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Gameful Experience and Brand Loyalty: Exploring Customer Brand Engagement in Language Learning Apps

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ABSTRACT

This study examines the impact of gameful experiences on brand loyalty in language learning applications mediated by customer brand engagement. With the increasing incorporation of gamification in educational tools, understanding how specific game mechanics drive user engagement and brand loyalty in language learning apps is crucial. While existing gamification research generally focuses on broader fields, this study uniquely investigates how specific gameful experiences—such as enjoyment, creative thinking, and domination—affect brand loyalty in the context of language learning applications. Data were collected from 250 active users in Indonesia using an online survey with a Likert scale of 1-5, employing purposive sampling. Structural Equation Modeling (SEM) with AMOS 26 assessed validity, reliability, and relationships among variables. The results indicate that gameful experiences significantly enhance customer brand engagement, which, in turn, positively influences brand loyalty. This study contributes new insights into how gamification affects brand loyalty, specifically in the language learning app domain, providing practical recommendations for developers to incorporate effective game mechanics to enhance customer brand engagement and foster long-term brand loyalty.

1. INTRODUCTION

The rapid growth of mobile apps has changed the landscape of language learning, making it one of the most dynamic sectors in educational technology. Mobile language learning apps allow users to access language content anytime and anywhere, encouraging greater autonomy and motivation (Atifah et al., 2024). Its popularity is increasing with the recognition of the importance of language skills in a globalized world and its convenience (Huang et al., 2021). Additionally, the gamification elements in this app have been shown to increase motivation and engagement through challenges and rewards (Kamsik, 2023). Interactive features such as quizzes and real-time feedback make learning more dynamic and engaging. As a result, the combination of mobile technology and gamification has made language learning more engaging and accessible (Metruk, 2021).

Non-gamified games focus primarily on entertainment, using competition and challenges to engage players intensely through strategy and combat (Cahyadi et al., 2023). These games emphasize immersive experiences without instructional goals, enhancing enjoyment through action-oriented engagement (Farhat et al., 2020). In contrast, gamified applications like Duolingo incorporate game elements such as levels, rewards, and achievements to make learning more enjoyable while reaching educational objectives (Santi et al., 2023). For instance, Duolingo's structured approach fosters continuous learning and a sense of accomplishment, enhancing user motivation for language acquisition

(Sadaf, 2023). The main distinction between gamified and non-gamified games lies in their purpose, with apps like Duolingo aiming for learning outcomes (Landers et al., 2022).

In 2021, the global language learning app market experienced significant growth as digital adoption increased, attracting millions of users worldwide (Essafi et al., 2024). This surge in popularity is driving brands to develop or acquire language-learning apps, allowing them to tap into the rapidly growing education market while increasing brand loyalty through technology-driven strategies (Bagdi et al., 2023). Apps like Duolingo, Memrise, and Clozemaster have successfully incorporated gamification features like daily challenges, leaderboards, and achievement systems, increasing user engagement and strengthening brand-customer interactions (Kamsik, 2023).

In the same context, language learning apps use engaging interface designs and gamification features to create a satisfying learning experience, and this global trend reflects significant advances in technology and user engagement strategies (Hans et al., 2023). Apps like Duolingo leverage gamification elements like points and badges to increase user motivation and retention (Mogavi, 2022). Memrise focuses on spaced repetition techniques to help learners memorize vocabulary (Shortt et al., 2023). Clozemaster offers a more contextual approach with fill-in-the-blank exercises, allowing users to practice the language more deeply (Kruchinin et al., 2021). Additionally, apps like HelloTalk and LingoDeer broaden the learning experience through language exchange with native speakers and lessons in less commonly taught languages, making them more appealing to a broader range of users (Huntington et al., 2023).

Gameful experience, characterized by rules, interactivity, goals, feedback, and challenges, creates immersive interactions between users and systems, fostering engagement through fun, satisfaction, and escapism (Zeng et al., 2020). Unlike entertainment-driven, non-gamified systems, gamified applications like Duolingo employ rewards, levels, and achievements to encourage sustained learning behaviors (Hadina et al., 2023). Core dimensions of gameful experience—enjoyment, creative thinking, and dominance—highlight emotional involvement, enabling users to derive satisfaction and autonomy (Parra-González et al., 2022). These positive experiences directly influence brand loyalty, a critical factor in consumer behavior that reflects commitment, trust, and emotional attachment to a brand (Pebrianti et al., 2023; Susiyanto et al., 2023; Dewi and Indra, 2024, Johnson et al., 2024, and Yahya et al., 2023). Brand loyalty is built on emotional and behavioral connections, driving repeat purchases, advocacy, and profitability through positive word-of-mouth (Ledikwe, 2020).

Customer brand engagement is central to fostering brand loyalty, which encapsulates the physical, cognitive, and emotional investment consumers make during brand interactions (Bouzaabia et al., 2024). Gamified systems amplify engagement by leveraging game mechanics to enhance user participation, creating immersive experiences that strengthen loyalty and advocacy (Rimadias et al., 2021). The interplay between gameful experience, customer brand engagement, and brand loyalty aligns with interpersonal relationship theory, emphasizing that positive brand interactions deepen customer-brand ties. By eliciting fun and rewarding experiences, gamified applications foster enduring emotional bonds, encouraging consumers to prefer a brand over alternatives consistently (Utami et al., 2021). Thus, gamification emerges as a pivotal tool for marketers, enabling robust customer relationships, increased retention, and sustained success in competitive markets (Abbasi et al., 2022).

The global landscape of language learning app downloads has shown a consistent upward trajectory from 2020 to 2024. In 2020, the surge in educational apps, including language learning apps, resulted in a remarkable increase of over 27 percent in downloads worldwide. 2021 this growth continued, with total language learning app downloads reaching approximately 183 million, marking a 22 percent increase from the previous year (Fitria, 2023). The growth trend continued into 2022, where global downloads increased to approximately 210 million, reflecting an average annual growth rate of 18.7 percent since 2020 (Muslimin, 2023). In Indonesia, the same pattern is seen regarding language learning app downloads. In 2020, there was a significant increase of more than 25 percent in downloads

compared to the previous year, driven by a surge in digital users. The following year, 2021, language learning app downloads in Indonesia grew by around 20 percent, driven by the increasing demand of learners and professionals looking to improve their language skills. By 2022, around 15 million Indonesian users had downloaded these apps, with an annual growth rate of around 23 percent (Sodiq, 2024). Continuing this upward trend, in 2023, downloads in Indonesia increased by approximately 24 percent compared to the previous year, which aligns with global growth patterns. This consistent download increase highlights the growing importance of mobile-assisted language learning in the international and Indonesian context as learners increasingly turn to technology to fulfill their educational needs (Zhi, 2023). The accessibility and convenience of language learning apps have made them an essential tool for language acquisition, catering to a diverse range of users, from learners to professionals (Essafi et al., 2024).

The growth of this application market is significant not only globally but also in Indonesia. In 2023, Duolingo surpassed 500 million registered users worldwide, including around 10 million users in Indonesia, indicating a great interest in language acquisition in this country (Abidin, 2023). Other apps like Memrise and Clozemaster are also increasing in usage, especially among learners looking to improve their language skills (Dewi et al., 2024). This is in line with the global trend in digital language learning, driven by increasing internet penetration and mobile device usage in Indonesia (Tan et al., 2023).

The surge in demand for language learning apps from 2020 to 2024 has prompted brands to build a significant digital presence in the edtech sector, leveraging mobile technology to enhance the language acquisition experience. This trend is underscored by the growing reliance on mobile apps, which provide flexible and interactive learning environments that cater to the diverse needs of learners (Nehe et al., 2023). The global market for language learning apps is projected to reach around $37.8 billion by 2024, indicating a lucrative opportunity for brands to innovate and expand their offerings (Yıldız, 2020). In addition, the successful acquisition and rebranding of language learning apps allows brands to engage with tech-savvy consumers and strengthen their competitive position in this rapidly growing market (Windya, 2023). As mobile-assisted language learning continues gaining traction, brands strategically leverage technology to create personalized learning experiences that resonate with modern learners (Amelina et al., 2022).

Despite the initial excitement around language learning apps, user engagement often declines over time, with many users abandoning the app shortly after downloading (Mallafré-Larrosa et al., 2023). To address this problem, developers increasingly incorporate gamification, integrating game-like elements into educational contexts to increase user engagement and motivation (Esmaeilzadeh, 2021). Gamification can transform the learning experience by making it more fun and interactive, encouraging users to persist in their language learning (Rosyidah et al., 2023). However, although gamification has shown promise in increasing motivation, recent research has shown mixed results regarding its overall effectiveness on learning outcomes. Several studies have shown that excessive gamification can have negative consequences, such as addiction and disinterest in the learning process (Shen et al., 2024). Thus, although gamification presents a valuable strategy for improving language learning applications, careful consideration is needed to align these elements with users' intrinsic motivations and learning goals (Perry, 2021).

Recent research highlights the importance of understanding how gamification influences gameful experiences and the underlying processes in branded apps to bridge the existing knowledge gap (Disse et al., 2023). This shift emphasizes the need to focus on the gameful experience provided by gamification systems and their role in fostering engaging relationships with brands (Mok, 2024). Moreover, there needs to be more comprehensive models in forthcoming gamification applications that evaluate the concurrent impacts of gameful experiences on various consumer outcomes, including customer brand engagement and brand loyalty. Understanding how perceived gamification experiences

influence user attitudes and behaviors in branded apps remains a critical area that requires further exploration (Baykal, 2023).

This study explores how components of gameful experience, including enjoyment, creative thinking, and dominance, influence customer brand engagement in language learning applications. Additionally, it examines the mediating role of customer brand engagement in the relationship between gameful experience and brand loyalty. By exploring the complex interactions between these variables, this study's findings aim to assist practitioners and academics in developing more effective marketing strategies to enhance customer brand engagement and brand loyalty in language learning applications.

2. RESEARCH METHOD

The information presented above can be used to develop the subsequent study framework.
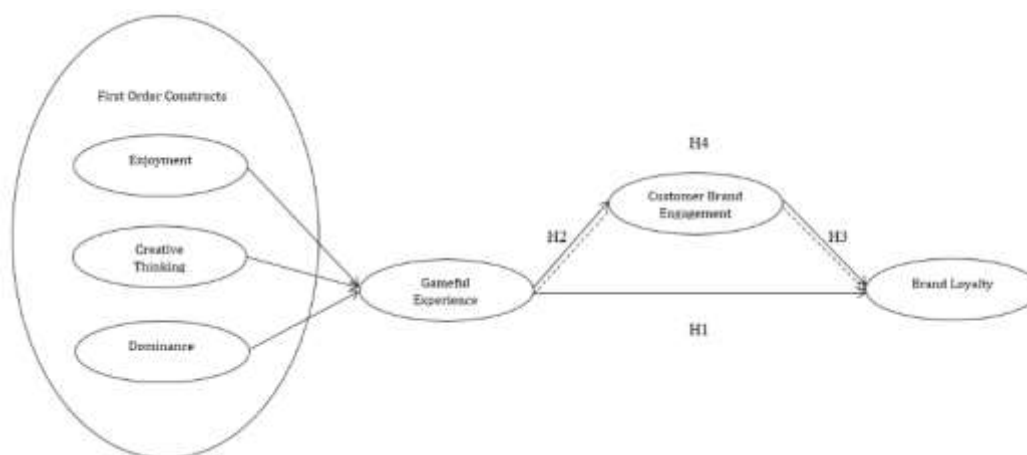
Figure 1. Conceptual Framework

The researcher proposes the following study hypothesis by the problem formulation and the aforementioned conceptual framework: (a) Gameful experience with language learning applications affects brand loyalty. (b) Gameful experience with language learning applications affects customer brand engagement. (c) Customer brand engagement affects brand loyalty. (d) Gameful experience with language learning applications affects brand loyalty through customer brand engagement.

This study employs a causal associative research methodology to examine the influence of gameful experience on brand loyalty in language learning applications mediated by consumer brand engagement. Causal associative research seeks to elucidate the cause-and-effect relationship between variables (Won et al., 2022). The data for this research was collected through primary data gathering via an online survey, in which questionnaires were distributed to participants who actively engage with gamified language learning software. The questionnaire employs a Likert scale from 1 to 5, categorized as follows: 1 indicates strongly disagree, 2 indicates disagree, 3 denotes somewhat agree, 4 indicates agree, and 5 represents strongly agree. The participant group comprised active users of gamified language learning programs across Indonesia.

The sample size for this study comprised 250 participants. A non-probability sampling method was employed, specifically purposive sampling. Purposive sampling is a technique for selecting samples based on defined criteria or considerations (Yudhistira et al., 2023). The requirements for the sample in this research included: (1) Residing in Indonesia; (2) At least 17 years of age; (3) Active users of language learning applications such as Duolingo, Clozemaster, HelloTalk, Memrise, LingoDeer, and Drops; (4) Have utilized language learning applications for a minimum of one month.

Data analysis was performed using Structural Equation Modeling (SEM). SEM facilitates the concurrent execution of three types of analyses: validity and reliability analysis, relational model analysis among variables, and the development of an acceptable predictive model. Several indices can be used to assess how much a model fits the data: chi-square, RMSEA, RMR, GFI, TLI, IFI, CFI, and NFI (Hsu et al., 2021).

3.   RESULTS AND DISCUSSIONS

Respondent Characteristics. The following demographics form the basis of the analysis of the survey respondents' profiles:

Table 1. Characteristics of Respondents

Categories	Items	f	%
Age	17 – 25	134	53.6
	26 – 25	81	32.4
	36 – 45	27	10.8
	46 -55	6	2.4
	Above 55	2	0.8
	Total	250	100
Gender	Man	89	35.6
	Woman	161	64.4
	Total	250	100
Domicile	Kalimantan	63	25.2
	Sumatra	31	12.4
	Sulawesi	27	10.8
	Jawa	67	26.8
	Bali	28	11.2
	Maluku	17	6.8
	Nusa Tenggara	13	5.2
	Papua	4	1.6
	Total	250	100
Work	Students	75	30
	Private employees	41	16.4
	Civil Servant	28	11.2
	State-Owned Enterprises/Regional-Owned Enterprises	30	12
	Self-employed	50	20
	Indonesian National Armed Forces/ Indonesian National Police	26	10.4
	Total	250	100
Used Language Learning Application	Duolingo	71	28.4
	Memrise	38	15.2
	Clozemaster	31	12.4
	HelloTalk	54	21.6
	LingoDeer	32	12.8
	Drops	24	9.6
	Total	250	100
Application Usage Duration	1 – 3 months	64	25.6
	Above 3 – 6 months	63	25.2
	Above 6 – 12 months	53	21.2
	Above 1 year	70	28
	Total	250	100
Main Reasons for Use	Supporting education	38	15.2
	Preparation for the trip	38	15.2
	To interact with others	49	19.6
	Making the most of free time	45	18
	Enhance your career	42	16.8
	For fun	38	15.2
	Total	250	100

Categories	Items	f	%
Frequency of Use	1-2 times per week	72	28.8
	3-4 times per week	93	37.2
	5-6 times per week	48	19.2
	Every day	37	14.8
	Total	250	100
First Source of Information	Facebook/Instagram	34	13.6
	YouTube	30	12
	Friends/Family	42	16.8
	TikTok	43	17.2
	App Store	35	14
	Google Search	38	15.2
	News/Articles/Blogs	20	8
	TV	8	3.2
	Total	250	100

Measurement Models. The outcomes of the conformance, validity, and reliability assessments are presented below.

Table 2. Value of Standardized Loading Factor, Construct Reliability (CR),
and Average Variance Extracted (AVE) in Overall Model Fit

| Variables	Items	SLF	CR	AVE
Gameful Experience	Enjoyment		0.894	0.804
	Using language learning apps makes me happy	0.906		
	I like using language-learning apps	0.913		
	I find using language learning apps very entertaining.	0.87		
	Creative Thinking		0.930	0.811
	When using language learning apps, I feel like they spark my imagination.	0.89		
	When using language learning apps, I feel creative.	0.889		
	When using language learning apps, I feel like I can explore many things.	0.903		
	When using language learning apps, I feel full of adventure.	0.919		
	Dominance		0.922	0.773
	When using language learning apps, I feel responsible.	0.817		
	When using language learning apps, I feel the impact	0.866		
	When using language learning apps, I feel independent.	0.907		
	When using language learning apps, I feel confident	0.923		
Customer Brand Engagement	I feel comfortable when using this language-learning application	0.89	0.922	0.811
	Using this language-learning app makes me happy	0.905		
	Using this language-learning app made me think about the app	0.903		
	Using this language-learning app has piqued my interest in learning more about the app.	0.905		
Brand Loyalty	I consider myself loyal to language learning apps.	0.911	0.912	0.808
	I will say positive things about this language-learning app to others.	0.908		
	I would not use any other app if a language-learning app were available.	0.86		
	I recommend that others use a language-learning app.	0.915		

The reliability and validity test results indicate that the model's indicators are reliable and valid, as shown in Table 2. All indicators have standardized loading factor (SLF) values exceeding 0.50, which is adequate for evaluating the model's overall structure. The instruments are dependable and consistently measure the model's framework, as confirmed by the Construct Reliability (CR) test, with a score above 0.70 (Sürücü et al., 2020).

Table 3. Goodness of Fit Index

Goodness of Fit Index	Cut off Value	Results	Evaluation
CMIN/DF	≤ 3.00	1.507	Good Fit
RMSEA	≤ 0.08	0.045	Good Fit
RMR	< 0.05	0.056	Bad Fit
NFI	≥ 0.90	0.955	Good Fit
IFI	≥0.90	0.984	Good Fit
TLI	≥0.90	0.982	Good Fit
CFI	≥0.90	0.984	Good Fit

A compliance statement can be made since the model passes the conformance test, as shown in Table 3. Five factors demonstrate an intense goodness of fit. According to several studies (Folmsbee et al., 2020), a study's model configuration is deemed suitable and accepted when three to four indicators demonstrate an adequate agreement level or exceed the threshold value.

Figure 2. Full Model Testing
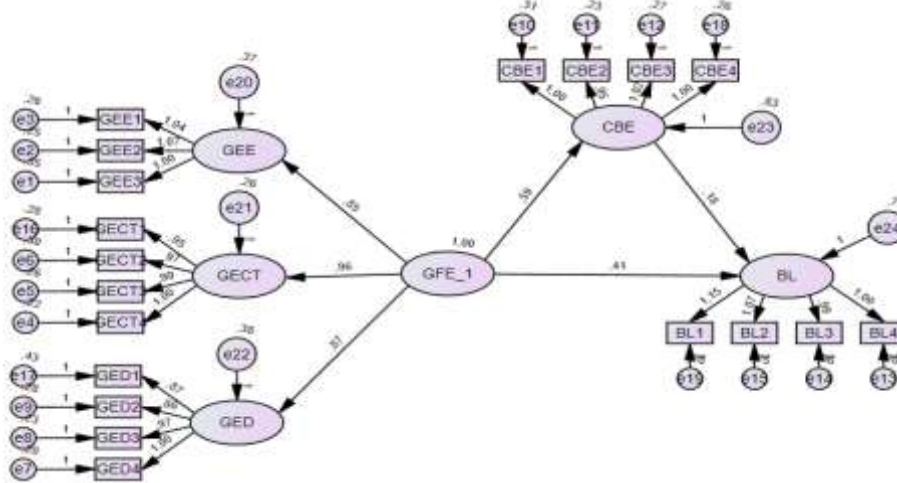
Hypothesis Test. This section presents the study's findings concerning the interrelationships of the framework's variables.

Table 4. Hypothesis testing

Hypothesis	Track	Estimate	SE	CR	P	Description
H1	GFE_1 → BL	0.410	0.080	5.103	***	Accepted
H2	GFE_1 → CBE	0.587	0.073	8.050	***	Accepted
H3	CBE → BL	0.182	0.069	2.630	0.009	Accepted

The hypotheses are grounded in established knowledge. Gameful experience (GFE_1) has a significant effect on brand loyalty (BL), as shown by a critical ratio (CR) of 5.103, which surpasses the threshold of 1.96, with a p-value below 0.05 (α = 0.05). Thus, the first hypothesis is supported. Additionally, gameful experience (GFE_1) impacts customer brand engagement (CBE), evidenced by a CR of 8.050, above 1.96, and a statistically significant p-value under 0.05, supporting the second hypothesis. Lastly, customer brand engagement (CBE) affects brand loyalty (BL) with a CR of 2.630 and a p-value of 0.009, confirming the third hypothesis. Table 5, derived from the Sobel test results, confirms the indirect effect of the combined mediation variables.

Table 5. Sobel Test - Significance of Mediation

	Sobel test statistic	Two-tailed probability	Description
GFE_1 → CBE → BL	2.506	0.012	Accepted

According to Table 5, the Sobel test results show a test statistic of 2.506 with a two-tailed p-value of 0.012. Since this test statistic exceeds the critical value of 1.96 and the p-value is below 0.05 (α = 0.05), the mediation effect is statistically significant. These results indicate that gameful experience (GFE_1) exerts an important indirect influence on brand loyalty (BL) via customer brand engagement (CBE). Consequently, the mediation hypothesis is supported.

Discussion. This study validates that gameful experiences can strengthen brand loyalty in language learning applications, with customer brand engagement as a critical mediator. The findings suggest that enjoyment, absorption, and activation can maintain users' emotional connection with the brand, ultimately fostering brand loyalty (Demir et al., 2020). By leveraging effective gamification strategies, apps like Duolingo and HelloTalk improve user experience, strengthen engagement, and drive loyalty

(Angelina et al., 2023). These findings provide practical implications for app developers who must enhance gamification features to retain users and foster loyalty (Pan et al., 2020). In terms of theoretical contribution, this study offers empirical evidence that reinforces the mediating role of customer brand engagement, aligning with existing literature that illustrates how positive brand experiences foster customer retention (Peco-Torres et al., 2020).

Compared with previous research emphasizing sports applications, this study highlights the unique context of language learning applications, stressing the importance of gamification elements tailored to users' goals and preferences (Tseng et al., 2021). However, there are limitations, such as insufficient empirical evidence regarding the direct relationship between gamification and brand loyalty and potential bias from self-reported data (Torres et al., 2021). Therefore, recommendations for further research include exploring the role of gamification elements in different demographic contexts, conducting longitudinal studies to understand the evolution of customer engagement over time, and integrating qualitative methodologies to enrich quantitative results (Samarah et al., 2022).

4. CONCLUSION

This study concludes that gameful experience positively influences customer brand engagement, which, in turn, enhances brand loyalty in language learning applications. The findings confirm the mediating role of customer brand engagement in the relationship between gameful experience and brand loyalty, directly addressing the research objectives. Specifically, gameful experiences such as enjoyment, creative thinking, and dominance drive deeper engagement, strengthening brand loyalty. This study offers novel insights by examining how specific gameful experiences—distinct from other forms of gamification—impact brand loyalty within the context of language learning apps. However, limitations such as reliance on self-reported data and the lack of longitudinal analysis are acknowledged. To foster long-term brand loyalty, language learning app developers should design game mechanics that prioritize enjoyment, creativity, and immersion to enhance customer engagement. Future research should use mixed-methods approaches, explore cultural and demographic differences, and identify the most effective game mechanics for promoting customer brand engagement and loyalty over time.

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