The over identification test found that the Sargan statistic was 8.24, p=0.238>0.1。It can be seen that the test results indicate that there is no serious endogeneity problem, and the research results have good reliability.

4 RESEARCH CONCLUSIONS AND IMPLICATIONS

4.1 Main research conclusions

This study constructs a theoretical model of "gamification marketing user experience brand loyalty" to explore in depth the impact mechanism of gamification marketing on brand loyalty on e-commerce platforms. The main conclusions drawn from the study are as follows:

4.1.1 gamification marketing has a significant positive impact on user experience

The four dimensions of gamification marketing (task system, social interaction, achievement system, and virtual rewards) all have a significant positive impact on user experience. The impact of the task system is most significant, followed by the achievement system. This indicates that well-designed task objectives and a complete achievement system can effectively enhance user experience. Meanwhile, virtual rewards and social interactions also play an important role in improving user experience.

4.1.2 The significant impact of user experience on brand loyalty

Both functional and emotional experiences have a significant positive impact on brand loyalty. Especially the impact of emotional experience is more prominent, indicating that in the process of establishing brand loyalty, users' emotional identification and resonance are more important than simply satisfying functions.

4.1.3 Social interaction has a significant mediating effect

Social interaction partially mediates the relationship between task systems and brand loyalty (indirect effect=0.192), as well as between virtual rewards and brand loyalty (indirect effect=0.173). This indicates that gamification marketing can not only directly affect brand loyalty, but also indirectly enhance brand loyalty by promoting social interaction among users.

4.1.4 Significant differences in the moderating effect of demographic characteristics

The differences in each pathway between male and female groups were not significant, indicating that the impact mechanism of gamification marketing on users of different genders is similar. The 26-35 age group shows the most prominent impact of social interaction on user experience, indicating that users in this age group pay more attention to social interaction characteristics. In terms of the moderating effect of education level, users with a bachelor's degree or above have a higher coefficient on the impact path of functional experience on brand loyalty, indicating that higher educated users value the functional features of products or services more.

4.2 Research Implications

The results of this study have provided many key insights for the gamification marketing practices of e-commerce platforms. Firstly, the design of the task system should not be underestimated. E-commerce platforms need to carefully create a clear and scientifically reasonable task structure, ensuring that tasks have appropriate difficulty levels and suitable completion progress, in order to enhance users' experience on the platform. Secondly, social interaction holds significant importance. The platform should actively build diverse and rich social interaction models, especially focusing on the social demands of the user group aged 26 to 35, and relying on strengthening social interaction to increase users' dependence on the platform. Furthermore, differentiation strategies are essential. For user groups with different educational levels, platforms should develop differentiated marketing strategies to provide high-quality services that focus more on functional features for highly educated users. Then, in the planning of gamification marketing, more emotional elements should also be incorporated to enhance user loyalty to the brand by establishing emotional bonds. Finally, the achievement system urgently needs to be improved. We need to establish a comprehensive level system and achievement recognition mechanism to visually present users' growth process, enhance their enthusiasm for participation and sense of achievement.

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