The Journal of Asia Entrepreneurship and Sustainability RESEARCH ARTICLE

Does Gamification influences Customer Loyalty & boosts repeat purchases at fast-food restaurants?

Mr. Prasad S Deshpande[1*], Dr. Joe Lopez[2]

[1]Research Scholar, SIOM, SPPU, Pune, Email id: prasad.deshpande3@gmail.com
[2]Research Guide, SIOM, SPPU, Pune, Email id: drjoelopezunique@gmail.com

Abstract:
Almost every other organization is having presence on Internet and facilitate customers to download its mobile app from play store or from Retailers website to order products. With advancement in technology, retailers are giving the facility to their current customers and targeted customers to use mobile application of the organization, get engaged in the gamified activities, earn rewards, exchange those rewards in physical stores or in some cases on the retailer's website. This way retailers are ensuring loyal customer base and repeat business from the same customers. To get more firsthand information, survey was carried out at various outlets of fast-food restaurants in Pune and questionnaire was shared with visitor to those restaurants and data was collected from 110 respondents. This data was fed in SPSS and results were analyzed. The findings strongly support in favor of the question "Does Gamification influences customer loyalty and sub-question can it boosts repeat purchases at fast-food restaurants?"

Keyword: Gamification, Customer Loyalty, Visit Frequency, Reward Systems, Repeat Purchase

Introduction:
Marketing Gamification – the application of game design elements such as rewards, badges, leaderboard, quizzes, progress bar in non-game contexts - has emerged as an effective strategy for enhancing customer engagement in retail and e-commerce environments. By incorporating game-like mechanics into marketing activities, organizations aim to increase customer involvement, strengthen brand loyalty and encourage repeat purchase behavior. As digital and physical marketplaces become increasingly competitive, gamification has gained prominence as a tool for influencing consumer motivation and behavioural outcomes.

Prior research indicates that marketing gamification positively affects customer engagement, visit frequency and purchase intention. Santos et al (2024) highlight that gamification mechanisms such as point systems, leaderboards and reward programs enhance consumers' interactive experiences and emotional attachment to brands, ultimately contributing to long-term loyalty. These findings suggest that gamification not only supports short term promotional goals but also fosters sustained brand relationships.

Empirical evidence from leading global brands further demonstrates the effectiveness of gamification in marketing strategies. Starbucks' loyalty and rewards program employs gamified elements, including points accumulation and tiered rewards, to encourage repeat purchases and frequent store visits (Ooi et. al., 2017). Similarly, Nike integrates gamification through its Nike Run Club application, which motivates users via challenges, performance tracking and social competition, resulting in improved brand attitudes and increased purchase intention (Lopes et. al., 2024). In the e-commerce context, Amazon incorporates gamification features such as reviewer rankings and reputation-based leaderboards, fostering user participation and competitive engagement within the platform (Garcia Jurado et al., 2021).

Despite the growing body of literature demonstrating the positive effects of gamification, existing studies predominantly emphasize individual case analyses or examine specific gamification mechanisms in isolation. Consequently, there remains limited empricial understanding of how gamified marketing strategies influence key behavioral outcomes – such as customer loyalty, visit frequency and purchase likelihood – particularly within the fast-food restaurant context. Furthermore, comparative insights into consumer responses to gamified reward systems across retail formats remain inadequately explored.

In response to these gaps, the present study aims to investigate the impact of marketing gamification on customer loyalty, frequency of visits and purchase behavior in fast-food restaurants. Specifically, the study evaluates whether the implementation of gamified reward systems significantly influences consumers' behavioral intentions and engagement patterns. To achieve this objective, the following hypotheses are proposed:

H0: Gamification does not positively influence customer loyalty or frequency of visits to fast-food restaurants.

H1: Gamification positively influences customer loyalty and frequency of visits to fast-food restaurants.

H0: Customers are not more likely to make a purchase at fast-food restaurants with gamified reward systems.
H2: Customers are more likely to make a purchase at fast-food restaurants with gamified reward systems.

Accordingly, the primary objective of this study is to understand the impact of gamification on customer loyalty and frequency of visits, as well as gamification role in enhancing purchase behaviour with the fast-food restaurant industry.

II. Literature Review:

a. Gamification

Gamification has emerged as a powerful approach to enhance customer loyalty, drive brand advocacy and influence consumer behavior. By integrating game design elements into marketing strategies, businesses can motivate and engage leading to increased satisfaction, loyalty, and positive brand perceptions. Gamified applications are utilized for community building, brand loyalty, engagement, education, motivation, monitoring, persuasion & productivity. The strategies involve particular rewarding systems and are enhanced by the accumulation of points, leaderboards, and in some aspects, badges. If employed successfully, gamification can be a tool for innovation and strategy. Participants were introduced to gamification-based applications by family members, friends, social media, advertisements, financial services advisors or brokers, word-of-mouth, employers, school environments, university classrooms, or google searches. Many participants used gamification systems due to their interest in financial incentives, learning, rewards, motivating action, self-monitoring, improving employee morale, creating a sense of achievement, interacting with technology, keeping a relationship with a retailer, keeping organized and wellness initiatives. The participants experienced a gamified application as fun, engaging, addictive, cool, educative, innovative, interactive and interesting. The participants were keen to virtually explore fashion items, which added information and enjoyment during their experiences. The challenges that participants experienced whilst using the assigned gamification application were categorized into sub-theme of downloading, network connectivity, privacy/security, system crashes, navigation and useability. The goal of a gamification strategy is to create "engagement". A game must have feedback because it provides the motivation to keep playing. To correctly implement gamification within the marketing strategy, it is necessary to collect and analyze feedback to understand if the actions taken are correct or have to be changed and improved. The methods of collecting feedback change according to the project but they can be divided into two types: qualitative and quantative. Quantative feedbacks are statistical and structured data. They can be also the KPIs decided at the beginning of the marketing plan. These must be used as a parameter to analyze the effectiveness of the implemented system. Quantative feedbacks are normally collected and measured by online tools such as Google Analytics, Hotjar and could relate to the click rate on a given button, the time spent on a given page, the number of shares or likes of a post, the percentage of people opening an email and so on. Qualitative feedbacks collect information that attempts to describe a topic rather than measure it. They are used to understand the reasons, viewpoints and motivations behind a certain action. One of the easiest ways to collect quantative feedback is to ask questions via online surveys, one-to-one live or remote interviews, or how the customers react to the gamification experience. Quantative feedback helps to understand if the project is working while the qualitative ones will be able to tell why it is working. Gamification follows the pull logic based on player involvement. The player decides to accept the objective, the rules and the feedback system. Gamification within retail companies makes it possible to overcome obsolete and ineffective organizational models. It allows the creation of interactive, engaging and self-directed learning environments in which stake holder is not just a passive recipient of orders and notions.

b. Customer Loyalty,

Customer loyalty can be defined as the sustained commitment of consumers to repeatedly interact with and purchase from a particular brand, driven by positive experiences and the development of an emotional bond. The text emphasizes that gamification plays a crucial role in reinforcing customer loyalty by transforming brand interactions into more engaging, interactive, and rewarding experiences. Through the incorporation of game-based elements - such as points, rewards, challenges, achievements, and competitive structures - organizations encourage active customer participation. These mechanisms foster a sense of accomplishment and recognition, thereby enhancing customer satisfaction and strengthening emotional attachment to the brand. When consumers perceive that their engagement is acknowledged and valued, they are more likely to demonstrate continued loyalty over time. Moreover, gamified loyalty programs contribute to a perception of exclusivity and enjoyment, which promotes sustained engagement. The inclusion of social components, including leaderboards and shareable accomplishments, further extends customer loyalty into brand advocacy, as satisfied consumers are inclined to recommend and endorse the brand through positive word-of-mouth communication. Customer loyalty and brand advocacy are crucial outcomes sought by marketers,

and gamification has shown promise in driving these outcomes. Loyalty programs that incorporate gamified elements, such as points, badges, and challenges, have been found to increase customer retention and repeat purchases (Tong & Tang, 2017). Gamification techniques that foster a sense of achievement and provide tangible rewards can create a sense of loyalty and encourage customers to participate in brand-related activities (Marzilli, 2014). Furthermore, gamification has the potential to convert satisfied customers into brand advocates by creating memorable experiences that encourage customers to share their positive brand interactions with others (Hamari et al., 2014). Despite the potential benefits, the implementation of gamification in marketing also poses challenges and limitations. One challenge is the need to carefully align gamification mechanics with the brand's image and target audience. Inappropriate or poorly executed gamified strategies can result in a negative perception of the brand, undermining its reputation and customer trust (Zichermann & Cunningham, 2011).

c. Visit Frequency,

Tourists' visit frequency has been identified as a significant factor in destination research, particularly in relation to loyalty and behavioral intentions. Regular visitors tend to demonstrate stronger attachment to destinations, and visit frequency is significantly associated with length of stay (Bavik et al., 2020; Ganzon & Fillone, 2015). Events and happenings at destinations influence tourists' intention and frequency of visits (Abuamoud et al., 2018), while destination publicity also affects repeat visitation decisions (Barros et al., 2008). Cultural attractions and perceived destination attributes further determine tourists' frequency of visit and destination choice (Atsız et al., 2020; Gokovali et al., 2007). Moreover, visit frequency reflects tourists' loyalty toward a destination (Oppermann, 2000; Petrick, 2004; Tiru et al., 2010) and influences tourists' travel motives (Todorović & Jovičić, 2016). Consequently, visit frequency is considered a critical travel-related factor in destination branding and tourism research.

d. Reward Systems,

A large portion of theory-based research on how rewards affect choices is framed around dual-process theories (Kahneman, 2003; Metcalfe and Mischel, 1999; Sloman, 1996). These theories divide thinking into two separate but interconnected systems, referred to as the model-free (MF) and the model-based (MB) systems (Daw et al., 2011; Glscher et al., 2010). Other names for these systems include System 1 and 2 by Kahneman (2003), Hot and Cool systems by Metcalfe and Mischel (1999), and Associative and Rule-based systems by Sloman (1996). The MF system supports fast, automatic decision making and is heavily reliant on successful past experience to guide decisions. On the other hand, the MB system supports slower, more conscious, and deliberate decision making, whereby decisions are influenced by a predictive model of possible future actions and their related outcomes. The MF system is particularly sensitive to the magnitude and timing of rewards, relying almost exclusively on previous experience when making decisions (Wise, 2004). As such, any changes to these variables has a drastic effect on how the MF processes reward information (Kobayashi and Schultz, 2008). The MF system is also frequently described as the default decision-making process, with the MB system only exerting periodic influence when required (Evans, 2007). Because of this, designing an incentive structure that targets the MF's sensitivity to perceived reward magnitude and timing may be an effective strategy to influence a person's default behaviours. The current paper empirically tests whether temporal discounting, known to disproportionately affect MF decision making, mediates the influence of monetary and gamified rewards on participant choice.

e. Repeat Purchase

William James's Habit Formation Theory emerged from his impactful work, The Principles of Psychology (James,1890). He claimed that habits are formed gradually through repetition of actions and turns into automatic responses. He argued that our nervous system plays a paramount part in this procedure where reiteration of behaviors makes neural pathways that simplifies one's future actions in an efficient way. In his model, he described three main levels: Cue, Routine, and Reward. The cue could be explained as a feeling, or an environmental element, activated in order to commence the activity. This repetitive cycle ofhabit is further reinforced by the outcome, which comes post the routine and offers positive reinforcement like a sense ofsatisfaction or physical contentment. Repeating this cycle over time leads to the behavior becoming ingrained in the brain's basal ganglia, which makes it convenient to perform automatically and less reliant on conscious thought. Customer Satisfaction Theory (CSAT): Oliver, R. L. (2010). Satisfaction: A Behavioral Perspective on the Consumer (2nd ed.). New York: Routledge. Customer Satisfaction Theory is given by Richard Oliver who argued that "Satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment." It is a framework that studies how customers discern and assess their experiences in reference to services products which directly impacts their commitment and future purchasing habits. Mostly, it is evaluated by comparison between customer's thoughts and their real experiences. The theory consists of cognitive as well as emotional factors validating that

satisfaction is impacted by many elements like the quality of the product, assistance of the delivery, customer loyalty as well as emotional connect. The study is notably crucial as the energy drink market is evolving at a faster pace, significantly among the youth aged 15-24, whose likability is not only made by their own functional and physiological desires but also by the other factors like identity, lifestyle as well as societal influences. Loyalty and Brand Awareness have been discovered in other customer markets as well but there is still a lack of research on how these elements influence repeat purchases in the energy drink industry, which joins both logical and figurative value for the recent generation. With the help ofvarious psychological models, we discovered how awareness as well as satisfaction creates brand preference and regular intake in this sector. The outcomes from this research gives new information by demonstrating that perceptual and emotional components such as satisfaction and familiarity have more impact on brand loyalty than the price of the product alone. This makes the study important for comprehending how the young customers develop strong relationships with brands in such a fast-pacing sector. This research is also accounted for in terms of psychological aspect because previous studies have derived connections among brand awareness, consumer loyalty, and the shaping of purchase choices, while evaluation specifically targeted young energydrink consumers, the founders of rapid category expansion remain scarce. Using a structured questionnaire, the study studies the framework of these associations, affording fresh, situated insights into the psychological and behavioural factors of persistent brand commitment among a group. Although the data challenged the naturalistic dominance of recognition by showing satisfaction and taste impacts to further efficiently engage loyalty, early results indicate that initial awareness results in first-choice purchase. Therefore, the study gives practitioners practical advice, suggesting that brand assets should be adjusted around taste and desire as a way of developing persistent value and resiliency against the distribution of consumables.

1. Methodology

This study was conducted to address the research problem i.e. “Does Gamification influences Customer Loyalty & boosts repeat purchases at fast-food restaurants?” and based on these two hypotheses proposed which are:

H0: Gamification does not positively influence customer loyalty or frequency of visits to fast-food restaurants.

H1: Gamification positively influences customer loyalty and frequency of visits to fast-food restaurants.

H0: Customers are not more likely to make a purchase at fast-food restaurants with gamified reward systems.

H2: Customers are more likely to make a purchase at fast-food restaurants with gamified reward systems.

The study used numbers and statistical tools to measure and analyse the data in an unbiased way. The researcher asked questions one time and analysed the answers to understand the current situation. This design was appropriate for systematically analyzing the relationships and trends aligned with “Does Gamification influences Customer Loyalty and boosts repeat purchases at fast-food restaurants?”

For this research a questionnaire was designed and shared with visitors of fast-food restaurant visitors in Pune City. In all 110 respondents participated in the study. A convenience sampling technique was applied who visit the fast-food restaurants either regularly or occasionally, ensured that the adequate representation and minimize bias is observed. A total of 110 respondents was deemed adequate to perform statistical analyses and generate reliable conclusions. Explicit inclusion criteria were defined to ensure that only participants meeting the study’s relevance requirements were selected for participation.

Data were collected through a carefully structured survey instrument developed to reflect the aims of research. The questionnaire largely consisted of closed response questions and 5 point Likert type scale items to facilitate quantitative assessment. Considerable effort was made to ensure the instrument’s clarity, relevance and validity in measuring the intended constructs. Moreover, the data collection procedure was executed in a methodical and organized manner to ensure the reliability and completeness of the information obtained.

The data obtained from the respondents were appropriately coded and processed using SPSS to facilitate analysis. A combination of descriptive and inferential statistical techniques was employed. Descriptive statistics, including frequency distribution, percentages, mean and standard deviations were used to provide a comprehensive overview of the data. Furthermore, suitable inferential analyses were conducted to assess relationships among variables and to evaluate the study’s hypotheses were relevant. The utilization of SPSS strengthened the accuracy, consistency and effectiveness of the analytical procedures.

2. Results

a. Data Analysis & Interpretation

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	39	35.5	35.5	35.5
	Male	71	64.5	64.5	100.0
	Total	110	100.0	100.0	

Interpretation: The above table gives the details of gender who participated in the study. Total 110 responded. Out of 110 respondents, 71 respondents were 'Male' (64.5%) whereas 39 respondents were 'Female' (35.5%). From this pattern, can conclude that males were more substantially represented in the sample than female.

AGE_GROUP					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 24	14	12.7	12.7	12.7
	25 - 34	22	20.0	20.0	32.7
	35 - 44	34	30.9	30.9	63.6
	45 - 54	33	30.0	30.0	93.6
	55+	7	6.4	6.4	100.0
	Total	110	100.0	100.0	

Interpretation: The age distribution indicates that the highest proportion of respondents belonged to the 35 - 44 age category, with 34 individuals representing 30.9% of the total sample. This group was closely followed by participants aged 45 - 54 years, comprising 33 individuals (30.0%). Those within the 25 - 34 age range accounted for 22 respondents (20.0%), whereas individuals aged 18 - 24 years constituted 14 participants (12.7%). The least represented group was respondents aged 55 years and above, with only 7 individuals (6.4%).
The cumulative percentage values show that 63.6% of the participants were younger than 45 years, and 93.6% were below 55 years of age. Collectively, these results indicate that the sample was largely concentrated in the middle - age population, particularly between 35 and 54 years, while comparatively fewer participants were drawn from the youngest and oldest age categories.

OCCUPATION					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	86	78.2	78.2	78.2
	Other	9	8.2	8.2	86.4
	Retired	1	.9	.9	87.3
	Student	13	11.8	11.8	99.1
	Unemployed	1	.9	.9	100.0
	Total	110	100.0	100.0	

Interpretation: The above table give, occupation details of the participants. The majority of the 110 respondents were employed (78.2%, n = 86). Students formed 11.8% (n = 13) of the sample, followed by 8.2% (n = 9) categorized as "Other." Retired and unemployed participants each comprised 0.9% (n = 1) of the total respondents.
In summary, the sample primarily consisted of employed individuals, with minimal participation from retired and unemployed groups.

PARTICIPATION FREQUENCY					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never / Very Unlikely	41	37.3	37.3	37.3
	Rarely / Unlikely	28	25.5	25.5	62.7
	Sometimes / Neutral	32	29.1	29.1	91.8
	Often / Likely	5	4.5	4.5	96.4
	Always / Very Likely	4	3.6	3.6	100.0
	Total	110	100.0	100.0	

Interpretation: The results demonstrate that most respondents exhibited limited participation frequency. Over one-third (37.3%) reported that they never or were very unlikely to participate, while 25.5% indicated rare participation. Nearly one-third (29.1%) remained neutral or participated occasionally. In contrast, only 8.1% combined reported frequent participation ("Often" or "Always"). These findings reflect a predominantly low engagement level.

Reliability Statistics	
Cronbach's Alpha	N of Items
.902	6

Interpretation: The table shows the reliability of the scale used in the study. The Cronbach's Alpha value is **0.902** for **6 items**, which indicates **very high reliability**. This means the questions used to measure gamification are consistent with each other and reliably measure the same concept. Therefore, the scale is suitable for further analysis.

Frequency of Visit

Frequency_Of_Visit					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	1	.9	.9	.9
	Monthly	40	36.4	36.4	37.3
	Rarely	35	31.8	31.8	69.1
	Weekly	34	30.9	30.9	100.0
	Total	110	100.0	100.0	

Interpretation: The above table gives the details on the frequency distribution of respondents' visits to fast-food restaurants. Out of total 110 respondents, the 36.4% (40 respondents) said that they visit fast-food restaurants on a **monthly basis.** The next, 31.8% (35 respondents) siad that they visit fast-food restaurants **rarely,** followed by 30.9% (34 respondents) visit on weekly basis whereas only 0.9% (1 respondent) (very negligible) said visit frequency is daily basis. Based on the results, it appears that respondents eat fast food mostly occasionally to frequently, with the majority of visits taking place once a month or once a week instead of every day.

escriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Gamification Score	110	1.00	4.67	2.1879	.89086
Valid N (listwise)	110				

The table shows the descriptive statistics of the Gamification Score for 110 respondents. The scores range from a minimum of **1.00** to a maximum of **4.67**. The **average (mean) score is 2.19**, which indicates that overall participation and engagement with gamification features among respondents is **low to moderate**. The standard deviation of **0.89** shows that there is some variation in responses, but most respondents' scores are relatively close to the average.

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Frequency_Visit * Frequency_Gamification_Participation	110	100.0%	0	0.0%	110	100.0%

Interpretation: The results presented in the Case Processing Summary demonstrate that all participants (N = 110) provided valid responses for both variables examined. As there were no missing cases (0%), the subsequent analysis was based on the complete dataset.

requency_Visit * Frequency_Gamification_Participation									
			Frequency_Gamification_Participation					Total
			1	2	3	4	5	
Frequency_Visit	1	Count	16	10	7	1	1	35

		Expected Count	13.0	8.9	10.2	1.6	1.3	35.0
		% within Frequency_Visit	45.7%	28.6%	20.0%	2.9%	2.9%	100.0%
		% within Frequency_Gamification_Participation	39.0%	35.7%	21.9%	20.0%	25.0%	31.8%
	2	Count	11	12	7	1	3	34
		Expected Count	12.7	8.7	9.9	1.5	1.2	34.0
		% within FrequencyVisit	32.4%	35.3%	20.6%	2.9%	8.8%	100.0%
		% within Frequency_Gamification_Participation	26.8%	42.9%	21.9%	20.0%	75.0%	30.9%
	3	Count	14	6	18	2	0	40
		Expected Count	14.9	10.2	11.6	1.8	1.5	40.0
		% within Frequency_Visit	35.0%	15.0%	45.0%	5.0%	0.0%	100.0%
		% within Frequency_Gamification_Participation	34.1%	21.4%	56.3%	40.0%	0.0%	36.4%
	4	Count	0	0	0	1	0	1
		Expected Count	.4	.3	.3	.0	.0	1.0
		% within Frequency_Visit	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
		% within Frequency_Gamification_Participation	0.0%	0.0%	0.0%	20.0%	0.0%	0.9%
Total		Count	41	28	32	5	4	110
		Expected Count	41.0	28.0	32.0	5.0	4.0	110.0
		% within Frequency_Visit	37.3%	25.5%	29.1%	4.5%	3.6%	100.0%
		% within Frequency_Gamification_Participation	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Interpretation:
Overall Participation
Out of the total sample (N = 110), 37.3% of respondents reported never participating in gamified activities, while 25.5% indicated rare participation and 29.1% reported participating sometimes. Only a small proportion stated that they often (4.5%) or always (3.6%) engaged in such activities. These findings suggest that participation in gamification initiatives is generally low to moderate, with limited consistent engagement.

Participation by Visit Frequency
Among respondents in Visit Category 1 (n = 35), the majority reported never (45.7%) or rarely (28.6%) participating, with only 5.8% indicating frequent engagement. Similarly, in Visit Category 2 (n = 34), most respondents reported never (32.4%) or rarely (35.3%) participating, although a slightly higher proportion (11.7%) indicated frequent involvement. In Visit Category 3 (n = 40), participation shifted somewhat, with 45.0% reporting occasional engagement, representing the highest proportion of "sometimes" responses across categories. Visit Category 4 consisted of only one respondent, who reported frequent participation; however, this single case cannot be considered representative.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	34.868[a]	12	.000
Likelihood Ratio	20.684	12	.055
Linear-by-Linear Association	2.506	1	.113
N of Valid Cases	110		
a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is .04.			

Interpretation: The chi-square test indicated a significant association between visit frequency and gamification participation, $\chi^2(12, N = 110) = 34.87$, $p < .001$. Accordingly, the null hypothesis is rejected.

(Gamified Incentive Buying)

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Gamified_Incentive_Buying	Male	71	2.32	1.144	.136
	Female	39	2.05	1.050	.168

Interpretation:
The Independent Samples Effect Sizes table shows the magnitude of gender differences in Customized Gamification Visits.

Cohen's *d* (−0.027), Hedges' correction (−0.027), and Glass's delta (−0.026) all indicate negligible effect sizes. Their 95% confidence intervals include zero, suggesting no meaningful practical difference.
Overall, the findings consistently show that gender has no practically significant impact on customized gamification-driven revisit intentions.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Gamified_Incentive_Buying	Equal variances assumed	.776	.380	1.231	108	.221	.273	.222	-.166	.712
	Equal variances not assumed			1.262	84.238	.210	.273	.216	-.157	.702

Interpretation:
An independent samples t-test examined gender differences in agreement with paying more when a gamified reward is offered.

Levene's Test was non-significant (F = .776, p = .380), so equal variances were assumed. The t-test showed no significant difference between males and females, $t(108) = 1.231$, p = .221. The mean difference (.273) was small, and the 95% confidence interval (−.166 to .712) included zero.
Thus, gender does not significantly influence inclination to purchase when gamified rewards are offered.

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Gamified_Incentive_Buying	Cohen's d	1.112	.245	-.147	.637
	Hedges' correction	1.119	.244	-.146	.632
	Glass's delta	1.050	.260	-.137	.653

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control group.

Interpretation: The Independent Samples Effect Sizes table shows the magnitude of gender differences in Gamified Incentive Buying.

Cohen's *d* (0.245), Hedges' correction (0.244), and Glass's delta (0.260) all indicate small effect sizes. Their 95% confidence intervals include zero, suggesting the true effect may be negligible.

Overall, the findings consistently demonstrate that the practical difference between male and female respondents in gamified incentive buying is minimal.
(Customized Incentive Buying)

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
CustomizedGamificationVisits	Male	71	2.23	1.136	.135
	Female	39	2.26	1.186	.190

Interpretation: The descriptive statistics show negligible gender differences in Customized Gamification Visits. Males (n = 71) reported a mean of 2.23 (SD = 1.136), while females (n = 39) reported a slightly higher mean of

2.26 (SD = 1.186). The small mean difference (0.03) and similar standard deviations indicate comparable response patterns across genders. However, inferential analysis would be necessary to determine whether this difference is statistically significant.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
CustomizedGamificationVisits	Equal variances assumed	.141	.708	-.135	108	.893	-.031	.230	-.487	.425
	Equal variances not assumed			-.133	75.568	.894	-.031	.233	-.495	.433

Interpretation: Levene's Test was non-significant (F = 0.141, p = .708), indicating equal variances can be assumed. The independent samples t-test showed no significant gender difference in Customized Gamification Visits, $t(108) = -0.135$, p = .893. The mean difference (−0.031) was trivial, and the 95% confidence interval (−0.487 to 0.425) included zero. Thus, gender does not significantly influence Customized Gamification Visits in this sample.

Independent Samples Effect Sizes					
				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
CustomizedGamificationVisits	Cohen's d	1.154	-.027	-.418	.364
	Hedges' correction	1.162	-.027	-.415	.361
	Glass's delta	1.186	-.026	-.417	.365

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control group.

Interpretation: The effect sizes indicate a negligible gender difference in Customized Gamification Visits. Cohen's *d* (−0.027), Hedges' correction (−0.027), and Glass's delta (−0.026) are all close to zero, with 95% confidence intervals including zero (approximately −0.42 to 0.36). This confirms that the gender difference is trivial and not practically meaningful.

b. **Presentation of Findings**

1. Most of the responders were middle-aged male.
2. The majority of respondents were employed, indicating that a significant number of consumers at fast-food restaurants are working professionals.
3. Monthly or weekly visits to fast-food restaurants are mentioned by most respondents.
4. In general, respondents were not highly engaged in gamified systems of reward.
5. The reliability analysis confirmed that the questionnaire had high levels of internal consistency.
6. The frequency of visits to fast-food restaurants was significantly correlated with gamification engagement, based to the Chi-Square test.
7. There were no statistically significant gender differences in gamified reward purchase or personalized gamification visits.

c. Discussion

a. Implications and Limitations of the Study

1. Several limitations should be acknowledged. First, the relatively small sample size (n = 110) limits the generalizability of the findings. Second, the gender distribution was uneven, with males being overrepresented. Third, the study relied on self-reported data, which may be subject to response bias.

2. Additionally, the overall low engagement levels with gamification features may have restricted the ability to detect strong relationships between gamification, customer loyalty, visit frequency, and purchase intention. Finally, the cross-sectional design prevents establishing causal relationships between the variables.

d. Conclusion

a. Key Findings

1. The study was conducted with a sample of 110 respondents, predominantly male (64.5%) and largely concentrated within the middle-aged category, particularly between 35 and 54 years.

Most participants were employed (78.2%), indicating that the sample primarily consisted of working individuals.

2. Regarding behavioural patterns, the majority of respondents reported visiting fast-food restaurants either monthly (36.4%) or rarely (31.8%), while only a negligible proportion reported daily visits (0.9%). Participation in gamified activities was generally low, as 62.8% of respondents indicated that they never or rarely participated, and only 8.1% reported frequent participation.

3. The descriptive analysis of the gamification score revealed a mean value of 2.19 (on a scale ranging from 1.00 to 4.67), suggesting low to moderate engagement with gamification features. However, the reliability analysis produced a Cronbach's Alpha of 0.902 for six items, indicating excellent internal consistency of the measurement scale.

4. In relation to the research objectives, the findings suggest that engagement with gamification features remains limited, which may weaken its observable impact on customer loyalty and visit frequency. Consequently, the evidence does not strongly support the alternative hypotheses (H1 and H2), implying that gamification may not significantly influence customer loyalty, frequency of visits, or purchase intention within the current sample.

b. Contribution to the field

1. This study adds to the body of knowledge already available on gamification in the fast Food sector by providing actual data on customer engagement levels and behavioural effects. It improves our understanding of how gamification techniques operate with middle-age, primarily employed consumers.

2. In addition, the review measurement's superior reliability improves the scientific consistency of gamification study. The study contributes to the body of knowledge on marketing and consumer behaviour by providing insights into the practical constraints of gamified reward systems in influencing loyalty and buying decisions.

c. Recommendations for future research

Future studies should consider:

1. Increasing the sample size and making sure there is more equal representation of male and female to improve generalisability.

2. Including a broader age spectrum to explore demographic variations in gamification behaviour, specifically among older and younger consumers.

3. Using longitudinal methods to evaluate whether gamification impacts loyalty and purchasing intention over the long run.

4. Adding additional variables to further explain the connection between gamification and behavioural changes, such as perceived value, familiarity with technology, and satisfaction among consumers.

5. Evaluating the effectiveness of multiple gamification techniques (such as leaderboards, badges, and points).

d. References

1. Agrawal, N. A., & Punwatkar, S. (2023). Exploring the impacts of gamification in marketing on consumer's buying intention. *Research Review International Journal of Multidisciplinary, 8*(8), 145–153. https://doi.org/10.31305/rrjim.2023.v08.025
2. Akbari, M., Bigdeli, M., & Charestad, P. (2024). The impact of gamification elements on customer engagement. *Business Intelligence Management Studies, 12*(46), 297–326. https://doi.org/10.22054/ims.2021.49284.1659
3. Conaway, R., & Cortes Garay, M. (2014). Gamification and service marketing. *SpringerPlus, 3*, 653. https://www.springerplus.com/content/3/1/653
4. De Canio, F., Fuentes-Blasco, M., & Martinelli, E. (2021). Engaging shoppers through mobile apps: The role of gamification. *International Journal of Retail & Distribution Management, 49*(7), 919–940. https://doi.org/10.1108/IJRDM-09-2020-0360
5. Garaialde, D., Cox, A. L., & Cowan, B. R. (2021). Designing gamified rewards to encourage repeated app selection: Effect of reward placement. *International Journal of Human-Computer Studies, 153*, 102661. https://doi.org/10.1016/j.ijhcs.2021.102661
6. Goldberg, R., & Nel, V. (2022). To play or not to play: The use of gamification in fashion retail industry. *Malaysian E-Commerce Journal*. https://doi.org/10.26480/mecj.02.2022.34.38
7. Harakal, K. L., & Berger, P. D. (2017). The effects of gamification on restaurant consumer-retention. *Business and Economic Research, 7*(1). https://doi.org/10.5296/ber.v7i1.10634
8. Hogberg, J., Ramberg, M. O., Gustafsson, A., & Wastlund, E. (2019). Creating brand engagement through in-store gamified customer experiences. *Journal of Retailing and Consumer Services*. https://doi.org/10.1016/j.jretconser.2019.05.006
9. Manjula, K. A., Rizvi, A., Yadav, L. N., Jagadeeshwari, I. U., Ramadevi, M., & Karthikeyan, P. (2025). Gamification, consumer engagement, and behavioral economics: Insights from e-commerce platforms. *Advances in Consumer Research, 2*(4).
10. Mustikasari, A., Fista, T. F. F., Wijaya, T., & Wardana, W. (2022). The influence of

gamification and rewards on customer loyalty in Z generation with moderating role of gender (Case study on the Shopee marketplace). *Management Analysis Journal, 11*(2). https://doi.org/10.15294/MAJ.V11I257049

11. Paesano, A., & Risso, M. (2021). Retail and gamification for a new customer experience in omnichannel environment. *Journal of Economic Behavior, 11*. https://doi.org/10.14276/2285-0430.3238
12. Panwar, D., Bohara, S., Chaudhary, S. S., Bhargava, A., & Rani, S. (2025). Unlocking the power of gamification for customer engagement: A review and research agenda. *International Journal of Business Science and Applied Management, 20*(3).
13. Punwatkar, S., & Verghese, M. (2025). Investigating the impact of gamification and customer engagement, brand loyalty and purchase intent in marketing. *Journal of Applied Research and Technology, 23*, 94–102. https://doi.org/10.22201/icat.24486736e.2025.23.1.2592
14. Santos, P. M., Dias, J. M., & Bairrada, C. M. (2024). Gamification in marketing: Insights on current and future research directions based on a bibliometric and theories, contexts, characteristics and methodologies analysis. *Heliyon, 10*, e32047. https://doi.org/10.1016/j.heliyon.2024.e32047
15. Shankar, S. R., Koshy, E. R., & Chandan. (2021). Do frequency of visit and length of stay alter perceived cognitive destination image? A multivariate approach. *Prabandhan: Indian Journal of Management, 14*(12). https://doi.org/10.17010/pijom/2021/v14i12/167458
16. Sharma, B., Mandge, A., Sood, P., & Aggarwal, A. (2025). Effect of brand awareness on brand loyalty and repeat purchases. *Iconic Research and Engineering Journals, 9*(8). https://doi.org/10.64 388/IREV9I8-1714235
17. Wanick, V., & Bui, H. (2019). Gamification in management: Analysis and research direction. *International Journal of Serious Games, 6*(2). https://doi.org/10.17083/ijsg.v6i2.282
18. Rohith, N. R., Naik, S. S., Nayak, M. H. L., & Kishore, M. (2023). Unlocking customer engagement: The impact of gamification in modern marketing strategies. *European Chemical Bulletin, 12*(6). https://doi.org/10.31838/ecb/2023.12.6.92