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# How Gamification Features Drive Brand Loyalty: The Mediating Roles of Consumer Experience and Brand Engagement

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**Abstract:** In the digital age, gamification has emerged as a paramount strategy for strengthening brand–consumer interaction. Despite the fact that existing studies have extensively probed further into its effects on brand communication and sales performance, rare investigations have been reported to throw light upon how gamification features influence consumer experience, brand engagement, and brand loyalty, as well as the potential mediating mechanisms involved. For this reason, this research delved into these correlations by employing structural equation modeling (SEM) grounded in 461 valid responses from consumers familiar with a co-branded gamification campaign between a tea beverage brand and a gaming IP. The results illustrated that immersion, achievement, and social interaction dramatically reinforced consumer experience, which led to brand engagement and, in turn, strengthened brand loyalty. Furthermore, consumer experience and brand engagement both mediated gamification feature effects on brand loyalty. By constructing and validating a generalized model, the current study not only practically expands the gamification literature but also empirically illuminates mechanisms through which gamification features contribute to loyalty formation in co-branded settings.

**Keywords:** gamification; consumer experience; brand engagement; brand loyalty; brand–gaming IP collaboration

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## 1. Introduction

Over the last couple of years, gamification has stood out as an effective innovative strategy in brand marketing, which unexceptionally centers around the incorporation of game elements into non-game contexts to engage consumers and reinforce brand interactivity. This phenomenon originates from the speedy advancement of digital technologies, the popularization of social networks, and ubiquitous mobile internet use, which collectively provide enough room and technical climate for gamification mechanisms [1,2]. As evidenced by relevant studies, gamified marketing can substantially boost consumer brand loyalty and purchase intention, particularly among digital natives such as Millennials and Generation Z, whose preference for dynamic and personalized experiences offers a robust market impetus for gamified marketing [3,4].

Gamification strategies can be applied in a diverse spectrum of practical ways. In general, conventional approaches often involve creating brand-related gamified apps or cleverly integrating brand product details into existing games [5]. Brands can boost consumer engagement by designing apps with features like point systems, task-based challenges, or virtual rewards, which is exceedingly advantageous for indirect but effective brand value communication [6]. Another popular approach involves embedding ads

in popular games or providing virtual brand-related items, which elevates awareness, consolidates recognition, and creates an endearing association with consumers [7]. More recently, brand partnerships with game IPs have emerged as a new marketing approach that works as consumers have demanded more immersive and interactive experiences. In comparison with the old product placement practice, this approach demonstrates a more conspicuous correlation with top-tier game IPs. On that account, brands gain access to such games' sizeable base of consumers, reach more consumers, and can further their brand's fun and personalized status via co-branded events or products [8]. The success of gamification activities hinges significantly on finding a balance between emotional entertainment and functional value. On an emotional level, immersive experiences can tap into consumers' inner motivations, which is advantageous for building a stronger emotional bond between the brand and its audience [9]. From a functional viewpoint, elements like leaderboards, achievement systems, and social features address consumers' desires for competence and connection, rendering it less challenging for brands to stand out in a crowded market [5].

In addition, gamification has been discovered to foster a sense of belongingness through consumer-generated content and interactive engagement, cementing brand loyalty [10,11]. In this respect, cross-industry collaborations among game intellectual properties (IPs) and brands have proved to be a viable strategy in gamified marketing. Game IPs, especially ones with anime-flavored elements, use unique visual identities, audio, and engaging storytelling to attract consumers' attention and maximize exposure to multimedia and social sharing content [12]. This trend is particularly dramatic in China's fast-moving consumer goods market. Under such circumstances, new tea beverage brands have augmented their visibility and consumer participation by creating custom products and interactive campaigns in collaboration with popular game IPs [13]. Through the integration of gamified elements with cross-industry partnerships, brands not only satisfy consumers' desire for entertainment and interaction but also gain a distinctive advantage in a competitive market [14].

This research examined consumer experience and brand engagement as mediating factors of the brand loyalty building process. Afterward, this study put forward an integrated model that incorporated gamification features, consumer experience, brand engagement, and loyalty, which was primarily intended to offer an all-round analysis of the complex associations among the variables. On top of that, this study probed into the practicability of innovative brand gamification marketing in China's new fast-moving consumer goods market, taking the tea beverage market as an instance, and demonstrated significant implications for other markets. The study initially selected Heytea, a leading brand in China's new-style tea beverage market, as the research object and subsequently investigated its experiences and influences of gamified marketing. As a market base of more than 100 million members, Heytea suggests dominant market power and innovation capability, setting the standard for gamified marketing through innovative cross-industry integration.

## 2. Literature Review

With an aim to construct a theoretical framework explaining brand collaborations with game IPs, this study integrated self-determination theory (SDT), social identity theory (SIT), and experiential value theory (EVT). The framework encompassed four core variables: gamification features (immersion, achievement, and social interaction), consumer experience, brand engagement, and brand loyalty, explaining brand gamification mechanisms through psychological motivation (SDT), social belonging (SIT), and experiential value (EVT).

SDT elaborates upon how gamified environments fulfill psychological needs (competence, autonomy, and relatedness) to stimulate intrinsic motivation [5,15]. SIT complements this by underscoring how social interaction strengthens group identity and brand community loyalty [11]. EVT principally revolves around consumers' hedonic/utilitarian value assessments in experiential contexts [16].

In particular, these theories intersect at pivotal points. SDT and SIT converge on the need for social relatedness, where belonging fosters intrinsic motivation [17]. EVT extends this by linking competence/autonomy fulfillment to experiential value [18], which can substantially augment the psychological-to-behavioral pathway.

As empirically demonstrated, not only does experiential value mediate gamification features and brand loyalty [19], but also immersive brand interactions heighten loyalty intentions [20]. This comprehensive viewpoint offers a multi-dimensional basis for modeling brand gamification's psychological, social, and experiential mechanisms.

### *2.1. Gamification Features and Consumer Experience*

Deterding et al. [21] have demonstrated gamification as applying game design within contexts outside of games to push ahead consumer motivation and engagement. This definition clearly identifies gamification's fundamental mechanisms and primary goals, thereby laying a robust theoretical foundation for conceptualization. Huotari and Hamari [22] further refined this definition by underlining that gamification maximizes service experiences through motivational mechanisms to heighten consumer value. Gamification usually involves three principal traits, namely, immersion, achievement, and social interaction.

#### 2.1.1. Immersion

The role of immersion in gamification primarily resides in reinforcing emotional consumption and deepening the satisfaction derived from the experience [23]. As consumers become thoroughly engrossed in virtual environments, their concentration heightens, and interactivity grows more prominent, enabling them to more vividly discern the depth and allure of the brand experience [2,24]. This heightened cognitive and sensory engagement encourages exploratory behaviors while simultaneously evoking emotional responses, especially when the experience is enriched through narrative elements and task-based progression [25–27]. Such emotional arousal and curiosity-driven interaction not only deepen satisfaction but also are advantageous for encoding brand information into long-term memory, thereby reinforcing emotional bonds with the brand [28,29]. By fulfilling both exploratory and affective needs, immersion augments consumers' awareness of brand value and strengthens their experiential connection, ultimately improving the depth and quality of brand interaction [28]. This gives rise to the following hypothesis:

**H1.** *Immersion-related features have a conspicuous and positive effect on consumer experience.*

#### 2.1.2. Achievement

Achievement-related gamification features such as scoring, badges, and leaderboards can provide consumers with clear objectives, rewards, and immediate feedback, which ultimately satisfy their intrinsic desires for autonomy and competence [30]. As consumers complete progressively challenging tasks, these mechanisms foster a growing sense of efficacy and control, reinforcing feelings of progress, self-worth, and personal achievement [2,31]. In brand gamification practices, achievement systems motivate participation through time-bound tasks, virtual rewards, and narrative-driven challenges [30]. The effectiveness of achievement systems immensely rests with the relevance of tasks, the immediacy of feedback, and the appeal of rewards [32]. Clever recommendation algorithms that adjust the task difficulty grounded in consumer performance are instrumental in triggering a

satisfying "flow state", intensifying enjoyment and sustained participation [33]. Furthermore, visual aids such as progress bars, animated feedback, and exclusive digital rewards (e.g., limited-time skins) continuously reinforce perceived achievement and contribute to immersive experiences [34].

As time progresses, achievement systems foster sustained engagement through the integration of staggered goals and incremental progress, exemplified by visual growth trajectories and social rankings [35]. These elements jointly strengthen achievement-related motivation and emotional connection, ultimately rendering this design a paramount booster of consumer experience [36]. The following hypothesis is put forward on the basis of this reasoning:

**H2.** *Achievement-related feature has a striking and positive effect on consumer experience.*

#### 2.1.3. Social

Social features can substantially augment consumer engagement in brand gamification by enabling interactive participation and cultivating a sense of community [37]. Consumers are encouraged to engage with brand content and each other through mechanisms such as team-based tasks, virtual gift exchanges, and community competitions [38]. These shared social experiences accelerate group dynamics that strengthen emotional connection, foster a sense of shared identity, and deepen psychological belonging within the brand environment [39,40]. Designs like public leaderboards and collaborative achievement systems further reinforce this process by creating visible milestones of group success and encouraging peer recognition [40,41]. The emotional resonance not only elevates consumer satisfaction but also augments the brand engagement's depth and quality [2,42]. Moreover, well-crafted social gamification features furnish essential underpinning for building loyalty through enriched consumer experience by systematically transforming social interaction into emotional affiliation and brand attachment [17,42]. For this reason, the study proposes the following hypothesis:

**H3.** *Social-related features have a noticeable and positive effect on consumer experience.*

### *2.2. Consumer Experience and Brand Engagement*

As a core element of brand building, consumer experience directly determines consumers' willingness and depth of participation [43]. In accordance with recent research associated with experiential value theory, high-quality consumer experiences are characterized by two primary dimensions: hedonic and novelty [44]. In detail, the hedonic dimension evokes emotional pleasure and immersion, while the novelty dimension stimulates curiosity and cognitive exploration [44,45]. To conclude, they elevate consumer satisfaction, memory, and loyalty [46,47]. From a real-world viewpoint, consumer experience meets basic functional needs through convenient gamified interaction mechanisms; heightens emotional identification through engaging brand stories; and establishes connections, as well as a sense of belonging among consumers through the social attributes of game IPs [48]. In a digital marketing environment, the integration of these dimensions not only affects consumers' immediate satisfaction but also determines their long-term willingness to engage with the brand [49]. More importantly, delivering differentiated consumer experiences has become a pivotal driver of brand advantage in today's competitive landscape [50].

Emotionally, brands can foster positive affect and active participation by designing immersive, interactive content that aligns with consumer values [28]. In brand collaborations with game IPs, consumers gain a sense of achievement through task completion and form emotional bonds with game characters and narratives. As relevant studies demonstrate, these emotional responses establish robust brand attachment [51], which can foster enduring loyalty through affective accumulation [52].

Cognitively, personalization strategies and intelligent recommendation systems augment relevance and responsiveness, further encouraging consumer participation [53]. It is tremendously noteworthy that relevant studies have uncovered a synergistic association between cognitive and emotional experiences. To be more specific, emotional engagement motivates exploration of brand content, while cognitive understanding reinforces emotional involvement [54]. For instance, learning a brand's story via game IPs may inspire emotionally driven participation and social sharing. Such multi-dimensional integration deepens consumer–brand interaction and ameliorates brand engagement [55]. As a consequence, a theoretical hypothesis is put forth below:

**H4.** *Consumer experience has a noticeable and positive effect on brand engagement.*

### *2.3. Brand Engagement and Brand Loyalty*

In some sense, brand engagement functions as one of the most influential drivers of brand loyalty formation as it evokes consumers' intrinsic motivation and behavioral commitment to the brand [56]. In detail, engagement is a multidimensional mechanism within gamified environments that operates across affective, cognitive, and social dimensions [57]. From an emotional viewpoint, immersive narratives and personalized interactive features strengthen emotional resonance and connection. From a cognitive standpoint, achievement systems reinforce brand values through clear goals and real-time feedback. From a social perspective, features like leaderboards and community tasks build a sense of shared identity and collective belonging [2,56–59]. These three pathways operate in tandem, mutually reinforcing one another to deepen interaction, reinforce perceived brand value, and sustain consumer involvement over time. Rather than functioning in isolation, they collectively create a dynamic engagement cycle that converts positive brand encounters into consistent loyalty-driven behavior [60–62]. This underscores the central role of brand engagement in gamified design and its integrative function in reinforcing consumer–brand correlations through ongoing, meaningful participation. Accordingly, this study comes up with the following hypothesis:

**H5.** *Brand engagement has a substantial and positive effect on brand loyalty.*

### *2.4. The Mediating Role of Consumer Experience in the Association Between Gamification Features and Brand Loyalty*

Gamification features (immersion, achievement, and social) indirectly shape brand loyalty through their influence on consumer experience, which serves as a paramount transformational mechanism [2,10]. This experience-oriented pathway translates interactive stimulation into emotional, cognitive, and relational engagement, which consequently strengthens consumers' evaluative and behavioral responses to the brand.

It is crucial to note that immersive features tremendously facilitate this process by intensifying the psychological depth of engagement. Furthermore, consumers develop heightened attentiveness and an expanded sensory association with brand elements when they are adequately drawn into a gamified environment [9]. Rather than just strengthening focus, these stimuli support the formation of memorable brand-linked impressions and encourage continued affective reinforcement throughout the experience [63]. Such experi-

ential immersion, particularly when facilitated through storytelling and responsive design, deepens brand-related affect and fosters loyalty through emotional continuity [7,30].

With regard to achievement features, consumer experience is elevated through well-organized progression and individualized feedback loops, which noticeably heighten consumers' sense of capability and relevance [30]. Rather than serving as transient motivators, tiered reward systems and periodic challenges build long-term attachment by evoking satisfaction bound up with personal growth and success [64]. This evolving sense of accomplishment enables consumers to internalize brand value as part of their experiential trajectory, ultimately bringing about loyalty reinforcement [65].

Social-related features activate the experiential route by embedding consumers within interactive networks and shared goals. Rather than fostering nothing more than interaction, social structures such as team dynamics, recognition systems, and digital gift exchanges cultivate relational identity and mutual validation [42]. By means of cooperative accomplishments and reciprocal involvement, consumers not only develop an emotional bond with the brand but also perceive themselves as part of a broader brand-affiliated community [66]. These community-based experiences provide the emotional context and continuity that anchor loyalty behaviors in social identity and shared meaning [67]. Grounded in the above analyses, this study puts forth the following hypotheses:

**H6a.** *Consumer experience mediates the association between immersion features and brand loyalty.*

**H6b.** *Consumer experience mediates the correlation between achievement features and brand loyalty.*

**H6c.** *Consumer experience mediates the link between social features and brand loyalty.*

### *2.5. The Mediating Role of Brand Engagement in the Connection Between Gamification Features and Brand Loyalty*

In common cases, brand engagement functions as a pivotal behavioral conduit that links gamification features to the development of brand loyalty [2,10]. This intermediary role manifests in how consumers' interactive responses to gamified elements evolve into habitual engagement, which fosters sustained behavioral alignment with the brand [2,68].

Immersion features strengthen consumer engagement by encouraging prolonged interaction through rich sensory input and adaptive narrative elements [69]. This type of interactive continuity facilitates a more substantial personal alignment with brand messaging, which may gradually shape consistent brand preference and durable loyalty inclinations [70]. In immersive experiences featuring exploratory missions or dynamic content, consumers often develop engagement tendencies embedded in their brand-related behaviors [71]. On that account, achievement features are beneficial for the cultivation of a persistent engagement rhythm by offering structured progression and responsive incentives. Point systems, tiered rewards, and challenge structures function as behavioral catalysts, which is advantageous for the augmentation of consumer task involvement and brand relevance [72]. Recurrent engagement with these elements reinforces familiarity and perceived value, eventually triggering incremental loyalty behaviors as time passes [32]. Social features accelerate brand engagement by stimulating peer interaction. Activities such as consumer-generated content, joint participation in in-game tasks, and recognition systems facilitate horizontal interaction and personal endorsement of brand narratives [2]. What deserves mentioning is that these participatory behaviors not only strengthen relational connectivity but also deepen the brand's perceived relevance in consumers' social circles [73]. Under such circumstances, social bonding and mutual value reinforcement emerge through interaction, forming a behavioral foundation for loyalty development [74]. The iterative nature of these engagements supports long-term consumer–brand engage-

ment within shared digital spaces [75]. Rooted in the aforementioned discussion, this study comes up with the following hypotheses:

**H7a.** *Brand engagement mediates the association between gamification immersion features and brand loyalty.*

**H7b.** *Brand engagement mediates the connection between gamification achievement features and brand loyalty.*

**H7c.** *Brand engagement mediates the link between gamification social features and brand loyalty.*

### *2.6. The Mediating Role of Brand Engagement in the Connection Between Consumer Experience and Brand Loyalty*

As already suggested by associated studies, consumer experience exerts indirect influence on brand loyalty through brand engagement, which is a critical mechanism that translates emotional and cognitive responses into sustained behavioral alignment with the brand [2,10]. This is also clarified further in the unified framework suggested by Li et al. [13], which elaborates on this process through a three-stage model, where initial brand perceptions are internalized, transformed into interactive behaviors, and eventually consolidated into lasting consumer–brand associations. This framework clarifies the path by which experiential value fosters loyalty over time.

Recent studies further highlight the behavioral dimension of engagement, underlining its function as a cumulative process shaped by contextual and experiential triggers [76]. Rather than merely acting as an outcome of experience, brand engagement constitutes a dynamic, ongoing interaction loop that deepens both affective and behavioral commitment [77,78]. In digital contexts, three engagement drivers conduct a particularly salient role, encompassing instant feedback mechanisms that sustain consumer attention, cross-platform integration that lowers participation barriers, and customized content delivery that heightens personal relevance [54]. These mechanisms collectively provide a structured pathway for reinforcing consumer involvement.

When scaffolded through multiple interaction points, consumer experience progressively heightens brand familiarity and emotional resonance [34]. In mobile-prioritized environments, the flexibility of digital media allows consumers to engage in varied modes, such as content co-creation, gamified tasks, and social sharing, that extend and intensify brand contact [9]. With the passage of time, these consistent participatory behaviors result in habit formation, which drives stable loyalty patterns that resist disruption [76]. This enduring effect is rooted in the alignment between interactive brand mechanisms and consumers' intrinsic needs for autonomy, identity expression, and social connection, traits that transcend cultural and contextual boundaries [79]. Such universality makes engagement-driven strategies particularly effective for brands striving for global relevance and scalability [71]. For this reason, the following hypothesis is established accordingly:

**H8.** *Brand engagement mediates the association between consumer experience and brand loyalty.*

Figure 1 illustrates the research framework of the study along with the proposed hypotheses.

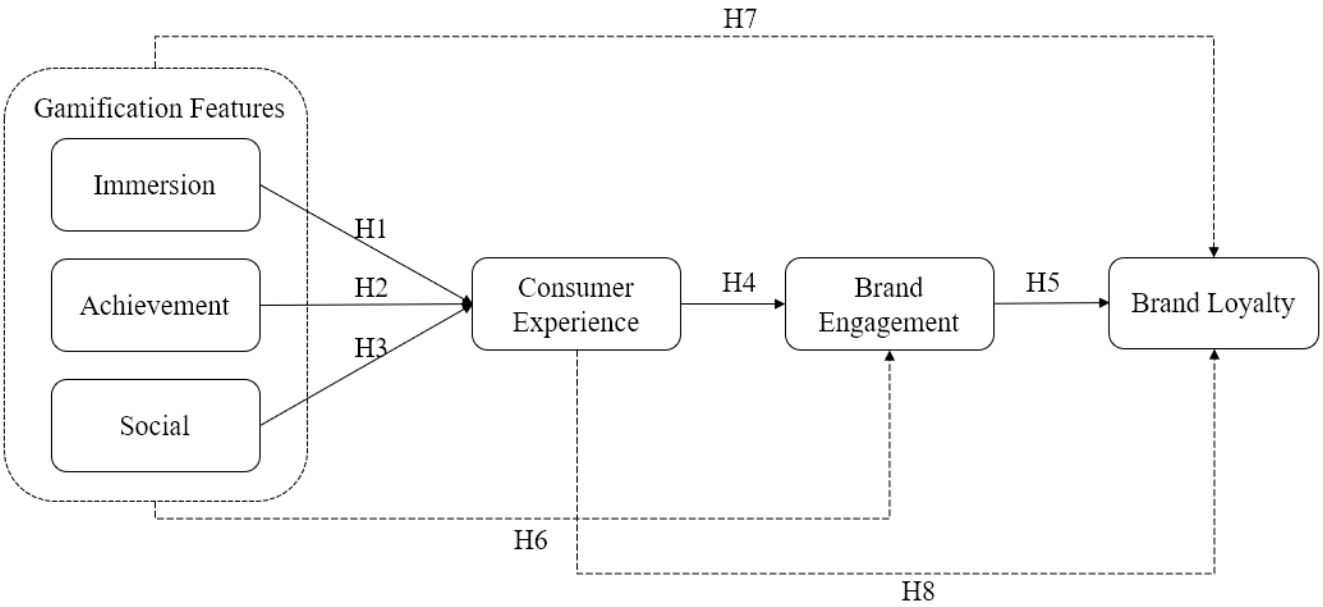


**Figure 1.** The research framework and hypotheses.

## 3. Methodology

This study principally revolved around Heytea as the primary research subject. By analyzing its joint marketing campaign with the game IP "Genshin Impact", it explored how brand cross-industry gamification collaborations shaped brand loyalty by influencing consumer experience and brand engagement. Throughout the above investigation, Heytea was chosen as the research subject for the following reasons. Above all, Heytea stood out as a new Chinese tea beverage market leader and strongly appealed to young consumers. Additionally, renowned as an industry pioneer, Heytea had accumulated a broad consumer base through innovative gamification marketing strategies and diverse brand activities. To be more specific, this was reflected in the fact that Heytea's Weibo followers had surpassed 1.4 million, and brand-related topics had attracted over 485,000 active consumers to participate in discussions. In this collaboration, Heytea Genshin Impact launched co-branded beverages, limited-edition merchandise, and themed interactive events. The application of game elements was apparently mirrored in the visual experience of the store activity design, task-based rewards, fan-centered social engagement, and the brand experience. The campaign successfully stimulated user-generated participation by leveraging social media platforms and created emotionally resonant, gamified consumption experiences, augmenting brand identification and loyalty. In this regard, a high level of engagement and intense social interaction tendency rendered it an ideal case for delving into the effects of gamified brand marketing.

This section describes the systematic measurement framework developed by the study to comprehensively assess the effectiveness of gamification marketing. It predominantly covered four aspects: gamification features (immersion, achievement, and social), consumer experience, brand engagement, and brand loyalty. To be specific, the assessment of gamification features was divided into three core dimensions. The immersion feature evaluated the immersive atmosphere created by the brand activity, the appeal of theme decorations, and the strengthening of character relevance [80]. The achievement feature was primarily measured through the desire for limited-edition products, the sense of achievement from task completion, and progress tracking [4]. In comparison, the social interaction feature delved into the frequency and depth of consumer participation in community discussions, experience sharing, and interactive behaviors [65]. Consumer experience was assessed by referring to hedonic value and novelty [76]. Specifically, hedonic value

mirrored consumers' sensory enjoyment and emotional pleasure, while novelty captured their perception of newness and motivation to explore during brand interactions [81,82]. These dimensions systematically explored how activities affected consumers' emotional responses and memory value. Brand engagement measurement included three dimensions: emotional, cognitive, and social interaction [56]. The emotional dimension predominantly centered on brand enthusiasm and affection. The cognitive dimension evaluated interest in information and proactive information-seeking behavior. By contrast, the social interaction dimension measured willingness to discuss and community participation. Brand loyalty was thoroughly mirrored through repeat purchase intention, price tolerance, and word-of-mouth communication [83].

This study used an online questionnaire survey to obtain valid and reliable research data. This unique approach not only safeguarded the privacy of respondents but also offered remarkable advantages with regard to efficiency and cost-effectiveness. The research adhered strictly to statistical principles, aiming to gather a minimum of 450 valid questionnaires within a 95% confidence level and a 5% margin of error. The measurement design used a 7-point Likert scale to assess the research variables. The scoring range spanned from "strongly disagree" to "strongly agree" or from "rarely use" to "frequently use", thereby empowering multi-dimensional capture of respondents' attitudes and behaviors. The full questionnaire used for this survey is provided in Appendix A. In an effort to ensure data quality, the study implemented a series of control measures. In detail, screening questions were included to assess respondents' familiarity with the brand and activity. Attention check questions were added to exclude low-quality responses. The study strictly adhered to privacy protection principles and explained the research purpose to ensure informed consent from respondents. The data analysis plan employed AMOS software (version 26) to conduct structural equation modeling (SEM) analysis, which principally encompassed model fit assessment, path coefficient testing, and mediation effect analysis to ensure the scientific validity and reliability of the research conclusions.

## 4. Data Analysis and Findings

### *4.1. Sample Descriptive Statistics*

This study collected 461 valid questionnaires. The sample characteristics are outlined as follows. With reference to demographic features, the sex distribution demonstrated a comparatively favorable balance, with 53.4% male and 46.6% female. The age distribution was primarily concentrated between 21 and 40 years old, with 34.9% aged 21–30 and 31.7% aged 31–40, mirroring the characteristics of a young consumer group. The education level was predominantly vocational or technical qualifications or associate degrees (43.0%) and bachelor's degree (25.2%), which apparently suggested a relatively high level of education. Monthly income primarily ranged between CNY 4000 and 6000 (35.1%), revealing a middle-income level. With respect to game participation characteristics, 67.2% of respondents played games for 1–5 h daily. The majority of participants had 1–5 years of gaming experience (31.5% with 1–3 years and 28.9% with 3–5 years). The above findings illustrate that the sample group had a high familiarity with and potential for participating in gamified activities. The sample characteristics and data quality control measures laid a robust cornerstone for the comprehensive evaluation of the study. Specific information on the demographics is provided in Table 1.

**Table 1.** Demographic information of respondents.

| | N | % | | N | % |
|---|---|---|---|---|---|
| Sex | | | Game Time/Day | | |
| Male | 246 | 53.4% | Less than 1 h | 109 | 23.6% |
| Female | 215 | 46.6% | 1–5 h | 310 | 67.2% |
| | | | 5–10 h | 31 | 6.7% |
| Age | | | 10 h and above | 11 | 2.4% |
| 20 and below | 84 | 18.2% | | | |
| 21–30 | 161 | 34.9% | | | |
| 21–40 | 146 | 31.7% | | | |
| 41–50 | 50 | 10.8% | | | |
| 50 and above | 20 | 4.3% | Game Experience/Years | | |
| | | | Less than 1 year | 76 | 16.5% |
| Education | | | 1–3 years | 145 | 31.5% |
| High school graduate or lower | 101 | 21.9% | 3–5 years | 133 | 28.9% |
| Vocational/Technical qualification or Associate degree | 198 | 43.0% | 5 years and above | 107 | 23.2% |
| Bachelor's degree | 116 | 25.2% | | | |
| Master's degree and above | 46 | 10.0% | | | |
| Income | | | Game Familiarity Level | | |
| Below 2000 | 84 | 18.2% | Slightly familiar | 5 | 1.1% |
| 2000–4000 | 69 | 15.0% | Moderately familiar | 59 | 12.8% |
| 4000–6000 | 162 | 35.1% | Familiar | 87 | 18.9% |
| 6000–8000 | 84 | 18.2% | Very familiar | 146 | 31.7% |
| 8000 and above | 62 | 13.4% | Extremely familiar | 164 | 35.6% |

### *4.2. Reliability and Validity Analysis*

Reliability was tested by Cronbach's $\alpha$ coefficient in the research, which was a typical way of internal consistency measurement [84]. Cronbach's $\alpha$ coefficient varied between 0 and 1; the more significant the values, the more conspicuous the reliability [85]. It is universally acknowledged in the academic community that $\alpha > 0.9$ is excellent reliability, $0.8 < \alpha \leq 0.9$ is desirable, $0.7 < \alpha \leq 0.8$ is satisfactory, $0.6 < \alpha \leq 0.7$ is questionable, $0.5 < \alpha \leq 0.6$ is poor, and $\alpha \leq 0.5$ is unsatisfactory. The research findings with regard to the reliability analysis are presented in Table 2. Cronbach's $\alpha$ for all the variables exceeded 0.9, demonstrating high internal consistency [84,86]. This indicated that the measurement instruments used in the research were consistent and reliable. In this regard, they provided a desirable database for the following validity analysis and hypothesis testing.

**Table 2.** Reliability test.

| Variables | Cronbach's Alpha | N of Items |
|---|---|---|
| Immersion | 0.930 | 4 |
| Achievement | 0.938 | 4 |
| Social | 0.941 | 4 |
| Consumer experience | 0.973 | 10 |
| Brand engagement | 0.955 | 15 |
| Brand loyalty | 0.944 | 4 |

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were adopted to explore the scales for validity, providing reasonableness and applicability of the measures [87]. Owing to the fact that the scales used in this research were multi-dimensional, EFA decreased data and derived latent factors [88]. Before that, the Kaiser–Meyer–Olkin (KMO) test of sampling adequacy and Bartlett's test of sphericity were conducted to test

data adequacy [89]. The aforementioned findings showed a KMO of 0.955, well above the 0.9 cutoff, and Bartlett's test provided an approximate chi-square value of 17,341.318, $p < 0.001$, which validated the data adequacy for factor analysis [90]. As illustrated by principal component analysis, the first six factors explained the cumulative total variance as 74.751%, and the factor loading matrix following rotation showed that most of the measurement items had loadings greater than 0.4, suggesting rational dimensional structure, complete information retention, stability, and statistical significance of the factor structure.

With an aim to perform CFA and examine the fit of the theoretical model to the observed data, this research used multiple fit indices to evaluate model adequacy [91]. The analysis results were CMIN/DF = 1.605 (within the favorable range of 1–3); RMSEA = 0.026 (less than 0.05); and IFI, TLI, and CFI all > 0.9, suggesting excellent model fit [92]. Subsequent to the steps, the research also tested convergent validity (AVE) and composite reliability (CR), and the results are displayed in Table 3. All of the constructs had AVE above 0.5 and CR above 0.7, suggesting satisfactory convergent validity and internal reliability of the measurement model. Notably, the AVE for brand loyalty was the highest (0.809), which illustrated that the measurement items successfully tapped into the attributes of brand loyalty. AVE scores of immersions, achievement, and social constructs exceeded 0.75, and CR scores approached 0.93, illustrating remarkable measurement stability. Brand engagement also revealed a high CR score (0.954) but a lower AVE score (0.596), which was potentially attributable to the more significant number of measurement items (15), ultimately giving rise to complexity, albeit within an acceptable limit. Apart from that, according to the Fornell–Larcker criterion, the square root of the AVE of every construct was higher than its correlation with other constructs, demonstrating satisfactory discriminant validity in this research [93]. The details can be seen in Table 4.

**Table 3.** Convergent validity and composite reliability test for each dimension.

| Variables | Items | AVE | CR | Result |
|---|---|---|---|---|
| Immersion | 4 | 0.770 | 0.930 | Excellent |
| Achievement | 4 | 0.789 | 0.937 | Excellent |
| Social | 4 | 0.803 | 0.942 | Excellent |
| Consumer experience | 10 | 0.784 | 0.973 | Excellent |
| Brand engagement | 15 | 0.596 | 0.957 | Acceptable |
| Brand loyalty | 4 | 0.809 | 0.944 | Excellent |

**Table 4.** Results of the differentiated validity test of the dimensions.

| Variables | Immersion | Achievement | Social | Consumer Experience | Brand Engagement | Brand Loyalty |
|---|---|---|---|---|---|---|
| Immersion | 0.770 | | | | | |
| Achievement | 0.473 | 0.789 | | | | |
| Social | 0.424 | 0.483 | 0.803 | | | |
| Consumer experience | 0.429 | 0.458 | 0.447 | 0.784 | | |
| Brand engagement | 0.467 | 0.461 | 0.463 | 0.455 | 0.596 | |
| Brand loyalty | 0.518 | 0.554 | 0.470 | 0.508 | 0.527 | 0.809 |
| AVE square root | 0.877 | 0.888 | 0.896 | 0.885 | 0.772 | 0.899 |

### *4.3. Model Fit Evaluation*

The SEM model was assessed as demonstrated in Table 5. The CMIN/DF ratio of the model was 1.505, which fell within the range of excellent standards of 1–3 [85]. The RMSEA was 0.033, much lower than the critical value of 0.05, suggesting that the model had a favorable precision fit [91]. Its incremental fit index (IFI) of 0.979, Tucker–Lewis index (TLI)

of 0.977, and comparative fit index (CFI) of 0.979 unexceptionally exceeded the excellent value of 0.9 [91]. In terms of different measures like parsimony fit, precision fit, and relative fit, these factors demonstrated that the theoretical model stood as a satisfactory fit to the actual data, eventually laying a sound statistical basis for further path coefficient testing and hypothesis verification.

**Table 5.** SEM model fit test.

| Indicator | Standard | Result |
|---|---|---|
| CMIN/DF | 1–3 excellent, 3–5 good | 1.505 |
| RMSEA | <0.05 excellent, <0.08 good | 0.033 |
| IFI | >0.9 excellent, >0.8 good | 0.979 |
| TLI | >0.9 excellent, >0.8 good | 0.977 |
| CFI | >0.9 excellent, >0.8 good | 0.979 |

### *4.4. Hypothesis Testing*

Path analysis was conducted to delve into direct effects on immersion, performance, social interaction, and consumer experience, while brand engagement was tested through path analysis (Table 6). The above analytical findings unequivocally demonstrated that every single hypothesis proposed was robustly substantiated. Immersion had a positive and significant effect on consumer experience (path coefficient = 0.241, t = 4.656, $p < 0.01$), supporting hypothesis H1, which stated that the more striking the level of immersion, the more the overall consumer experience was heightened. The constructive impact of achievement on consumer experience was also noteworthy (path coefficient = 0.241, t = 4.828, $p < 0.01$), corroborating hypothesis H2, which sufficiently illustrated that satisfying achievement needs could make brand interaction more engaging. On top of that, social interaction positively influenced consumer experience (path coefficient = 0.213, t = 4.273, $p < 0.01$) substantiating hypothesis H3, which forcefully demonstrated that social interaction could boost the brand community atmosphere and experience quality. Consumer experience positively affected brand engagement (path coefficient = 0.193, t = 3.993, $p < 0.01$), validating hypothesis H4, which eventually illustrated that positive experience could give rise to consumers' intentions to use the brand. Moreover, brand engagement strikingly affected brand loyalty (path coefficient = 0.197, t = 4.173, $p < 0.01$), thereby validating hypothesis H5, i.e., high levels of brand engagement could establish consumer loyalty. Altogether, immersion, achievement, and social interaction played an irreplaceable role in consumer experience and eventually facilitated brand loyalty through ameliorated brand engagement, which not only supported the hypotheses of the research model but also suggested the pathway mechanism in which gamification features affected brand loyalty through brand engagement and consumer experience.

The research systematically dug into the mediating effects on the basis of the bootstrap method. It illustrated that brand engagement and consumer experience strikingly mediated the gamification elements (achievement, immersion, and social interaction) affecting brand loyalty. As demonstrated in Table 7, consumer experience exhibited significant potential to mediate the effects of immersion (H6a, $p = 0.001$), achievement (H6b, $p = 0.001$), and social interaction (H6c, $p = 0.001$) on brand loyalty. The above finding illustrated that these gamification features imposed substantial influence on brand loyalty by ameliorating the level of consumer experience. Brand engagement also illustrated remarkable mediating effects through consumer experience in the paths from immersion (H7a, $p = 0.001$), achievement (H7b, $p = 0.002$), and social interaction (H7c, $p = 0.001$) to brand loyalty, adequately suggesting that brand engagement was successful in conveying the impact of consumer experience on brand loyalty. Moreover, the mediating role of consumer experience on

brand loyalty (H8, $p = 0.001$) was significant, testimony to the overriding significance of consumer experience in brand loyalty formation.

**Table 6.** Hypotheses test results.

| Hypotheses | Std | S.E. | C.R. | *p* | Support |
|---|---|---|---|---|---|
| H1. Immersion-related features have a conspicuous and positive effect on consumer experience. | 0.241 | 0.052 | 4.656 | *** | Yes |
| H2. Achievement-related feature has a striking and positive effect on consumer experience. | 0.241 | 0.05 | 4.828 | *** | Yes |
| H3. Social-related features have a noticeable and positive effect on consumer experience. | 0.213 | 0.056 | 4.273 | *** | Yes |
| H4. Consumer experience has a dramatic noticeable and positive effect on brand engagement. | 0.193 | 0.044 | 3.993 | *** | Yes |
| H5. Brand engagement has a conspicuous substantial and positive effect on brand loyalty. | 0.213 | 0.056 | 4.273 | *** | Yes |

Note: *** $p < 0.001$.

**Table 7.** Mediation test results.

| Hypotheses | Bootstrapping | | BC 95% CI | | *p*-Value | Result |
|---|---|---|---|---|---|---|
| | Estimate | Std. Error | Lower | Upper | | |
| H6a | 0.046 | 0.02 | 0.016 | 0.098 | 0.001 | Accept |
| H6b | 0.047 | 0.018 | 0.019 | 0.091 | 0.001 | Accept |
| H6c | 0.047 | 0.019 | 0.017 | 0.096 | 0.001 | Accept |
| H7a | 0.051 | 0.021 | 0.019 | 0.107 | 0.001 | Accept |
| H7b | 0.036 | 0.016 | 0.011 | 0.077 | 0.002 | Accept |
| H7c | 0.042 | 0.018 | 0.014 | 0.087 | 0.001 | Accept |
| H8 | 0.041 | 0.017 | 0.014 | 0.085 | 0.001 | Accept |

As clearly revealed in Table 8, the total effect analysis suggested that all hypothesized paths were statistically significant ($p < 0.05$). Among the mediation paths involving consumer experience (H6a–H6c), the achievement-related gamification feature (H6b) exhibited the most conspicuous total effect ($\beta = 0.305$), while the social interaction feature (H6c) revealed the smallest value ($\beta = 0.154$). With reference to the mediation paths involving brand engagement (H7a–H7c), the achievement feature (H7b) again demonstrated the most substantial total effect ($\beta = 0.295$), whereas the social interaction feature (H7c) suggested the least conspicuous effect ($\beta = 0.150$). These findings underscored the consistently dramatic influence of achievement elements on brand loyalty, in comparison with the relatively smaller effects of social interaction elements.

**Table 8.** Mediation test total effect results.

| Hypotheses | Bootstrapping | | BC 95% CI | | *p*-Value | Result |
|---|---|---|---|---|---|---|
| | Estimate | Std. Error | Lower | Upper | | |
| H6a | 0.276 | 0.063 | 0.114 | 0.416 | 0.001 | Accept |
| H6b | 0.305 | 0.065 | 0.172 | 0.434 | 0.000 | Accept |
| H6c | 0.154 | 0.041 | 0.052 | 0.263 | 0.002 | Accept |
| H7a | 0.281 | 0.064 | 0.150 | 0.418 | 0.001 | Accept |
| H7b | 0.295 | 0.067 | 0.172 | 0.427 | 0.000 | Accept |
| H7c | 0.150 | 0.052 | 0.038 | 0.368 | 0.009 | Accept |
| H8 | 0.234 | 0.062 | 0.113 | 0.358 | 0.001 | Accept |

To sum up, the aforementioned findings illustrated that consumer experience and brand engagement held particularly significant values in the research model, which not only sufficiently mirrored the influence of gamification elements (immersion, achievement, and social interaction) on brand loyalty but also forcefully validated this pathway mechanism via brand engagement and consumer experience. This also confirmed the recommended theoretical model in this research, thereby underscoring the central role of brand interaction and consumer experience in developing brand loyalty, with paramount implications for brand managers in developing optimum consumer interaction strategies.

## 5. Discussion and Conclusions

This study identified three core gamification features, namely, immersion, achievement, and social interaction, as significant influencers of consumer experience. In detail, immersion reinforces the emotional and cognitive depth of consumer–brand interaction by creating narrative-driven and atmospheric experiences, particularly in collaborations with game IPs, which not only elevate consumer attention but also heighten brand identification [2,38]. Realized through progressive tasks and rewards, achievement fulfills consumers' needs for competence and autonomy, generating a sense of accomplishment that boosts participation and enjoyment [15,42]. Through social interaction, community-based experiences are nurtured, which in turn stimulate communication and collaboration, foster brand identification, and ultimately lay the groundwork for customer loyalty [39].

The empirical results demonstrated a noticeable and positive correlation between consumer experience and brand engagement across cognitive, emotional, and behavioral levels. Well-designed gamified tasks improved brand understanding, evoked emotional resonance, and drove repeated consumer interaction [4,10,17]. Within brand–game IP collaborations, gamification reinforced the brand entertainment value, while emotional transfer from IP fans further motivated consumer engagement.

This study validated three key mediation pathways. To start with, consumer experience mediated the connection between gamification and brand loyalty. Among the above three traits, achievement exerted the most decisive influence on consumer experience as challenges, rewards, and feedback loops effectively elevated intrinsic motivation [5]. Social interaction and immersion also brought about certain influences but with comparatively weaker effects. For instance, Hamari and Koivisto [17] argued that consumers were more engaged by goal-oriented tasks than immersive or social elements.

Brand engagement also served as a mediator in the connection between gamification and brand loyalty and achievement, which exerted the most significant influence. More importantly, achievement boosted participation and deepened consumer–brand interaction by offering clear goals and rewarding progress [42], notwithstanding the fact that less immediate immersion fostered sustained engagement through emotionally rich and interactive brand environments [2]. On this basis, Xi and Hamari [2] put forth a standpoint that immersive gamified experiences resulted in more significant engagement and longer-term loyalty. On that account, immersive tools could conduct vital roles in reinforcing brand connections, which encompassed AR campaigns, brand storytelling, and interactive media [70].

On the whole, achievement demonstrated the most robust total effect through both mediating pathways, which coincided with SDT's emphasis on competence fulfillment. Koivisto and Hamari [17] validated this finding through meta-analysis. Likewise, Tondello et al. [94] further arrived at a pertinent conclusion that mixed-motive designs combining intrinsic challenges with moderate rewards boost long-term engagement. Sailer et al. [5] also noted that achievement mechanisms more readily translate into actual behaviors. While achievement is more effective in the short term, immersive strategies contribute to

stable long-term connections. Thus, it is sensible for brand managers to adopt differentiated strategies, prioritizing investment in achievement systems, supporting immersion content development, and moderately reducing social interaction features, to optimize loyalty outcomes. It is preferable for future research to explore how cultural context moderates these effects [95]. In the end, this study confirmed that consumer experience indirectly drove brand loyalty via augmented engagement [10,96]. This supported the idea that loyalty depended on brand appeal and consumers' perceived value and role identity within the gamified space [97].

## 6. Contributions and Implications

First and foremost, this research transcends the all-round standpoint of conventional gamification studies by innovatively constructing a differentiated integration model, comprehensively shedding light upon the mechanisms through which three gamified features, immersion, achievement, and social interaction, influence brand-game IP collaborations. By validating two independent mediating pathways, namely, consumer experience (perceptual path) and brand engagement (behavioral path), this study not only refined the theoretical framework of gamification's impact on brand associations but also clarified the distinction between "engagement" and "experience" prevalent in prior research [58].

More importantly, the study has deepened how we comprehend the intrinsic mechanisms of gamification. Through the integration of self-determination theory (SDT), expectancy-value theory (EVT), and social identity theory (SIT), it clarifies the psychological need-satisfaction mechanisms corresponding to different gamified traits: achievement satisfies competence needs, immersion stimulates autonomous exploration, and social interaction reinforces belonging. This theoretical integration not only responds to Koivisto and Hamari's [17] call for differentiating gamification elements but also bridges the gap in brand emotional experience research by incorporating hedonic and novel experience dimensions [10,66].

Last but not least, this research predominantly centers on the emerging field of fast-moving consumer goods (FMCGs) and game IP joint marketing, providing the first systematic theoretical model for this context. This exploration expands the application boundaries of gamification. It establishes a theoretical foundation for understanding the integration mechanisms of game culture in brand strategy, offering significant guidance for brand communication practices in the digital age.

From a practical standpoint, the study offers actionable guidance for designing effective gamified brand strategies. Brands are encouraged to adopt a holistic approach that integrates immersive, achievement-oriented, and social elements rather than applying them in isolation. Consistency across online and offline experiences is crucial to delivering seamless brand interactions. Moreover, long-term engagement can be promoted through diverse participation formats, personalized recommendation systems, and compelling reward structures. In IP-driven collaborations, leveraging character storytelling and emotional interaction mechanisms can further extend the brand impact. Overall, the study offers both theoretical advancement and practical insight, providing brands with a robust foundation for building differentiated competitive advantages and pursuing innovation in the digital era.

## 7. Limitations and Future Research

This study has limitations. Above all, the sample was dominated by young consumers aged between 21 and 40, who were very receptive to gamified marketing initiatives. This age-based composition may result in a substantial generational bias in the research results. Younger consumers, as they are more digitally savvy, tend to be more open and receptive to

interacting with gamified features. This trait could ameliorate beneficial results, comprising more remarkable engagement and brand reputation. Nonetheless, the sample's homogeneity can limit the generalizability of the findings across different age groups. It is essential to consider that older and middle-aged consumers' behavior may differ substantially. For example, consumers over 40 may prioritize functionality over game-like elements and exhibit lower tolerance for complex gamification. To improve representativeness, it is advisable for future endeavors to encompass a more age-diverse sample.

In addition, the research concentrated on cross-industry partnerships involving tea beverage brand names and game IPs. Notwithstanding the fact that these partnerships have been effective at heightening consumer engagement in this setting, it is questionable whether they would be successful in other markets. Additional testing in retail, education, or healthcare sectors would needs to determine generalizability.

Furthermore, a cross-sectional design captures consumer behavior at a single point in time and cannot account for the evolving nature of brand loyalty. Owing to the fact that loyalty is a gradual and dynamic process influenced by time, brand strategy shifts, and environmental changes, future endeavors should adopt longitudinal approaches to assess causality and long-term outcomes better.

Aside from that, although structural equation modeling confirmed a desirable model fit, potential standard method bias remains a concern as a consequence of the self-reported, single-time-point online data collection. Notwithstanding significant countermeasures adopted to mitigate bias, such as ensuring anonymity, using neutral language, and emphasizing subjective honesty, measurement homogeneity may still affect variable associations. On that account, future investigation could reinforce validity by incorporating multi-timepoint data, multiple data sources, or combining behavioral metrics with perceptual measures.

Ultimately, external influencing factors, comprising market maturity and technology readiness, were excluded in this study. These influencing agents may exert a substantial influence on the effectiveness of gamification across a diverse array of regions or consumer segments. As this study was set in the Chinese market, it is imperative to conduct additional cross-cultural research to investigate geographic and contextual variations.

On top of that, it is advisable for future exploration to diversify participant demographics to encompass older and culturally diverse consumers, heightening the generalizability of the results. In an effort to ameliorate the reliability and richness of the results, we can not only expand research scopes to additional industries but also adopt longitudinal and multi-source data approaches. Incorporating contextual factors such as market maturity and technological adoption can further elaborate upon how gamified marketing influences brand loyalty across dissimilar settings, offering both theoretical refinement and practical guidance.

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**Institutional Review Board Statement:** Ethical review and approval were waived for this study, as it did not involve any experiments on humans or animals. The data were collected anonymously through a voluntary online survey for academic purposes only, and no sensitive personal information was gathered.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study. Participation was voluntary, and respondents were informed about the purpose of the research, data confidentiality, and their right to withdraw at any time prior to completing the online survey.

**Data Availability Statement:** The questionnaire used in this study is available in the Appendix A. However, the raw data collected during the survey are not publicly available on account of privacy and confidentiality considerations. Interested researchers may contact the corresponding author to request access to the dataset, which will be provided on a reasonable and case-by-case basis.

**Conflicts of Interest:** The authors declare no conflicts of interest.

## Appendix A

**Table A1.** List of items in questionnaire.

| Variables | Item Statistics | Cite |
| --- | --- | --- |
| Immersion-related features | I enjoy the Genshin Impact theme in Heytea's products, which provides me with a unique brand experience. | [2,42,98] |
| | The collaboration with Genshin Impact delivers a strong level of gaming immersion in both online and offline events. | |
| | Heytea's collaborative events are replete with the signature elements of the Genshin Impact game universe. | |
| | The background and theme of the Genshin characters are vividly presented by the designs of the drinks and gifts, enhancing my brand experience and emotional attachment. | |
| Achievement-related features | I would feel a strong sense of achievement when I successfully collect the Heytea × Genshin Impact products and gifts. | |
| | Acquiring limited-edition products makes me feel like I've achieved something special. | |
| | By selecting drinks and successfully obtaining all the event giveaways, I experience a deep sense of satisfaction and success. | |
| | Being able to participate in the Heytea × Genshin Impact collaboration and obtain limited products right away makes me feel unique. | |
| Social-related features | I am happy to share the information and gift choices of the Heytea × Genshin Impact event with my friends, which adds to my sense of involvement | |
| | Sharing photos and experiences of my participation in the collaboration on social media allows me to connect with other fans. | |
| | In this collaboration event, I like interacting with other Heytea and Genshin Impact fans, such as discussing purchase plans and product experiences. | |
| | This collaboration event encourages me to showcase my product choices and related experiences on social media, engaging in discussions about Heytea and Genshin Impact with more people. | |
| Consumer experience | When I participated in the collaboration event between Heytea and Genshin Impact, I felt very pleased. | [99,100] |
| | I was excited to take part in this collaborative event. | |
| | My experience during the Heytea and Genshin Impact collaboration was very smooth, with no inconveniences at all. | |
| | While experiencing the collaboration between Heytea and Genshin Impact, I enjoyed a delightful experience. | |
| | Participating in the Heytea and Genshin Impact collaboration made me feel a deep connection to the event. | |
| | This collaboration between Heytea and Genshin Impact was different from my previous purchasing experiences. | |
| | Taking part in this Heytea and Genshin Impact collaboration was a unique experience. | |
| | During my involvement in the Heytea and Genshin Impact collaboration, I encountered some entirely new elements. | |
| | Participating in the Heytea and Genshin Impact collaboration allowed me to learn new knowledge or information. | |
| | The collaboration between Heytea and Genshin Impact provided me with a rich variety of products and experiences. | |

**Table A1.** *Cont.*

| Variables | Item Statistics | Cite |
| --- | --- | --- |
| Brand engagement | I am excited about purchasing the collaboration products between Heytea and Genshin Impact.<br>I have a strong interest in the joint campaign between Heytea and Genshin Impact.<br>I am passionate about the collaboration activities between Heytea and Genshin Impact.<br>I feel a sense of enthusiasm for the partnership between Heytea and Genshin Impact.<br>I really enjoy the collaboration events between Heytea and Genshin Impact.<br>I am curious and want to learn more about the collaboration activities between Heytea and Genshin Impact.<br>I closely follow any information-related to the collaboration between Heytea and Genshin Impact.<br>I often find myself thinking about questions related to the collaboration between Heytea and Genshin Impact.<br>I actively seek out relevant information about the collaboration between Heytea and Genshin Impact.<br>I enjoy discussing and sharing my experiences with Heytea and Genshin Impact collaboration products with my friends.<br>When I'm with friends, I prefer to talk about and use the collaboration products from Heytea and Genshin Impact.<br>I am more inclined to discuss and share my experiences when my friends are also engaged in the Heytea and Genshin Impact collaboration.<br>I love sharing my experiences of purchasing and using the collaboration products from Heytea and Genshin Impact with others.<br>I feel a sense of community when I am with others who are participating in the Heytea and Genshin Impact collaboration.<br>I am willing to recommend the collaboration products from Heytea and Genshin Impact to others. | [28,42,101] |
| Brand loyalty | If other brands launch similar game IP collaboration events, I will still choose Heytea.<br>I am more loyal to the Heytea because it has collaborated with Genshin Impact.<br>The next time I want to try a new tea drink; I am very likely to choose Heytea.<br>Even if similar products from other brands are priced lower, I am still willing to purchase Heytea's Genshin Impact collaboration products. | [42,102,103] |

# Appendix B

**Table A2.** Total variance explained.

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 17.559 | 42.826 | 42.826 | 17.559 | 42.826 | 42.826 | 9.619 | 23.462 | 23.462 |
| 2 | 4.861 | 11.857 | 54.683 | 4.861 | 11.857 | 54.683 | 8.287 | 20.212 | 43.673 |
| 3 | 3.075 | 7.501 | 62.184 | 3.075 | 7.501 | 62.184 | 3.375 | 8.232 | 51.906 |
| 4 | 2.098 | 5.117 | 67.301 | 2.098 | 5.117 | 67.301 | 3.363 | 8.203 | 60.109 |
| 5 | 1.894 | 4.620 | 71.920 | 1.894 | 4.620 | 71.920 | 3.291 | 8.027 | 68.136 |
| 6 | 1.603 | 3.911 | 75.831 | 1.603 | 3.911 | 75.831 | 3.155 | 7.695 | 75.831 |

# Appendix C

**Table A3.** Rotated component matrix.

| Component | 1 | 2 | 3 | 4 | 5 | 6 |
| --- | --- | --- | --- | --- | --- | --- |
| BE1 | 0.765 | | | | | |
| BE2 | 0.752 | | | | | |
| BE3 | 0.76 | | | | | |
| BE4 | 0.839 | | | | | |
| BE5 | 0.826 | | | | | |
| BE6 | 0.79 | | | | | |
| BE7 | 0.671 | | | | | |
| BE8 | 0.682 | | | | | |
| BE9 | 0.738 | | | | | |
| BE10 | 0.738 | | | | | |

**Table A3.** *Cont.*

| Component | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| BE11 | 0.702 | | | | | |
| BE12 | 0.835 | | | | | |
| BE13 | 0.674 | | | | | |
| BE14 | 0.71 | | | | | |
| BE15 | 0.722 | | | | | |
| CE1 | | 0.857 | | | | |
| CE2 | | 0.848 | | | | |
| CE3 | | 0.843 | | | | |
| CE4 | | 0.85 | | | | |
| CE5 | | 0.85 | | | | |
| CE6 | | 0.855 | | | | |
| CE7 | | 0.853 | | | | |
| CE8 | | 0.861 | | | | |
| CE9 | | 0.841 | | | | |
| CE10 | | 0.832 | | | | |
| GA1 | | | 0.828 | | | |
| GA2 | | | 0.821 | | | |
| GA3 | | | 0.821 | | | |
| GA4 | | | 0.827 | | | |
| GS1 | | | | 0.84 | | |
| GS2 | | | | 0.84 | | |
| GS3 | | | | 0.819 | | |
| GS4 | | | | 0.858 | | |
| GI1 | | | | | 0.827 | |
| GI2 | | | | | 0.832 | |
| GI3 | | | | | 0.819 | |
| GI4 | | | | | 0.833 | |
| BL1 | | | | | | 0.808 |
| BL2 | | | | | | 0.806 |
| BL3 | | | | | | 0.787 |
| BL4 | | | | | | 0.799 |

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