Gratification Sought in Gamification on Mobile Payment

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Abstract— The trend of mobile payment in Indonesia is rapidly growing since BI as Indonesia's central bank has initiated a movement called "Gerakan Nasional Non Tunai" (national cashless movement). this movement drove the emergence of several mobile payment systems, with GO-PAY from GO-JEK dominates the market. this paper aims to explore the motives of GO-PAY users in using gamification, as one of the loyalty programs, by using uses and gratification(U&G) perspectives. U&G perspectives was successfully implemented to identify the factors that effect on continuous intention to use a variety of media, but its application in mobile payment context is still limited. our results revealed three types of gratification that have significant impacts on user motivation to continue to use GO-PAY: hedonic gratification (perceived enjoyment and passing the time), utilitarian gratification (ease of use, self-presentation, information quality, and economic rewards), and social gratification (social value).

Keywords—mobile payment, gamification, go-pay, uses and gratification.

I. INTRODUCTION

Mobile payment has been shown to become a payment medium with very rapid growth[1], and become a technology and research trend in recent years. Mobile payment services have variety definition such as all payments over any mobile communication device for paying a transaction like bills authorized, items in a store or transferring money using smartphone apps[2]. Currently, in Indonesia, there are many mobile payments brands, and the most popular is GO-PAY[2] cashless payment platform on GO-JEK apps, an application provide on-demand transport and lifestyle services. According to[3] people prefer using mobile payments because it is easy to use, safer, compatibility, and more convenient than cash, correspond to individual mobility that affected users behavior.

The mobile payment environment is highest fiercely competitive marketplaces, GO-JEK continuously experiments with various marketing strategies to attract customers and increase their GO-PAY user base[1]. GO-JEK strives to increase the user base by improving service quality and implementing gamification in their mobile payment to give a better user experience. The use of gamification elements in marketing is an effort to engaging users and enhancing user experience[2]. Based on previous research, gamification is a favorite marketing tool which is being widely used by many companies to attract more users such as Facebook, Twitter, and Instagram. GO-PAY has implemented gamification elements in its mobile payment like Go-Points as a loyalty program and KEJOG as a report of user activities in a year. Gamification is defined as implementing game elements in non-game context[4] to engage users and make users enjoy when using a product. In mobile payment, gamification elements can be in the forms of collecting points or badges and receiving rewards for purchases, then users will feel more entertaining while purchasing a product. Based on our systematic literature review, the studies of gamification effects on mobile payment still limited[5]. The research trends on gamification have focused on general gamification theory, gamification elements, or educational topics, and no research identified directly discusses the effects of gamification on mobile payment, even though gamification elements has implemented on mobile payment.

This study conducted to understand the gamification effect on motivation to continuous use GO-PAY as mobile payment with Uses and Gratification(U&G) perspectives that have been successful in many previous studies to identify gratification factors that influence intention use a media[6]. U&G perspectives have successfully implemented in a variety of media, result from previous research identified that there are hedonic gratification, utilitarian gratification, and technology gratification that has had a significant effect on the continuance intention to use WeChat[7]. Another research by[8] implemented U&G perspective to identified gratification influence on continuous use an online game, and the results found social presence as a gratification factor that impacts significantly on continuance intention to use a game online. Many studies have been carried out to explore why people continue to use media and identify gratification factors that make users satisfied when using media. However, the media that have been studied is limited to mass media (e.g., media communication, media entertainment, social media), no previous research identified explore the implementation U&G perspectives in mobile payments, this study contributes to extend the literature that has not previously considered.

This study will explore the implemented Go-Points and KEJOG as gamification on GO-PAY using U&G perspectives to explore the user needs that can fulfill by media[6], users satisfied using GO-PAY based on their needs that influence by psychological and users characteristics. Users also take the initiative in selecting and using media to satisfy their needs or desires. This study conducted to explore gratification sought from gamification on mobile payment because there is a lack of

understanding the impact of gamification like Go-Points and KEJOG to continuous intention using GO-PAY. In the next section, we explain the theoretical context based on the literature with an emphasis on gamification and U&G perspectives. In the next section presented the used of qualitative research methodology, including collecting data with interview using the semi-structured technique, preprocessing and analyze, then presented the research findings, discussed and integrated with the literature. The last section is a summary of the study's contributions and future research.

II. LITERATURE REVIEW

A. Gamification

Gamification provides software enrichment with elements from the game to bring up the same exciting experience as a game. Currently in real-life software is developed for many purposes, the most dominant either to be utilitarian or hedonic[4], Users are increasingly hoping that software is not only useful but also enjoyable to use[9]. Gamification becomes a popular research trend in recent years. Gamification refers to applying game elements in non-game contexts[4] to enhance user experience and increased greater loyalty[10]. The game elements in this sense could include anything from game aesthetics, mechanics, and dynamic[11] such as process-bar, badges, levels, user avatar, and points. In business practice using gamification for solving problem or marketing strategy has become a hot topic, the concept of gamification by using game elements and the essence of characteristics like goals, rules, playfulness, reward, and promotions in designing products will have the potential to enhance positive response from users. The benefits of implemented gamification achieve when executed game elements corresponding to the product requirements and product goals to understanding the value of a product, and user needs.

Gamification in the loyalty program(LP) effect in users perception and responses[11], like enjoyment and user loyalty, by implemented gamification information on the product can easily understand by users, gamification elements(e.g., points) leads them to perceive a gamified LP as more fun and enjoyable than a conventional LP without gamification[10]. Refer to ISO 9241-210 user experience defines as user perceptions and interactive responses while using products, systems, or services, and gamification has consistently proven to be a valuable method in improving it. Based on[11] gamification has a positive effect on user experience like perceived value, which defined as how a user understands the net benefits obtained in return for the cost of purchasing the desired benefits. Gamification has demonstrated good user experience can encourage Positive interaction between users and product which is improving users' perceptions about brand equity (e.g., brand loyalty, quality, associations, and brand trust). Gamification can produce happy feelings that able to influence user emotion and reduce the number of errors[12] using the product and effect on user experience. Both of quantitative and qualitative research already done before the identified benefit of implemented gamification in multiple areas such as education, E-health [13], and business[14] identified valuable benefits like playful experience[14] and influence on user motivation to use a product. However, previous research that investigated the effects of gamification in mobile payments still limited.

TABLE I.   SUMMARY OF SELECTED PRIOR STUDIES ON GAMIFICATION

Gamification Context	Authors	Major Findings/Conclusion
Marketing	[11]	Gamification elements such as story, aesthetics, mechanics, or technology drives customer loyalty, engagement, and motivation.
	[23]	Gamified loyalty programs increased consumer loyalty that enhanced consumers' participation intention and app download intention. Playfulness and self-oriented rewards as the underlying impact of gamification.
Information Systems (IS)	[12]	Gamification was useful as a tool for motivating and engaging users in non-entertainment contexts and more usefully presented as a subset of a larger effort to improve user experience through gemeful design.
Educational	[26]	Gamification effect on motivation, engagement and satisfaction.
	[30]	Gamification purpose of improving students' motivation and engagement by promoting a better user experience.
E- health	[13]	Gamification creates have fun user interface and experience, but without efficient support from the design field may compromise the user understanding and motivate.

B. Uses and Gratification

Uses and gratification(U&G) theory used to investigate why people use media and identify gratifications, which guide behaviors and drive users to use a media comes from social and psychological motives[6]. U&G proved that users actively seek out media that can satisfy their needs, and they will fulfill when specific media meet their expectation. Recent studies cite the U&G perspectives as being the most relevant of communication theories[7] and become a favorite research topic in the context of Information System studies. Several studies have been applied in various types of media and identifying the gratification obtained will be different, and this influenced by the variety of media used in the research context. Previous research used U&G theory[18] identified underlying dimensions for the motivation use internet[19], identified factors as entertainment, relaxation, pass time, social information and information seeking[20], These motivations come from interpersonal, media, and new technologies[21] that support the internet interactive of the capabilities. Some previous research explored U&G perspectives and identified gratification factors like passing time[20], information seeking[19], entertainment[22], and social enhancement[18].

III. METHODOLOGY

This study used qualitative method appropriate with the stages of research [25] intended to build knowledge through understanding and discovering phenomena based on subjects experienced like behavior, perceptions, motivations, and actions by collecting facts. This study focused on explanation U&G theory and gamification, data collected with semi-structured interviews and open-ended questions. Go-Points and KEJOG as GO-PAY loyalty programs selected in the case-study context.

A. Research Contexts

GO-PAY successfully get the first position with contributed 30% transaction values of overall mobile payment transactions in 2017[1]. GO-PAY always improving the services with
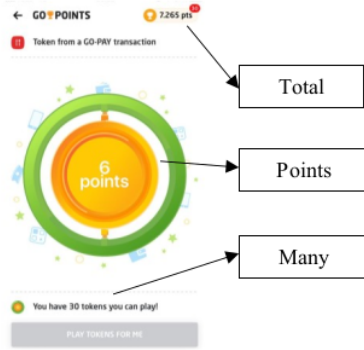
Fig 1. User interface Go-Points in GO-PAY

Fig 2. User interface KEJOG

innovation and evaluation to deliver products following the user's needs and trying to create a better user experience. Go-Points and KEJOG present as loyalty programs exclusively for GO-PAY users with gamification concept. This study aims to explore whether gamification provided by GO-PAY can gratify and meet user needs. Go-Points present as a game that can be used to collect points and change it as rewards, to playing Go-Points user must use GO-PAY as a payment method, the user will receive a token from every transaction then use that to play Go-Points to collect points and redeem a reward by converting their points. KEJOG as reports user activity in a year that contains information on GO-PAY transaction.

B. Research Instrument and Data Collection

The literature review conducted to explore gamification, U&G theory, and generate interview questions. Selection participants for this interview used purposive sampling, which selected according to their specific profile based on determined demographics. Data collection developed through face-to-face semi-structured interviews conducted for two weeks to existing GO-PAY users consist 15 open-ended questions, the process of the interview recorded with a mobile audio-recording application with an average interview duration was approximately 30-45 minutes. The interviews goals are to get details insights directly from Go-Points and KEJOG users, regarding perceptions about existing gamification and the gratification sought from using gamification in GO-PAY.

C. Analysis

All interviews data from the semi-structured interviews than transcribed with verbatim translation, read the transcripts thoroughly to be familiar with the content subsequently, simple manual coding was performed to highlight expressions and phrases that were theoretically related.

IV. FINDING

All participants of interviews know that GO-PAY implemented different game design elements on Go-Points and KEJOG, Go-Points implement game elements such as points and physical rewards. KEJOG has implemented an achievement element and is provided based on the history of GO-PAY usage. Based on interviews with 10 participants regarding users' perceptions in terms of their satisfaction from using GO-PAY, several gratification factors found and then grouped into three main categories according to the characteristics intrinsic every factor. These categories were: (a)Hedonic gratification (enjoyment and passing the t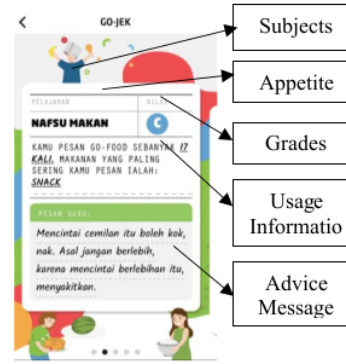ime) (b)Utilitarian gratification (ease of use, self-presentation, information quality, and economic rewards) and (c)Social gratification (social value).

A. Motivation to use Influenced by Hedonic Gratification

The hedonic gratification refers to perceived enjoyment and passing time[8][7], this is intrinsic and relates to aesthetic, experiential and benefits related to pleasure or enjoyment[7], Hedonic aims to provide self-fulfilling value to users, emphasizing psychological well-being and individuals stimulation[8]. Perceived enjoyment is a feeling felt by users when using media and considered one of the key motivators that influence individual use of the media[7]. Prior studies have empirically validated the finding and found that individuals are more likely to continue using a media if they perceive self-fulfilling by consumption hedonic content, colors, interaction, and animated images, this is enjoyable, pleasant and fun during the used[23]. While passing time defined as a condition when the user using the media to occupy the time[24][22], spends time without realizing it like has nothing better to do. In this study, participant accepted that hedonic gratification effects on Motivation to using Go-Points.

I use Go-Points because the first time I use it, I can redeem a reward that I want with my points, I enjoyed it. So every time I get a game token directly, I used it because of the exciting rewards. I play it when I don't have certain activities to do.

I enjoy when I playing Go-Points, if I got high points from swipe, I am happy, it can fill my time and Have fun.

Based on the analysis, the participant interviews felt that the gamification that was on Go-Points and KEJOG perceived enjoyment. The implementation of game elements such as swipe on Go-Points is quite fun, and the design implemented at KEJOG looks good and fun.

KEJOG is fun, and the design is catchy appropriate for entertaining, especially for millennials like me. Packed with exciting concepts that contain words of confusion and me like it, I enjoy it, and I think we need entertainment like this.

I enjoyed it and appreciated because I can understand the information presented as easy as I want. I appreciated it with gamification can help understand the information presented easily and interestingly.

We can observe from these comments that GO-PAY users appreciate Go-Points and KEJOG because they can perceive enjoyment from that. In this vein, as noted above[4][9] researched gamification makes users enjoyed when using the product because they can understand the functions of products.

B. Motivation to Use Influenced By Utilitarian Gratification

Utilitarian is the perception of utility and the degree to which users believe that using platforms in specific tasks will improve their performance and consequently, productivity[23]. The utilitarian motivation of consumption assumes that the benefits of using technology derived from the results of rational and contributions from functional aspects. When the media has obtained, and the task already completed efficiently, the benefits from utilitarian motivation can achieve. Utilitarian refers to the ease of use, self-presentation, information quality, and economic rewards. Now users can use GO-PAY in various stores that have become GO-PAY partners, and this makes users always choose GO-PAY as their payment media. GO-PAY as mobile payments is easy to use, faster and more comfortable.

I use GO-PAY because it is effective and comfortable if using cash requires time to make payments, it effective in terms of time and performance. GO-PAY was able to cut the payment process by eliminating direct payment activities.

Exciting, nowadays people prefer information according to facts. Entertaining, exciting, because I like and need information based on facts. KEJOG Report provides facts about my activities for one year.

GO-PAY is very easy to use and also makes my life easy to make payments, I don't need to bring cash, when I am using GO-JEK service.

Ease of use refers to a measurement of how easy the product is to use by users. The function of GO-PAY as a mobile payment is something that fulfills and meets the needs of users, with the convenience making users motivated to continue using GO-PAY it easy to use. Self-presentation refers to users used GO-PAY, attempt to present themselves to shape a particular image of individuals who will influence how others perceive and treat them[7]. According to prior studies, people tend to present themselves in a good manner to build their good images, expressing oneself and behaving in ways create the desired impression which leads others to perceive them as socially likable and competent at achieving greater rewards[24]. Motivation to continue using Go-Points and KEJOG derived from Self-presentation like people collect Points as many as they can achieve by Using GO-PAY to presents it and compare with other users, and then when getting good grades from KEJOG, people will share it with other people to get responses.

I used Go-Points because I often discuss my total points and compare them with my friend's points. I collect points as many as possible to redeem the reward that I want. That's fun when I can achieve more than my friend total points.

Information quality refers to the information from KEJOG were provides information history of using GO-PAY in one year and represented it with exciting designs and words. According to participants, they need this information and very satisfied with the provided information, this not a significant increase in Motivation to continue using GO-PAY. Because of information, only things that must be known. They are interested in this information and share it with other people to get responses from others, get attention, and need feedback, but it just for fun.

KEJOG is useful, we can see recapitulation the use of GO-PAY. We can know how much and used for what. The design looks interesting followed with Funny words make me feel good when reading it. I appreciated with the value was given, I became a champion in my area, and it made me think wow proud, amazed, not believing. I share my report to other people to make them know I got good grade in my report.

KEJOG is different from Go-Points, which is a Loyalty program that provides an opportunity to redeem rewards. According to Go-Points users, the motivation to use Go-Points is to get rewards that can be redeemed by exchange some points, but economic rewards identified as dominant reasons influence users to continue playing Go-Points. Economic rewards refers to the value of rewards that can be achieved, it plays an important role as a primary motivation for human behavior[25], from some participants, the most influencing them to use Go-Points is the reward that can redeem. Greater reward motivates them to continue collecting points on Go-Points, but now the value of reward not following the effort they have made, many participants argued that the measure of points has received is not comparable with the reward that can be redeemed.

The reward. The total number of points exchanged to get reward should reduce, or the reward value must increase, so the motivation to play Go-pints will come. Swipe technique is also right, but it is better if there are no self-play games. Give points directly for each payment from GO-PAY. The go-points game should give rewards because I have used GO-PAY.

C. Motivation to Use Influenced by Social Gratification

Social gratification refers to social motivation as an important human factor that affecting individuals to use a media, in this study this derived from social value as primary social gratification. Social value is the benefit of a product or service that aims to satisfy user desires in obtained acknowledgment or social achievement, users that prioritize social value will choose Go-Points and KEJOG to present there being in line with current trends. The gratification from this category does not impact the specific use by an individual, but rather the user's relations with others.

I use Go-Points and KEJOG reports, because several peoples use and share it on their social media, I'm interested want to know and trying to use it too.

The perceived value of technology influenced by the number of users, several users started using GO-PAY based on the influence of their friends who have already used it, and then continue to use because of it easy to use and influenced by social value.

V. DISCUSSION

This study used the U&G perspectives to explore the effect of gamification in motivation to use GO-PAY as mobile payments, the result confirmed that three categories of gratification have significant impacts on motivation users to continue using GO-PAY: hedonic gratification(perceived enjoyment and passing time), utilitarian gratification(ease of use, self-presentation, information quality, and economic rewards), and social gratification(social value).

TABLE II.   THE RESULTS FROM THIS STUDY

Gratification	Factors	*Definition in this research*
Hedonic	Enjoyment	The happy feeling while using media.
	Passing time	A condition when the user using the media to occupy the time
Utilitarian	Ease of use	The measurement of how easy the product can use by users.
	Self-presentation	People tend to present themselves in a good manner to build good images.
	Information quality	The quality of information content.
	Economic rewards	The value of rewards can be redeemed.
Social	Social value	The benefit of a product or service that aims to satisfy user desires in obtained acknowledgment or social achievement

This study found that utilitarian gratification is the most important motivator or a significant motivational effect on motivation users to continue to use GO-PAY. This consistent with the findings of[7], Go-Points and KEJOG are easy to use and more efficient. People tend to present themselves in a good manner to build their good images, people collect points from Go-Points to presents it and compare with other users but the more significant influence from Go-Points is the rewards that can redeem, greater rewards motivate user to continue collecting points by using GO-PAY, while in KEJOG, when users getting good grades from KEJOG report, people will share it with other people to get responses.

Consistent with prior findings regarding[20] [7], hedonic gratification has found, this is related to enjoyment and passing time. Users feel gratified when using Go-Points and KEJOG, they perceive self-fulfilling by hedonic consumption content, colors, interaction, and animated images, this is pleasant and fun during the used, and they can spend time without realizing it when they have many tokens to play. The last is the social gratification, and it is related to the social value, which is a perception that users wish to convey their personality to other people. Consistent with[18][20] gamification can make Go-Points, and KEJOG became a trend, and it attracts people to use it. From the perceived value of technology, GO-PAY is easy to use, and it makes users gratified and fulfill their needs. The social value derived this assumption and effect on motivation to use GO-PAY.

This study found consumption process and perceptions derived from their needs that can achieve, and gamification increases user interest in a feature provided by GO-PAY. Gamification was influencing the motivation to continue using GO-PAY, as with the presence of gamification in KEJOG, users interested with KEJOG because the presented information have an interesting design, funny words, and ranking. In Go-Points, gamification increases user interest to play and get rewards that Go-Points offer. U&G perspectives appropriate to identify gratification from GO-PAY as mobile payment that according to user needs and motivate people to use GO-PAY, it is influenced by gamification from Go-Points and KEJOG.

VI.   IMPLICATIONS

The results of this study from, a theoretical viewpoint, contributes to IS literature in several things. First, this study found that the impact of gamification that can be driving motivation to continue to use mobile payment systems were previous studies on mobile payment have not much done in developing countries like Indonesia. Second, this study produced knowledge about the effects of gamification on mobile payment with U&G perspective that have not been explored before, in prior IS literature studies the U&G perspective generally implemented on mass media that use as a means to individuals connect with others like social media [23], the internet[19], WeChat[7]. The findings of this study extend the use of U&G perspective in IS literature that can be used to understand the effects of gamification in mobile payment that can fulfill the user needs and influence motivation to use mobile payment. Three categories of gratification identified in this study as present in Table II, the result indicates that every factor will play different roles in fulfilling the gratification. Third, this study found that utilitarian gratification has the most significant effect on motivation to use mobile payment, utilitarian has several factors that were shown in Table II, the users can fulfill their needs with functional of GO-PAY that effective and easy to use. This study revealed that U&G perspective could be used as a method to understanding the effect of gamification in motivation to use mobile payment, and this is a novel in the IS literature which previously limited.

The result of this study from a managerial viewpoint, provide several new insights to practitioners in mobile payment providers who are planning or currently implementing gamification. First, in terms of game elements, practitioners must pay attention to each game element that will be applied, to produce hedonic content that can make user-perceived enjoyment so the user will pass the time use the product. Second, to develop loyalty programs, practitioners must understand the rewards that will give, this study identified economic rewards play an important role as a primary motivation for human behavior. Third, this study explains that the users are always seeking the media that can fulfill their needs, so practitioners must ensure that the product is easy to use and can give benefits to the users effectively. Fourth, the benefit of a product or service should aim to satisfy user desires in obtained acknowledgment or social achievement, practitioners in mobile payment providers should be able to make a product that will become trends, so users that prioritize social value will choose to use the products. Finally, in terms to retain existing users and enhance new users, the practitioners in mobile payment providers must improving understanding of how and why users used the products. This study identified three types of the needs of users from U&G perspective (see Table II) that must be fulfilled by companies and allow companies to improve effectiveness and increase the user base.

VII.   CONCLUSION

Based on the conducted research, the conclusions of this research explain gratification sought from Go-Points and KEJOG as gamification in Mobile payment. This research finds several gratification factors that grouped into three categories as follows: (a) Hedonic gratification: gamification make users enjoy using Go-Points, and KEJOG, users perceive self-fulfilling by hedonic consumption content, colors, interaction,

and animated images. (b)Utilitarian gratification: utilitarian refers to the function that easy to use, and economic rewards can help motivated people to continue collecting points from Go-Points, and users appreciated the information that produces by KEJOG reports. Moreover, (c) Social gratification: it refers to social value, that motivates users to use Go-Points and KEJOG to be in line with trends, and influenced by others people, this effect to motivation to use GO-PAY as media payment. This study identified gamification is approved to be a method to attract users and make hedonic content that user will enjoy to use GO-PAY as media payment that fulfills user needs appropriate with U&G perspectives. Although from the results of this study have important implications for academic and practitioners, some limitation still needs to be addressed, this study participation based on limited existing users of GO-PAY, this study may have a general understanding of gamification. Future research can explore the right gamification elements to implement in mobile payment, mechanic, aesthetics, and dynamic. Different game elements can give a different effect on motivation to use or impact on loyalty programs. This perspective could change at any time for something new and innovative that meets the trends, so it is essential to know what users need that can be fulfilled by gamification in mobile payment to make user gratified and continues to use.

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