

The Effect of Gamification on User Satisfaction on Online Travel Agent

1st Yulia Hamdaini Putri
Economic Faculty
Sriwijaya University
 Palembang, Indonesia
 yuliahamdaini@unsri.ac.id

2nd Suhartini Karim
Economic Faculty
Sriwijaya University
 Palembang, Indonesia
 suhartinikarim@gmail.com

Abstract—Technology-based companies use many strategies such as gamification in online travel business companies that play a role in increasing tourism. Gamification is a strategy to attract consumers in the form of rewards, points, levels, reviews (story). Gamification is applied in online shops, salons, and several other types of companies. This gamification marketing technique also acts as survey data for companies and related businesses that collaborate. This study aims to determine the effect of gamification on user satisfaction. The result is the effect of gamification on user satisfaction. Stories (reviews) do not affect user satisfaction.

Keywords: *gamification, traveling, online business, satisfaction*

I. INTRODUCTION

Before the online travel business existed (online companies booked aircraft and hotel services), the community used the services of a travel agent at outlets located in the area where the community lived or at the airport. In its operational activities, people who want to order plane tickets come to the outlet, waiting in line and waiting for their turn to be served by customer service. Then the customer service will input the data of prospective passengers who will travel on the computer and then print the trip ticket.

Then in the 2000s, the public was able to order their plane tickets through the website provided by the airline. Then fill in the data online. Order payment can be done by debit or credit. The airline then sends the ticket via email, and potential passengers can print out the ticket. In 2011 the online company aircraft and hotel booking services began operating in Indonesia, which was marked by the establishment of the website Tiket.com as the online pioneer company for aircraft and hotel booking services. The number of online companies booking aircraft and hotels in Indonesia known to the public to date is twenty, that is, Tiket.com, traveloka.com, pegi-peg.com, airlines, tripadvisor.co.id, travel.co.id, agoda.com, wirasena.travel.com, ratuloka.com, airasiago.co.id, reservation.com, expedia.com, nusatrip.com, via.com, airpaz.com, Tiket2.com, arenatiket.com, etrip .com, halaltrip.com and mytrip.com.

Traveloka.com is one of the unicorns in Indonesia, beating other competitors, engaged explicitly in online aircraft and hotel booking services, both applications and websites. SimiliarWeb noted, Traveloka had 10.5 million visitors on a website search service in June 2016. This

figure is far higher than ticket booking data on other sites, including from official websites of airlines in Indonesia.

This service provider competition is very tight with the same market segmentation, namely the ease of technology-based ticket and hotel booking services for consumers who want to travel on business and tourism. With one click on their smartphone without having to print out a ticket and show the ticket in the consumer smartphone to travel anywhere and anytime. With this intense competition, a strategy is needed to stay afloat in the world of competition.

Gamification is a strategy to attract consumers in the form of rewards, points, levels, stories, or challenges [1]. Gamification is used to stimulate a person's behaviour so that performance in an activity increases, previous studies analyze this gamification strategy on employee performance in a company, gamification is applied to consumers who shop at an offline shopping place or online store, gamification increases consumers to improve purchasing behavior an item. Marketers developed gamification and used by users who order tickets online. A marketing technique compiler can consider implementation points, levels, and leaderboards in establishing marketing strategies as a quick and easy way to improve user performance for simple tasks because elements of this game can set clear goals. [2]

This gamification marketing technique also acts as survey data for companies and related businesses that collaborate. With this, they are to see the pattern of consumer behavior so that it can improve the level of hotel services and for land and air transportation services can also see an increasing period of ticket reservations such as before holidays and holidays. The development of the concept of gamification with business applications has been carried out in previous studies, perspectives of customers and managers, and compared the results of the survey in terms of service marketing and the characteristics of consumers involved with the gamification platform. The data supports design theory that illustrates four key features namely the path of progress, feedback and appreciation, social relations, and attractiveness of a site. [3]

Based on the background above, this study wants to know how the influence of gamification on user satisfaction on the travel agent online.

II. LITERATURE REVIEW

A. E-Marketing

In general, internet marketing, electronic marketing, or e-marketing is a term that can be exchanged and is usually associated with the application of communication and internet technology into the marketing or marketing systems of a company. Chaffey et.al stated that the term internet marketing "... usually refers to an external perspective on how the internet can be used together with traditional media to obtain and provide services for consumers." [4]

E-Marketing, internet marketing or also commonly referred to as digital marketing is the core of an e-business, with a company getting closer to customers and understanding it better, adding value to a product, expanding its distribution network and also increasing sales figures by carrying out activities e-marketing based on digital media such as marketing through search engines, online advertising, and affiliate marketing. [5]

E-Marketing also includes using a website that will become a facility to provide information for customers, simplify the sales process, and a means that can manage sales services. As with marketing in general, e-marketing is a pattern of thinking, a way that can easily attract customers in all online activities, for example, having a different group of users to test the seven websites you have used different browsers, various settings and also with different internet connections.

Smith and Chaffey said that e-marketing could be used to achieve three objectives: a) Identifying - the Internet can be used as market research to find out the needs and desires of consumers, b) Anticipating - The internet provides additional channels that consumers can use to access information and make purchases, c) Satisfying - The key to success in e-marketing is achieving customer satisfaction through electronic channels, which raises questions such as: is the site easy to use, is the performance adequate, is it only the relevant customer service standards and how physical products are delivered. [4]

Regarding e-marketing forms, one of which can be done through website creation, Chaffey and Ellis-Chadwick [5], identify that there are five main types of online presence: a) Transactional e-commerce sites. Manufacturing companies, e-retailers, travel services, or financial services make the products offered available online. The main contribution is through product sales. The website can also support businesses by providing information to consumers who prefer to buy products offline. b) Service-oriented relationship-building sites or lead-generation web sites. It provides information to stimulate purchases and build relationships. Natural products are not available online. Information is provided via the website, along with e-mail marketing, to inform the purchase decision. Its main contribution is to encourage offline sales and generate specific questions or desires (commonly called leads, in the case of e-marketing) from potential customers. Such sites can also add value to existing consumers by providing information that suits their needs. c) Brand-building site. Provide an experience to support the brand. Products are

usually not available online, but sites are used to sell knick-knacks/merchandise. The main focus is to promote a brand by providing online services for the brand through content marketing integrated with social media. Usually used for low value, high volume, and fast-moving products. d) Media portal or site. The primary purpose of these third-party publishers is to provide information and content. Online publishers have a variety of options for generating revenue through advertising, affiliate marketing, and selling access to content through a subscription or pay-per-view system. e) Social networking or community sites. Sites allow community interaction between different consumers. Interactions usually take the form of comments, replies, messages, ratings of content and marking content in specific categories. Famous examples include Facebook and LinkedIn, but there are still many other important niche communities that might have to be considered in the market. In addition to social networking sites, social interaction can be integrated into different types of websites through plugins or application programming interfaces (API).

B. Gamification

One possible way to increase the effectiveness of mobile advertising is to use gamification. Gamification is "the process of improving services with some rules of user experience that supports consumers creating overall value" [6]. It can include rewards, points, levels, stories or challenges [1]. By triggering psychological conditions - that is, experience - the services provided will motivate desired behavior [6]. Thus, knowledge is an integral part of using certified services [7] [6], even to some extent that if consumers do not experience them, the giving process has failed [6].

C. Satisfaction

Companies cannot forget other fundamental business goals, such as achieving competitive advantage or making profits. As seen in Figure 2, customer satisfaction provides many benefits for the company, and the higher level of customer satisfaction will result in greater customer loyalty. In the long run, it will be more profitable to keep the right customers than continually attracting and fostering new customers to replace customers who leave. A delighted customer will spread positive stories by word of mouth and will instead become a running advertisement for the company [8]

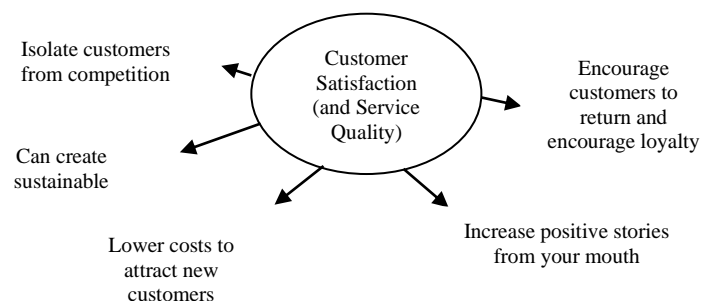


FIG 1. BENEFITS OF CUSTOMER SATISFACTION AND SERVICE QUALITY

In previous studies studying how effective gamification has been in changing consumer behavior through the online review approach of Astrosor in 2016-2017 including points and badges, the result is a relationship between gamification features and tourist behavior when writing reviews [9]. However, for the effective use of gamification in in-store mobile advertising does not have a strong influence on purchasing decisions, cellular needs have become a trend, while the method uses field experimental techniques with differences in the two groups.[10]

Gamification refers to designing information systems to provide the same experience and motivation as games, and consequently, seek to influence consumer behaviour. Other research combining qualitative approaches and quantitative approaches found positive results about the effectiveness of gamification. Besides, education, health, and crowdsourcing, as well as points, badges and leadership boards, remain the most common context and way of implementing gamification.[11]

Other research on gamification uses an exploratory research approach, with semi-structured interview techniques. The results of this study provide a detailed description of the contemporary attitudes of marketing executives towards gamification. Positive marketing executive responses to 9 out of 10 interview questions and hope to adopt gamification more often in their work in the future; shows a promising future for the gamification industry. [12]

Furthermore, research that alludes to product-service features, including Michael stated that e-service quality and overall e-service quality influence e-satisfaction [13]. In contrast to other studies Using case studies on smartphone reviews, examples of UX data findings are the main product features and usage situations exemplified. This study explores the feasibility of finding valuable UX data and their relationship automatically to product design and strategic business plans by analyzing massive amounts of online customer data [14]. Modern companies generate value by digitizing their services and products [15]. Other studies using ordinary least square (OLS) multiple regression analysis to examine the relationship between service experiences, especially in the context of attractiveness, provide evidence that values have an enormous influence on satisfaction and behavioral intentions. Emotional benefits affect satisfaction and behavioral intention more than other forms of interest [16].

III. RESEARCH METHOD

A. Participant

The population of this study is the general public in Indonesia who use the Traveloka application and Tiket.com. Withdrawal samples from the people, in this study, used sampling with the Lemeshow method totaling 200 respondents. In this study, we used a non-probability, purposive sampling technique. Everyone does not have the same opportunity to be sampled in this study. We asked respondents whether to use both applications or just one of them. Therefore in this questionnaire using the same

measurement tool, respondents who did not use one of these applications on the measurement scale of the variable gave the number 1.

B. Method of collecting data

Data collection methods by conducting interviews/interviews directly with sources associated with the object of research. We had open-ended questions to 10 consumers who have used the application more than two times in the focus group discussions in the past year and the last six months, frequently visited the Traveloka / Tiket.com application. Then as many as 200 Questionnaire (Questionnaire) distributed online and offline. The research questionnaire uses a Likert scale of 5 (1 = strongly disagree, disagree = 2, sufficient = 3, strongly agree, 4 = agree, 5 = strongly agree). The measurement instrument in this study is the story variable, level, points and rewards as independent variables (Houtari & Hamari, 2017), while satisfaction as the dependent variable. [8]

C. Method of Analysis Data

In this study, using a standardized test that is validity testing, reliability testing, and testing traditional assumptions. For data analysis using descriptive and frequency analysis, multiple linear regression analysis and different tests. Descriptive and frequency analysis is used to describe the profile of respondents, to analyze the level of the significant influence of a variable using multiple linear regression analysis. The multiple linear regression equation models as follows:

$$Y_1 = a + b_1X_{11} + b_2X_{21} + b_3X_{31} + b_4X_{41} + e \dots \dots (1)$$

Information :

The dependent variable in this study

a = Constant b = Number of regression directions

Y1 = Consumer Satisfaction

The independent variable in this study is

X11 = Story (Review)

X12 = Level (rating)

X13 = Points

X14 = Rewards

IV. RESULTS AND DISCUSSION

The results of the study summarise 200 respondents, with 43 percent men and 57 percent women. Respondents under the age of 35 make up the remaining 62 percent over the age of 35. Most participants work as civil servants as much as 56 percent, others work as entrepreneurs, private, students. One hundred thirty-eight respondents or 69 percent used the Traveloka application; 47 respondents used both applications (Tiket.com and Traveloka). Only 15 respondents or 7.5 totaled used the tiket.com application. Most respondents use the Traveloka.com application more following previous research, Traveloka has a strong brand image of user trust [17]

Based on income, income is under 10 million, with most respondents claiming to book plane tickets 1-4 times a year while over 10 million make plane ticket reservations more than 12 times a year. For more details, see appendix table 1.

The regression test results of the backward method influence the story, level, points, rewards on user satisfaction (N = 200). The first model of all these variables is included in the data process, resulting in an R-value of 0.782 and Square 0.611. The second model of the story variable was issued to produce a value of 0.780, R Square 0.609. The rest can be predicted by other factors not examined in this study, such as price, comfort, convenience, and others [18]

F test results there is a significant influence between rewards, levels, points, stories together on user satisfaction in the first model (F = 76.501), the second model (F = 101.638). Separately (independent variable) story (B = 0.086), level (B = 0.323), points, (B = 0.251), rewards (B = 0.427) for the first model only the story variable (review) has no effect (Sig = 0.310 > 0.05) on user satisfaction (the dependent variable), for the second model the story variable was issued so as to produce the level (0.354), points (0.268), rewards (0.456) effect on user satisfaction. To see differences in gamification variable based on male and female sex, the results of different tests using independent t-test produce the following output:

TABLE 2. STATISTICS OF GAMIFICATION VARIABLES BASED ON GENDER

Gender	Statistics	
Men	N	86
	Mean	62,23
	Standard Dev	10,99377
	Standard Error Mean	1,185
Women	N	114
	Mean	62,9561
	Standar dev	8,32885
	Standar Error Mean	0,78

- a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples
Primary data processed (2019)

Based on the table above, there are 86 men, with a mean of 62.23, a standard deviation of 10.99377 and a standard error of a mean of 1.185. Women totaled 114 with a mean of 62.9561, a standard deviation of 8.33285 and a mean standard error of 0.78. Thus only a slight difference in mean gamification between the two groups can be concluded that there is no difference in mean between the two groups. We can see further different tests below:

TABLE 3. INDEPENDENT T-TEST

F	Sig	Sig 2 tailed
0,001	0,980	0,597

Primary data processed (2019)

Based on the table above, the Levenest test value is 0.980 > 0.05. It means that the male and female groups are the same, while the t-test value of 0.597 is more significant than 0.05. And women.

Gamification, there are four sub-variables discussed, namely: story, level, points, rewards. Users weigh and trust the many reviews from other users in assessing a hotel, both experience, hotel description, and hotel location. The length of a review is not a measure in hotel selection decisions, but the length of a review can be an additional user point. There is no significant effect of reviews on user satisfaction in using the ticket and hotel booking application. The transaction process and trust affect satisfaction [19].

The level is the rating given by the user after finishing staying at a hotel through the hotel booking application. Rank is in line with the review given; if the level is high then the review given is positive; if the rating is low then the review given is usually harmful. It is a motivation for hotels to improve the quality of service. There is a significant level of influence on user satisfaction.

Points given provide a decisive role in increasing user satisfaction, points are considered as benefits that they can use for deductions and rewards, but users do not like the expiration system that applies to points. From the point of a viewer of the service provider companies, these points are beneficial because they can increase the frequency of use. There is a significant influence of points on user satisfaction. The marketer can considered elimination of expiration, or the period is more extended because the points become one of the considerations of users to continue to use the service application. However, changes in consumer attitudes can change from time to time depending on current motivation [20]

Rewards offered by the travel agent competing hotels. There is a discount at any time, and there are discounts on ticket and hotel reservations at any time. It can even be displayed in the user's smartphone notification. Thus, there is a significant influence of rewards on user satisfaction.

User satisfaction in using the application service provider ticket and hotel reservations can be seen from the level of frequency of use, recommending to colleagues, family, and coworkers. The use of features in this application (both Traveloka and Tiket.com) makes some users business as an intermediary in booking tickets and hotels. Gamification plays a role in user satisfaction but does not always have a positive effect on the offer more precisely [10]

Overall reviews, points, levels, and rewards influence user satisfaction. Gamification can be considered as a current strategy in user satisfaction and user loyalty. The results of this study differ from previous studies [10], the effectiveness of gamification also cannot be applied to all types of products [21]

V. CONCLUSION AND RECOMMENDATION

Other service providers can consider gamification strategies to increase spending and usage frequency. Gamification has a significant effect on user satisfaction. Separately only reviews do not affect user satisfaction, while points, rewards, and levels have a significant effect on user satisfaction.

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APPENDIX
TABLE 1. FLIGHT TICKET BOOKING ACTIVITY BASED ON REVENUE

Flight Ticket Booking Activity based on Revenue							
		Flight Ticket Booking Activity				Total	
		> 12 times in a year	1- 4 times in a year	5-8 times in a year	9-12 times in a year		
Revenue	<= 2000000	Count	0	39	21	0	60
		% within salary	0.0%	65.0%	35.0%	0.0%	100.0%
	2000001-5000000	Count	9	62	5	12	88
		% within salary	10.2%	70.5%	5.7%	13.6%	100.0%
	5000001 – 10000000	Count	6	16	12	9	43
		% within salary	14.0%	37.2%	27.9%	20.9%	100.0%
	>10000000	Count	6	3	0	0	9
		% within salary	66.7%	33.3%	0.0%	0.0%	100.0%
	Total	Count	21	120	38	21	200
		% within salary	10.5%	60.0%	19.0%	10.5%	100.0%

Primary data processed (2019)