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The Impact of Gamification on Brand Loyalty Mediated by Customer Engagement (An Empirical Study: Alfapets Users on the Alfagift Application in the Jabodetabek Area)

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Abstract: This study aims to examine the influence of gamification on brand loyalty through the mediating role of customer engagement. Gamification, the application of game elements in non-game contexts, is hypothesized to increase customer engagement, which ultimately strengthens brand loyalty. This study involved 180 respondents residing in Jabodetabek who are active users of the Alfapets gamification feature on the Alfagift mobile application. Data was collected through online questionnaires and analyzed using Structural Equation Modeling (SEM). The results show that gamification has a positive impact on customer engagement and brand loyalty. Furthermore, customer engagement was proven to be a significant mediating variable in the relationship between gamification and brand loyalty. The findings of this study provide implications for marketers and mobile application developers in designing strategies to enhance customer engagement and loyalty through the effective implementation of gamification elements.

Keywords: Gamification, Customer Engagement, Brand Loyalty, Mobile Application, Alfapets, Alfagift.

INTRODUCTION

The continuous advancement of technology has driven the progress of industries, indirectly forcing businesses to remain competitive. Businesses must continuously innovate to keep up with these developments. This is evident in the rapid development of information technology, which has become inseparable from our daily lives. The emergence of the internet is one example of the ongoing development of information technology.

One industry that has experienced significant growth in recent times is e-commerce. The shift in consumer behavior towards utilizing digital technology to fulfill daily needs has contributed to the burgeoning e-commerce sector in Indonesia. E-commerce has become a rapidly growing industry, considered essential by many due to its convenience. Garín-Muñoz and Pérez-Amaral (2010) define e-commerce as a platform for economic and informational exchange to offer products and services via the internet.

Alfagift is an online grocery shopping application developed by Alfamart, offering a

wide range of daily necessities. Initially launched as a reward application for Alfamart members who accumulate points from each purchase or transaction, Alfagift has evolved into Alfamart's omni-channel platform. Alfamart leverages Alfagift to remain relevant to all segments of society, particularly the younger generation. This is achieved by continuously implementing the latest technologies that align with consumer needs.

One of Alfagift's strategies to maintain its competitive edge is to build an engaging system by introducing the concept of gamification. The gamification strategy employed by Alfagift aims to motivate customers to continue using the platform. Alfapets is a gamification feature available on Alfagift.

Gamification is the process of enhancing products and services by providing benefits such as increased consumption, loyalty, engagement, or product advocacy (Huotari & Hamari, 2017). Gamification is commonly used in mobile apps (N. van Doorn & Chen, 2021; Wanderley De Oliveira & Teixeira De Carvalho, 2020). Unlike games primarily designed for entertainment or recreation, gamification involves the application of game design principles to non-game products or services with the goal of increasing consumption and, in the long term, fostering loyalty (Hamari & Koivisto, 2015; Hofacker et al., 2016). The implementation of gamification by companies in a business context is fundamentally aimed at increasing customer engagement, which ultimately leads to increased loyalty (Xu et al., 2017).

Eisingerich et al. (2019) proposed gamification principles consisting of social interaction, sense of control, goals, progress tracking, rewards, and prompts as essential factors for customer engagement. This study aims to analyze whether the gamification principles implemented by Alfagift can increase or decrease brand loyalty by considering customer engagement as an intervening variable.



METHOD

This research employed a quantitative research method. In quantitative research, hypothesis testing is a type of investigation that examines the frequency of the variables under study. Numbers are also used in quantitative research to convey numerical data (Morrison, 2018). This quantitative study utilized a survey questionnaire to collect data on research variables from a group of subjects (Noor, 2016). Quantitative research tends to be more accurate than qualitative research, which is why researchers often choose to use it (Morrison, 2018).

According to Sekaran (2020), causal hypothesis testing is an evaluation of the impact of various variables on each other. This research relies on research reports, leading to data collection conducted only once a day, once a week, and once a month. Therefore, the time frame used in this study is cross-sectional (Noor, 2016). The unit of analysis in this study is the Alfapets gamification feature within the Alfagift application, with Alfagift users serving as respondents.

The population in this study consists of active Alfagift members residing in the Jabodetabek area. The sample is a subset of the population, comprising members who reside in Jabodetabek and have used the Alfapets feature on Alfagift at least once.

The researcher aims to collect data from 180 respondents, following Hair's (2019) recommendation of multiplying the number of variables (18) by 10. This study will employ non-probability sampling with a purposive sampling technique. This method is chosen because the population is not countable but will be specifically targeted to a particular group.

RESULTS AND DISCUSSION

The research data collection period will take 1-2 months, during which researchers will distribute questionnaires to consumers who have used the Alfagift application at least once. The research will be conducted online, with questionnaires distributed via Google Forms according to the specified data.

Tabel 1. Data Responden			
Category	Description	Percentage	
Gender	Male	41%	
	Female	59%	
	< 30 years	21%	
A ~~	> 30 – 40 years	34%	
Age	> 40 - 50 years	26%	
	> 50 years	19%	
	Private Employee	24%	
	Civil Servant	16%	
Occupation	Entrepreneur	19%	
-	Housewife	27%	
	Student/University Student	14%	
	Senior High School/Equivalent	14%	
Education	Diploma III	36%	
	Bachelor's Degree	29%	
	Master's Degree	21%	
Usage Frequency	< 5 times	22%	
	6 - 10 times	48%	
	> 10 times	30%	
Purchase Frequency	< 5 times	37%	
	6 - 10 times	35%	
	> 10 times	28%	
Usage Duration	< 5 minutes	32%	
	6 - 10 minutes	39%	
	> 10 minutes	29%	

Gadget (Mobile phones, TV, dan etc.)	28%
Kitchenware & Cookware	31%
Shopping Voucher	17%
Others	24%
	Gadget (Mobile phones, TV, dan etc.) Kitchenware & Cookware Shopping Voucher Others

Source: Data Processing Results, 2024

Table 1 shows the results of the data from respondents who participated in this questionnaire, with 8 categories of questions provided. The data indicate that more female respondents participated in the questionnaire. The most common age group is 30-40 years old, with the majority being housewives. The highest level of education is predominantly Diploma III. Most respondents use Alfapets 6-10 times, with the most common duration being 6-10 minutes. They expressed a preference for kitchen and cooking equipment as prizes when playing Alfapets.

Table 2. Outer Loading				
Variable	AVE	Indicator	Outer Loading	Validity
Social interaction	0 742	X1.1	0.882	Valid
(X1)	0.743	X1.2	0.842	Valid
Sense of control	0 722	X2.1	0.862	Valid
(X2)	0.755	X2.2	0.851	Valid
Goals	0.744	X3.1	0.849	Valid
(X3)	0.744	X3.2	0.875	Valid
Progress Tracking	0.720	X4.1	0.876	Valid
(X4)	0.739	X4.2	0.842	Valid
Rewards	0.715	X5.1	0.851	Valid
(X5)	0.713	X5.2	0.840	Valid
Prompts	0.722	X6.1	0.860	Valid
(X6)	0.722	X7.2	0.840	Valid
Customer		Y1.1	0.825	Valid
Engagement	0.668	Y1.2	0.819	Valid
(Z)		Y1.3	0.808	Valid
Brand Loyalty (Y)		Y2.1	0.842	Valid
	0.692	Y2.2	0.822	Valid
		Y2.3	0.831	Valid

Source: Data Processing Results, 2024

Based on the data in Table 2, it is observed that the AVE values for the variables of social interaction, sense of control, goals, progress tracking, rewards, prompts, customer engagement, and brand loyalty are all greater than 0,5. Therefore, it can be stated that each variable has good discriminant validity.

Furthermore, it is noted that all indicators for the research variables have outer loading values greater than 0.6. According to Ghozali (2016), outer loading values between 0.5 and 0.6 are considered sufficient to meet the requirements for convergent validity. The data show that none of the variable indicators have outer loading values below 0.7, thus all indicators are deemed appropriate or valid for use in the research and can be used for further analysis.

Variable	Composite Reliabilty	Cronbach Alpha	Reliability
Social interaction	0.853	0.656	Reliabel
Sense of control	0.846	0.636	Reliabel
Goals	0.853	0.656	Reliabel
Progress Tracking	0.850	0.647	Reliabel
Rewards	0.834	0.602	Reliabel
Prompts	0.839	0.615	Reliabel
Customer engagement	0.858	0.752	Reliabel
Brand loyalty	0.871	0.777	Reliabel

Source: Data Processing Results, 2024

Based on Table 3, it can be seen that the composite reliability values obtained for all research variables are ≥ 0.7 . This result indicates that each variable has met the composite reliability, so it can be concluded that all variables are highly reliable.

Furthermore, it can be seen that the Cronbach's alpha value of each research variable is ≥ 0.6 . Thus, this result indicates that each research variable has met the Cronbach's alpha value requirement, so it can be concluded that all variables have a high level of reliability.

Table 4. R-Square Value		
Variabel	Nilai R Square	
Customer engagement	0.802	
Brand loyalty	0.536	
Source: Data Processing R	Results, 2024	

Based on the data in Table 4, it can be seen that the R-squared value for the variable customer engagement is 0.802. This value explains that customer engagement can be explained by the variables social interaction, sense of control, goals, progress tracking, rewards, and prompts by 80.2%, while the remaining 19.8% can be influenced by other variables not examined in this study. Furthermore, for the variable brand loyalty, the R-squared value is 0.536. This value explains that brand loyalty can be explained by the variable customer engagement by 53.6%, while the remaining 46.4% can be influenced by other variables not examined in this study.

	Table 5. Q ² Val	ue Result	
Variabel	SSO	SSE	Q ² (=1-SSE/SSO)
Brand Loyalty	540.000	343.695	0.364
Customer Engagement	540.000	259.632	0.519
Goals	360.000	360.000	
Progress Tracking	360.000	360.000	
Prompts	360.000	360.000	
Rewards	360.000	360.000	
Sense of Control	360.000	360.000	
Social Interaction	360.000	360.000	
~		1 0 00 1	

Source: Data Processing Results, 2024

Based on Table 5, the Q-square value for customer engagement is 0.519, while for brand loyalty it is 0.364. This indicates that the Q-square values are above 0. Therefore, based on these results, it can be stated that the research model has a good goodness of fit.

The Impact of Social Interaction on Customer Engagement

Based on the research results, the t-value of 3.279 > 1.96, indicating that social interaction has a significant and positive impact on customer engagement. The path coefficient is 0.241, meaning that social interaction contributes 24.1% to customer engagement, while the remaining 75.9% is influenced by other factors not examined in this study.

Social interaction is an element of gamification strategy that describes an application's ability to keep its users connected with other users. The presence of social interaction makes it easier for Alfagift customers to interact and make friends with other users, and consequently, they will find it easier to discuss the products offered by the company. This ease of interaction and product discussion can increase customer engagement.

The Impact of Sense of Control on Customer Engagement

Based on the research results, the t-value of 2.259 > 1.96, indicating that sense of control has a significant and positive impact on customer engagement. The path coefficient is 0.148, meaning that sense of control contributes 14.8% to customer engagement, while the remaining 85.2% is influenced by other factors not examined in this study.

Sense of control is an element of gamification strategy that is the ability of an application to make users feel as if they are responsible for what they do. Sense of control refers to a person's feeling or belief about the extent to which they can control or influence outcomes (Mirowsky & Ross, 2003). The presence of a high sense of control among customers can increase customer engagement.

The Impact of Goals on Customer Engagement

Based on the research results, the t-value of 2.411 > 1.96, indicating that goals have a significant and positive impact on customer engagement. The path coefficient is 0.171, meaning that goals contribute 17.1% to customer engagement, while the remaining 82.9% is influenced by other factors not examined in this study.

Goals are an element of gamification strategy that refers to specific objectives that users must achieve or targets that they must reach. Goals refer to the process of individuals or groups in determining the desired end-state to be achieved and are used in self-regulation. Goals are a fairly important gamification principle where customers often have difficulty understanding exactly what they need to do on a routine basis to achieve long-term goals (Burnette et al., 2013). The achievement of goals by customers can increase customer engagement.

The Impact of Progress Tracking on Customer Engagement

Based on the research results, the t-value of 2.411 > 1.96, indicating that progress tracking has a significant and positive impact on customer engagement. The path coefficient is 0.139, meaning that progress tracking contributes 13.9% to customer engagement, while the remaining 86.1% is influenced by other factors not examined in this study.

Progress tracking is an element of gamification strategy that is the ability to document every progress made by each user. Progress tracking serves to record the progress made by customers and allows customers to know their developing competencies. Customers who show improvement in their skills will feel successful and more motivated to achieve further progress, so they will increase their engagement in the game. The increase in progress tracking achieved by customers can increase customer engagement.

The Impact of Rewards on Customer Engagement

Based on the research results, the t-value of 3.053 > 1.96, indicating that rewards have a significant and positive impact on customer engagement. The path coefficient is 0.195, meaning that rewards contribute 19.5% to customer engagement, while the remaining 80.5% is influenced by other factors not examined in this study.

Rewards are an element of gamification strategy that is the ability of an application to provide a reward when a user successfully completes a set goal. Gamification applications offer rewards to customers when they complete a task or mission that represents a level of achievement. When customers achieve goals that align with their long-term goals, they feel good about themselves. In addition, the application offers more challenging and higher-level missions for customers to complete, and the curiosity and excitement about new challenges increase customer motivation to act and become more engaged. The increase in rewards achieved by customers can increase customer engagement.

The Impact of Prompts on Customer Engagement

Based on the research results, the t-value of 2.796 > 1.96, indicating that prompts have a significant and positive impact on customer engagement. The path coefficient is 0.134, meaning that prompts contribute 13.4% to customer engagement, while the remaining 86.6% is influenced by other factors not examined in this study.

Prompts are an element of gamification strategy that is the ability of an application to remind customers of their commitments and encourage them to take action through alerts (Eisingerich et al., 2019). Prompts are used in gamification with the aim of reminding and encouraging customers to engage further with the system and the underlying activities that the system is trying to support. Customers use their gamification applications in response to requests or reminders and alerts sent by the application. Audio or written notifications addressed to customers attract them to access and take action within the application. The increase in prompts received by customers can increase customer engagement.

The Impact of Customer Engagement on Brand Loyalty

Based on the research results, the t-value of 20.080 > 1.96, indicates that customer engagement has a significant and positive impact on brand loyalty. The path coefficient is 0.732, meaning that customer engagement contributes 73.2% to brand loyalty, while the remaining 26.8% is influenced by other factors not examined in this study.

Effective customer engagement allows customers to become more familiar with the company's brand, and to understand the strengths and weaknesses of the products offered by the company. This better understanding of customers due to customer engagement ultimately leads to an increase in customer loyalty to the brand (brand loyalty).

CONCLUSION

The results of this study show that there is a positive and significant influence of gamification, which consists of sense of control, goals, prompts, social interaction, rewards, and progress tracking, on customer engagement. There is also a positive and significant influence of customer engagement on brand loyalty among Alfagift application users in the Jabodetabek area. This study indicates that gamification is a consideration for companies in increasing customer engagement, which impacts brand loyalty for the Alfagift app. Gamification can help increase active users to use the Alfagift app for a longer period, which impacts brand loyalty. Competition among online grocery shopping applications in Indonesia is tight, and each company is trying to make its members use the application longer than

others. Thus, gamification features become one of the attractions to increase customer engagement and brand loyalty. The limitation of this research is the research time of less than 2 months, and the scope is limited to the Jabodetabek area. Suggestions for further research are to expand the scope of the research area and add variables that can influence customer engagement and brand loyalty so that results can be obtained from other perspectives.

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