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Does Gamified Marketing Work on Customer Loyalty?

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Abstract: This paper investigates and analyses the current gamified marketing industry from three aspects: industry development, typical companies and future customer groups. The data is obtained from online data and original surveys, both quantita-tive and qualitative analysis are used, and the DMC model is applied to analyses the data. This paper summarizes the current development status of the industry and puts forward the view that the industry has a large development space and good development prospects. It also analyses the customer loyalty of Duolingo, a representative company in the industry. Finally, an online questionnaire survey was conducted on consumers of gamified marketing, and ways to attract more consumers to online credit services were proposed.

Keywords: Gamification, Customer Loyalty, DMC Model, Intraclass Variance Analysis.

1. Introduction

Today, gamification is a widely trusted and applied technique for encouraging participation. As a phenomenon, the strength of gamification lies in redesigning services and systems to replicate experiences like those shaped by games in order to drive individuals towards specific target behaviors [1].

With traditional brand marketing being highly competitive, the market is growing slowly. Strategies such as hiring celebrity endorsements and offline advertising are too costly, so many companies are turning their attention to online marketing.

Gamification is addictive because gaming is a form of active consumer engagement. Because the game first establishes a top goal and then breaks it down into different levels, it gives the consumer a sense of achievement during the game, which increases user loyalty.

In the part of research question 1, authors will mainly analyze the relationship between game marketing and customer loyalty based on the second-hand data on the network, and take Duolingo as an example for in-depth analysis, so as to demonstrate the impact of game marketing on improving customer loyalty.

In the research question 2, gamification marketing has been divided into four directions, fun, humanization, entertainment and reward by Jane McGonagall in the Reality Is Broken. In this work authors will explore the future trends of gamified marketing through data analysis.

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2. Literature Review

2.1. The Market Background of Current Gamification Marketing

In recent years, the concept of gamification, defined as "the use of game design elements in non-game contexts" [2]. Gamification marketing is usually an incentive mechanism that attracts and encourages voluntary participation through different game design elements, allowing customers to have multiple experiences of products and services, and enabling consumers to create value together with brands that are continuously involved in the game. In short, gamification is making other things as fun as a game, or as attractive as a game. According to most review studies, gamification does have positive effects and benefits for companies that use them. And it has been widely used in recent years to increase users' motivation in different areas [3], such as Duolingo putting language learning courses into a gamification environment, and LinkedIn adopted a ranking system in improving its personal data.

Loyalty programs are frequently referred to as "points" or "rewards" programs. They are offered by airlines, grocery stores, gas stations, hotels, car rental agencies, restaurants, coffee shops, book stores and so on [4]. To succeed to win customer loyalty, the brand needs to pay attention to customers, formulate brand communication and experience strategies from its own perspective, and clarify how to establish, maintain and strengthen the long-term relationship with the brand in the customer journey. A suitable loyalty program can help brands reap twice the result with half the effort in the increasingly competitive marketing battlefield. The success of the program lies in providing customers with specific rewards. The intention is to reward loyal, frequent buyers more often [5]. The importance of customer loyalty is self-evident, and countless companies are trying to develop various loyalty program to improve customer loyalty.

Although in the past few years researchers have conducted some studies about gamification or loyalty program [5-7], but no one has yet studied the relationship between gamification marketing and consumer loyalty, loyalty programs lie in providing specific rewards to customers, and that is what gamification provides for the customers, so we decided to use Duolingo as a case to discuss the relationship between gamification marketing and customer loyalty.

Based on the above related literature, the authors developed the following two research hypotheses :

H1: Gamification marketing has an obvious positive effect on customer participation and loyalty.

H2: Gamification marketing can make consumers intrinsically motivated to participate in activities and mind-flow experience, thus increasing the user's loyalty to the product.

Now, authors will take Duolingo app as an example to have a in-depth analysis and discussion of the gamification marketing with the DMC pyramid model.

2.2. DMC Model Analysis

Duolingo, a popular language learning app, is a typical example of a game-like marketing campaign that aims to increase user stickiness, while users want to learn languages in an effective and engaging way. Most common learning apps show all the lessons directly, leaving it up to the user to schedule and decide when and how they want to learn. But Duolingo puts these language learning courses in a gamified environment, which is analyzed in the DMC model as follows.

2.3. Dynamics - Goal Layering and Game Level Strategies

In Duolingo users can usually choose between three modes - easy, medium and hard - depending on their experience level and the level of difficulty they want to be challenged with. Duolingo offers a similar choice: if users want to skip the basic course, they must first pass a test to prove that they can cope with the more difficult parts. This prevents overly easy lessons from boring advanced users and

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prevents beginners from trying too challenging content too early and getting frustrated and giving up. And users are constantly being upgraded and unlocked through tests in Duolingo, using what they have learned in the course to pass tests and unlock the next stage of the course, just like fighting in a game. This certainly gives users a sense of achievement in learning the language and provides motivation for the next use, with consumers having more choice and initiative, thus increasing user engagement.

2.4. Mechanics - Communication, Feedback and Competitive Collaboration Strategies

Duolingo allows users to make friends and communicate with each other to make progress. A friend leaderboard is also available to give users a visual representation of their learning achievements. Feedback is given for each stage completed and a good 'communication relationship' is established between the user and the company, informing the user that they have successfully progressed and won the stage. Customers don't feel overtly persuaded by the business in this marketing process and is motivated to complete the task with good feedback like satisfaction and achievement [8].

2.5. Components - Motivation and Reward Strategies

Users are awarded a badge for each task they complete on Duolingo, which shows what they have achieved since they started learning. These badges 'degrade' over time, meaning that if users do not keep practicing what they have learnt in the course, they lose the badges they have earned, and these badges take on more meaning. And with each level in Duolingo there are more personalized experiences, such as access to props and personalized clothing and three special language knowledge levels that can be unlocked at each level. These rewards and personalized services satisfy three basic psychological needs - the need to be competent, the need to belong and the need for autonomy - which in turn increases intrinsic motivation and enhances user engagement [9].

3. Methodology

3.1. Research Approach & Research Design

Study 1: For this problem, second-hand data collected on the Internet will be used. To mainly collect the data of gamification marketing in recent years. And the DMC pyramid model will be used to analyse the current gamification marketing by quantitative analysis.

Study 2： This research searches data through an online questionnaire, created and distributed with the help of a platform called wjx.cn., in consideration of time and scale limit. With an online questionnaire, it is possible for me to reach people from all parts of China. The data focuses on the Four applications related to gamification marketing. The quantitative method is applied to analyzes the results of the questionnaire, in order to quantify the attitude of the participants.

3.2. Data Collection

Study 1: For the secondary data of research question 1, comparative analysis was used, and three factors with high correlation were selected. We collected the two launched the gamification marketing strategy in TIKTOK and weibo.com the two social media in recent years by several dynamic data, Huawei's data presents the trend of growth year by year, the ant forest project's data although not the trend has been growing, but after operations in recent years, has considerable achievements, So far, Ant Forest's official TikTok account has received 1,2075,000 likes and 533,000 followers.

Study 2: The results collected from the questionnaire will be analyzed by the SPSS, and descriptive statistics will be used to display the characteristics of the data. The questionnaire (male 67, female 44, total 111) uses convenience sampling, which means the participants voluntarily provide their

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responses. It will be handed out on social media platforms, where the participants will be mainly university students. These participants are considered to be high quality participants, since they are usually more aware of investment opportunities therefore provide more valid data. However, with similar backgrounds, they may present similar responses.

4. Result

4.1. Secondary Data Collection

According to the results of our analysis, gamification marketing has an obvious positive effect on customer participation and loyalty, and the attention of companies using gamification marketing in public continues to rise.

4.2. Questionnaire Data Collection

The average user rating of four different types of game content was classified by 27% before and after, and according to this classification, the ANOVA was analyzed with the user's rating of different gamification marketing strategies.

Table 1: Analysis of variance results.

	Preference for fun games (mean ± standard deviation)			*F*	*p*
	Below 4.500(*n*=27)	4.500~6.000(*n*=52)	Above 6.000(*n*=32)		
Apply fun marketing	3.31±1.20	5.17±1.01	5.93±0.68	54.673	0.000**
	Preference for humanized games (mean ± standard deviation)			*F*	*p*
	Below 4.250(*n*=26)	4.250~6.000(*n*=53)	Above 6.000(*n*=32)		
Apply humanized marketing	3.76±0.96	5.22±0.89	5.81±0.63	44.675	0.000**
	Preference for entertaining games (mean ± standard deviation)			*F*	*p*
	Below 4.350(*n*=29)	4.350~5.650(*n*=51)	Above 5.650(*n*=31)		
Apply entertainment marketing	4.04±1.40	5.17±0.98	5.66±1.04	16.757	0.000**
	Preference for rewarded games (mean ± standard deviation)			*F*	*p*
	Below 3.750(*n*=27)	3.750~5.440(*n*=54)	Above 5.440(*n*=30)		
Apply reward marketing	4.06±1.40	4.82±1.39	4.56±1.56	2.555	0.082

* $p<0.05$ ** $p<0.01$

From the table 1, it can be seen that the analysis of variance (full name is one-way ANOVA) is used to study the difference between user preferences and humanized games for application humanized marketing. As can be seen from the table 1, different user preferences of humanized game samples show significates for application humanized marketing ($p<0.05$), which means that different user preferences of interesting game samples all show significant differences in application fun marketing. Different user preferences for humanized game samples are different for application humanized marketing. Different user preferences for entertainment game samples show significant differences for all application entertainment marketing. However, different user preferences of rewarded game samples will not show significant for application reward marketing ($p>0.05$), which

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means that different user preferences of reward game samples all show consistency for application reward marketing, and there is no difference.

Table 2: Linear regression analysis results (n=111)

	Non-standardized coefficients		Standardized coefficients	*t*	*p*	VIF	R^2	Adjust R^2	*F*
	B	standard error	*Beta*						
constant	0.815	0.309	-	2.638	0.010**	-	0.636	0.633	*F* (1,109)=190.621, *p*=0.000
Prefer fun	0.820	0.059	0.798	13.807	0.000**	1.000			

Dependent variable: Apply fun marketing

D-W: 1.742

	Non-standardized coefficients		Standardized coefficients	*t*	*p*	VIF	R^2	Adjust R^2	*F*
	B	standard error	*Beta*						
constant	2.032	0.323	-	6.292	0.000**	-	0.460	0.455	*F* (1,109)=92.878, *p*=0.000
Prefer humanized	0.610	0.063	0.678	9.637	0.000**	1.000			

Dependent variable: Apply humanized marketing

D-W: 1.329

	Non-standardized coefficients		Standardized coefficients	*t*	*p*	VIF	R^2	Adjust R^2	*F*
	B	standard error	*Beta*						
constant	2.854	0.438	-	6.518	0.000**	-	0.192	0.185	*F* (1,109)=25.901,*p*=0.000
Prefer entertainment	0.442	0.087	0.438	5.089	0.000**	1.000			

Dependent variable: Applied entertainment marketing

D-W: 0.513

	Non-standardized coefficients		Standardized coefficients	*t*	*p*	VIF	R^2	Adjust R^2	*F*
	B	standard error	*Beta*						
constant	4.005	0.487	-	8.220	0.000**	-	0.013	0.004	*F* (1,109)=1.437,*p*=0.233
Prefer reward	0.124	0.103	0.114	1.199	0.233	1.000			

Dependent variable: Application reward marketing

D-W: 1.958

* $p<0.05$ ** $p<0.01$

As can be seen from the table 2, the model formula is: application fun marketing = 0.815 + 0.820 * user preference fun game, the model R square value is 0.636, which means that the user preference for fun game can explain the 63.6% change in application fun marketing. When performing the F test on the model, it is found that the model passes the F test (F=190.621, p=0.000<0.05), which means that the user's preference for fun games will definitely have an impact on the application of fun marketing. In the same way, all of the user preferences for humane games will have a significant positive impact on the humanization of the application. All of the user preferences for entertainment games will have a significant positive impact on the marketing of application entertainment. However, the application of reward marketing = 4.005 + 0.124 * user preference for prize games, the model R square value of 0.013, meaning that the user preference for prize games can explain the reason for the 1.3% change in application reward marketing. When the model is F-tested, it is found that the

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model does not pass the F test (F=1.437, p=0.233>0.05), which means that the user's preference for prize games does not affect the application of reward marketing, so the influence of independent variables on the dependent variables cannot be specifically analyzed.

According to our analysis results, consumers who prefer four different types of game content have corresponding feedback on different gamification marketing strategies adopted, such as consumers who prefer fun to show a higher degree of loyalty to products that adopt interesting marketing strategies, and humanization and entertainment also show similar results; but there is no same linear regression result in reward game marketing, which may be due to the difficulty of the redemption process and the lack of attractive rewards.

5. Conclusion

From the above analysis we can see that the DMC pyramid model has a key role to play in the analysis and use of gamification, and that gamification varies significantly by preference. The factor "rewarding", which has the strongest game-like character, is the least valued by the clients of the gamified marketing market.

This article has made managers aware that gamification is taking over the marketing market and that the challenge is to make it more fun, more entertaining and more humanization. Managers need to balance cost and marketing by segmenting the user market, capturing the factors that matter most to users, and increasing market share while controlling costs.

Of course, gamification marketing is not a panacea. Gamification marketing can effectively drive the enthusiasm of the user output, but if the scale of the game is not mastered, then it can make the marketing ineffective, and also make the user disgusted with the product.

For example, in the bait effect, the difficulty of completing the bait is too great and the user becomes negative. The bait will not be effective as a lure. In contrast psychology, if the difference between the comparison participants is too large, it will not be possible to mobilize the sense of competition of the weaker users and the sense of achievement of the stronger users.

The use of gamified marketing combined with humanization, fun and entertainment is the best way to maximize its effect on branding and customer loyalty.

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