Consumer Motivation of Using Chatbot and Its Impact on Their Engagement: A Uses and Gratification Perspective

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Abstract

With the rapid increase in the number of consumer activities online, handling and responding to related requests has become increasingly challenging for organizations. To overcome this challenge, organizations have formed customer service teams to delicately respond to consumer requests online. However, responding to consumer questions in person is often time, energy, and money consuming. As such, chatbot has provided an alternative opportunity for businesses to communicate with their customers. The role of chatbot in e-commerce is not only beneficial to customers but also beneficial to the maintenance and development of e-commerce business. This study draws on the use and gratification theory and consumer engagement theory to investigate the reason why consumers use, engage in, and continue to use chatbot intention. The results are expected to provide organizations a reference when formulating online communication strategies.

1. Research Motivation and Research Purpose

As business continues to grow online exponentially, the online service environment plays a vital role in customer engagement (Nisar & Prabhakar, 2017). Chatbot can solve the problems and deficiencies in e-commerce and reduce the risks caused by online shopping, such as checking stock before placing an order, or addressing customer inquiry to enhance their purchase decision. Chatbot can replace and supplement the deficiencies of front-line employees through artificial intelligence learning and thus improve service efficiency and effectiveness. They are regarded as important innovative marketing tool for business digital transformation. Lu, Cai, and Gursoy (2019) suggested that chatbot is a crucial service innovation to enhance consumers' online shopping and brand experience. For the government,

it is also one of the ways to distribute information and communicate public policies.

Corrada, Flecha, and Lopez (2020) pointed out that the degree of communication between consumers and companies affects the purchase rate and repurchase rate of products and services. Through social media, organizations using chatbot can generate considerable benefits. However, research in understanding why consumers continue to actively use chatbot is still limited. **Most studies still focus on the practicality of chatbot and the development of AI information and the Internet. Little research has investigated factors drive consumers continue use chatbot and the willingness to maintain relationships with an organization.** Therefore, this article proposes a conceptual model based on use and gratification theory and consumer engagement theory to understand consumer use and satisfaction, engagement, and their willingness to continue using chatbot and maintain long-term relationships with organizations. Therefore, this research proposes two research questions:

RQ1: How do consumer use and gratification factors of using chatbot affect consumers' engagement with chatbots?

RQ2: How does consumer engagement in chatbot affect consumers' willingness to continue using it?

This research will use Line@ disease steward from the Department of Disease Control of the Ministry of Health and Welfare of Taiwan as the study context. Through an online quantitative questionnaire survey understand to examine consumer use, satisfaction, and perception of using chatbot and thus their continue engagement in in using the application Line@ Disease Steward.

2. Literature review, research models and hypotheses

This research draws on the "use and gratification theory" and "consumer engagement theory" as the theoretical basis for the study model and hypotheses development. The model illustrates consumer motivations of using chatbot and its influence on

their engagement and willingness to continue relationship and interactions with an organization (for the current study, government)

2.1 Use and Gratification Theory and Related Research

Use and Gratification Theory (U&G) (E. Katz, Blumler, & Gurevitch, 1974) is one of the influential theories in media and consumer use behavior research. U&G is related to how the media is used. In the past, media research focused on the influence and influence of media on consumers rather than investigating consumer motivations of media use (Ruggiero, 2000). U&G considers the pleasure consumers experience from media use, as well as their attitudes towards the media and its content (Roy, 2009). Severin and Taknard (1997) pointed out that use and gratification comes from the perspective of psychological communication and focuses on personal use and choice. The two scholars believe that different people can use the same quality of media to achieve different goals.

U&G explains consumers' psychological needs of media use. These needs shape the reasons why consumers use media and encourage them to engage in certain media use behaviors to meet their inherent needs (Rubin, 1984). Pertinent research has focused on how individuals use media to meet their needs and identify the positive and negative consequences of personal media use (Lin, 1999). Thus far, U&G has been applied to different mass media such as newspapers, radio, television, television, television, cable TV, video recorders, and the Internet. Table 1 summarizes the past and the present, related research, and main research media of use and gratification.

Table 1: Use and Gratification Theory related studies and the study domains

Author	Media	Gratification
E. Katz et al. (1974)	Internet media	Information and education, entertainment, personal identity, integration and social interaction, escapism
Elihu Katz, Blumler, and Gurevitch (1973)	TV quiz programs	Transfer, personal identity, personal relationship, education, excitement
Greenberg (1974)	Children watching television	Study, habit, relax, pass the time
Lull (1982)	Social uses of television	Environment, adjustment, communication convenience, social learning, subordination/avoidance, dominance/ability
Shaver (1983)	Cable television	Variety, control
Rubin (1984)	Television	Relaxation, habit, entertainment, information, escapism
Lin (1993)	Television	Information guidance, interpersonal communication, entertainment, diversion
Korgaonkar and Wolin (1999)	Web usage	Social escapism, transaction, privacy, information, interaction, socialization, economic motivation
Stafford, Stafford, and Schkade (2004)	Internet	Content satisfaction, process satisfaction, social satisfaction
Huang (2008)	B2C Websites	Entertainment satisfaction (mass media), perceived usefulness, convenience (information systems)
Chang (2016b)	News App	Information economy, entertainment relief, knowledge technology, interactive sharing
Luo, Chea, and Bui (2016)	Digital Media	The impact of continuous intentions, suggestions, and complaints on satisfaction
Bae (2018)	Social media	Social, convenience, social support, information, entertainment, escapism
P. H. Chen (2018)	Virtual reality online shopping	Entertainment, information, perceived ease of use, perceived usefulness
Corrada et al. (2020)	Social media	Communicate, re-purchase, search for information

(Source: Roy (2009) and this research)

This study draws on the seminal paper of U&G proposed by E. Katz et al. (1974) to establish the study model and the hypotheses. E. Katz et al. (1974)

argued that consumers are motivated to use media resources that best meet their needs. The gratification that consumers experience after using the media includes information education, entertainment, personal identity, social interaction, and escapism. Because technology keeps advancing, many studies are based on the Internet and social media. It can obtain a large amount of information and a wide range of users, which is a very important research direction. Therefore, research based on the theory of consumer use and gratification is adjusted to the information economy, entertainment relief, and interactive sharing (Chang, 2016a).

Due to the advances of technology and the development of social media, this study further identifies another motivation type of using technology and social media; they are personalized needs (Beh, 2019; Hur, Kim, Karatepe, & Lee, 2017). In digital media, a response to personal needs (such as location) is associated with motivation for use and gratification. **Information and entertainment motivation** are two important motivations for using digital media. Nowadays, chatbots are becoming more and more common for organizations to engage consumers online and for consumers to solve problems. In addition to obtaining information and knowledge, for organizations, collecting consumer feedback and suggestions is also the scope of application of chatbot. For example, while utilizing chatbot to communicate with customers, organizations have often pushed and broadcasted advertisements without considering customers' needs for interactions. At present, global users' adherence to social communication apps is increasing year by year, and the top 20% apps occupy 80% of users' time (Tseng, 2019). For a generation with such high social media use rates, organizations should also provide socializing function embedded in chatbot in order to

enhance customer use frequency (J.-S. Chen, Tsou, Chou, & Ciou, 2019).

2.2 Consumer Engagement Theory

The root of consumer engagement theory lies in the service dominant logic (SDL) and the expansion of relationship marketing (Brodie, Ili´c, Juric, & Hollebeek, 2013). From a broad perspective, consumer engagement is conceptualized as a psychological process, including cognitive processing, affection, and continued use intention. In addition, the engagement process also includes the interrelationship between its motivational driving factors and multiple consumer levels (Brodie et al., 2013). Under certain circumstances, different levels of engagement can occur (Bowden, 2009; Brodie et al., 2013; van Doorn et al., 2010; Vivek, Beatty, & Morgan, 2012). Thus, Brodie et al (2013) concluded that consumer engagement should be a multi-dimensional concept.

In light of the above discussion, this study takes a multi-dimensional perspective of consumer engagement, which includes cognitive processing, affection, and continued use intention aspects.

2.3 The research model and related assumptions

The aforementioned review has made a foundation for the current study model (Figure 1) and the related hypotheses. Figure 1 illustrates four motivations—information economy, entertainment interaction, social sharing, and personalized needs derived from use and gratification literature that will drive consumer's engagement from the cognitive process, affection, and finally continued use intention
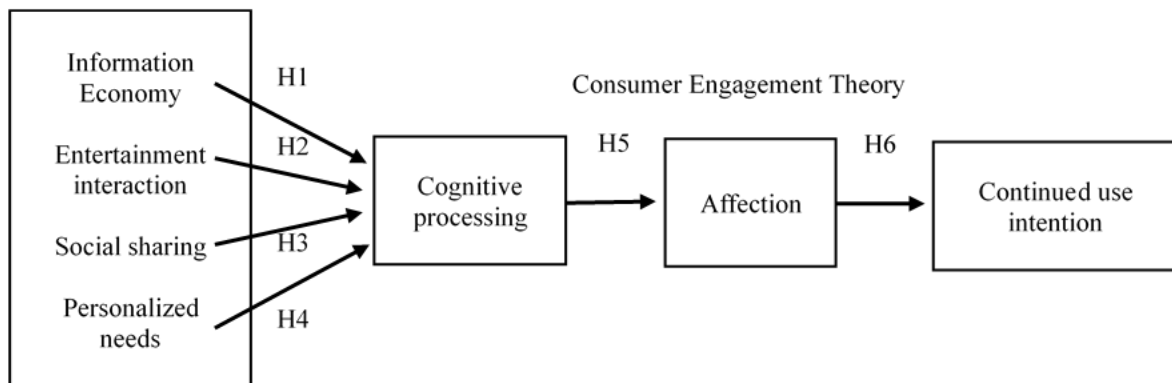
Use and Gratification Theory

Consumer Engagement Theory

Figure 1: The conceptual model and related assumptions proposed in this research

(i.e., continued use intention).

The information economy motivation drives consumers to check all economic-related information through the Internet (herein, Chatbot), including product information (Chang, 2016b; E. Katz et al., 1974). Cognitive processing is defined as a consumer's level of brand-related thought processing and elaboration in a particular consumer/brand interaction (Hollebeek, Glynn, & Brodie, 2014). While organizations need to answer a large number of consumer questions but with limited manpower, chatbot can help organizations to better use their resources to achieve maximum benefits for consumers and for organizations themselves. For example, Taiwan's medical resources are limited. Many people may just want to confirm their physical condition, but they have to register to ask a doctor. In such a situation, medical resources can be filtered to those who are urgent by chatbot. Gartner, an international research consultancy, estimates that by 2020, a quarter of enterprises are already using chatbot. It is estimated that by 2021, more than 50% of enterprises will spend more money on chatbot than traditional apps each year (Panetta, 2017). Therefore, this research proposes the first hypothesis:

Hypothesis 1: **Information economy** motivation is positively related to consumers' perception of participation in using chatbot

Entertainment interaction motivates consumers to use the Internet (herein, Chatbot) to pass time, relieve stress, and temporarily break away from the status quo (Bae, 2018; E. Katz et al., 1974). Studies showed that e-commerce should focus on reducing the complexity of online shopping and providing consumer-friendly features. The communication of government information and policies needs to be as simple as possible so that a layperson can understand them easily and effectively. Meanwhile, photos, videos, reviews, promotional activities, and messages can be used by consumers to realize their motivation to kill time and entertain (Hur et al., 2017). Consumers will find it interesting to use chatbot and continue to use them. Therefore, this research proposes that,

Hypothesis 2: **Entertainment interaction** motivation is positively related to consumers' perception of participation in using chatbot

Social sharing motivation drives consumers to communicate, share, and express opinions on topics between people on the Internet (herein, Chatbot) (Bae, 2018; E. Katz et al., 1974). New media introduced new methods of information dissemination especially through new types of social communication characterized by cooperation, community, dialogue, and sharing (Hennig-Thurau et al., 2010; Trusov, Bucklin, & Pauwels, 2009). Whiting and Williams (2013) identified ten uses and gratification motivations of using social media. Among the ten uses and satisfactions discovered, 88% of consumers share their satisfaction with the community members. 56% of respondents also use social media to discuss content on social media with others. For example, people may share the information they saw on social media in the Ministry of Health Service. Therefore, this research proposes that,

Hypothesis 3: **Social sharing** motivation is positively related to consumers' perception of participation in using chatbot

Personalized needs refer to different personal needs of consumers (Hur et al., 2017). For example, the disease steward of the Ministry of Health Service can specify a most nearby pharmacy to individuals. Hicks et al. (2012) pointed out that compared with those who only read content, consumers who participate in reading and commenting may have a higher overall usage rate. Customized services for personal factors can make chatbot more convenient for the public to use the service again and increase the incentives for continued use. The disease steward of the Ministry of Health Service provides information related to specific pharmacies that incorporates individuals' personal needs, saving the public time and energy to search for close-by pharmacies. Therefore, this research proposes the hypothesis:

Hypothesis 4: **Personalized needs** are positively related to consumers' perceptions of participation in using chatbot

The affection is defined as a consumer's degree of positive brand-related affect in a particular consumer/brand interaction (Hollebeek et al., 2014). Claffey and Brady (2017) pointed out that motivation is a prerequisite for consumer engagement. It directly affects consumers' cognitive assessment of whether to participate in experience and value creation. For organizations, new customers essentially care about the utilitarian value they can obtain from the organizations. Yet, for loyal customers, emotional connection is critically important for driving repurchase behavior. The more consumers are satisfied with the services or products

provided by the company, the more likely they will use the chatbot continually (Brodie et al., 2013). Panetta (2019) believed that artificial intelligence recognition of emotions will affect more than half of the online advertisement by 2024. Therefore, this research proposes the next hypothesis:

Hypothesis 5: Consumers' perceptions of engagement in using chatbot have a positive impact on their **affection** of engagement

Activation is defined as a consumer's level of energy, effort and time spent on a brand in a particular consumer/brand interaction (Hollebeek et al., 2014). Lusch and Vargo (2010) suggested that these interactive consumer experiences co-created with other participants can be interpreted as "engagement" behavior. The consumer engagement process includes a series of sub-processes, which reflect the consumer's interactive experience of the organization and the co-creation of value between organization and customers (Brodie et al., 2013). Consumers form their satisfaction from the process of interaction, making them more willing to spend time with the organization. establish loyalty, and satisfaction. When an organization can understand these factors before establishing consumer relationships, major investments can be made, and messaging can be delivered effectively (Ashley, Noble, Donthu, & Lemon, 2011). Therefore, this research proposes the final hypothesis,

Hypothesis 6: Consumers' emotion in using chatbot has a positive impact on their **continued use of chatbot**

3. Research methods and procedures

The purpose of this research is to investigate the motivation factors that drives consumers to use chatbot and how they affect engagement. Quantitative research method is therefore adopted.

3.1 Sampling method and data collection process

In this study, the questionnaire was designed based on the LINE chatbot "Disease Steward" of the Ministry of Health Service. Use a judgmental sampling strategy. It is hoped that people who have used the Disease Steward of the Ministry of Health Service more than two times within three months will be asked to help fill out the questionnaire. The questionnaire is sent in the form of an online form to potential qualified respondents. The advantages of the judgmental sampling method are as follows. First, the samples are more representative to the overall Taiwan population because not every Taiwanese citizen engage in the app. Those who have not used the disease steward are not included in the scope. It can prevent the testers from answering in a hypothetical way (Sands, Ferraro, Campbell, & Tsao, 2020). Second, the non-probability judgment sampling technique selects qualified samples that enhance the credibility of the data (Adam, Wessel, & Benlian, 2020). Finally, all information is anonymous and confidential to avoid prejudice by researchers (J.-S. Chen et al., 2019).

3.2 Questionnaire design

This study uses a questionnaire survey method, and the samples will be users who have used chatbot at least four times in the past one month. The survey content is divided into three parts, the first part is the scale use and gratification. The second part is consumer engagement. The third part is the sample's socio-demographics information including gender, age, educational qualification and employment status.

4. Contribution to theory and practice

This research has three main academic and practical contributions. First, this study integrates two theories—use and gratification theory and consumer engagement theory to investigate the factors that consumers use chatbots and how they affect participation. Consumers who have used chatbot four times within a month is used as a sample to answer the research question raised by this research: What factors affect consumers' continuous use of chatbot. According to Ruggiero (2000), the U&G has some limitations, for example, the theory still lacks internal consistency and theoretical argumentation, and its predictive ability is weak. Therefore, this study adds consumer engagement theory to improve the predictability of U&G in terms of chatbot engagement.

Second, this study highlights the process of consumer engagement, from cognitive processing, affection, and finally to continue to use intention. The expected results of the research are to investigate how consumer satisfaction and engagement are formed in the process of using chatbot, so they will continue to use chatbot. Finally, as chatbot is now widely applied in the marketing communication, it is essential to understand how to better engage customers. it is critical for managers to prevent customers from deleting chatbot since many people may slowly ignore or even delete chatbot after they obtain the information they need While this study

uses Disease Steward of the Ministry of Health and Welfare as the study target, the results can be used as a reference for the Government while trying to continuously engage citizens with the government messages.

5. References

Adam, M., Wessel, M., & Benlian, A. (2020). AI-based chatbots in customer service and their effects on user compliance. *Electronic Markets*.

Ashley, C., Noble, S. M., Donthu, N., & Lemon, K. N. (2011). Why customers won't relate: Obstacles to relationship marketing engagement. *Journal of Business Research, 64*, 749-756.

Bae, M. (2018). Understanding the effect of the discrepancy between sought and obtained gratification on social networking site users' satisfaction and continuance intention. *Computers in Human Behavior, 79*(2), 137-153.

Beh, Y. S. (2019). *Affordances as Self-Extension: Conceptualising the Affordances of Online Communication Features (OCFs) for Consumer Complaints.* (PhD). The University of Auckland, New Zealand. Retrieved from https://researchspace.auckland.ac.nz/docs/uoa-docs/rights.htm

Bowden, J. L. (2009). The process of customer engagement: A conceptual framework. *Journal of Marketing Theory and Practice, 17*(1), 63–74.

Brodie, R., Ili´c, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research, 66*(1), 105–114.

Chang, T. Y. (2016). *The Research of User Behavior on the News App by the Uses and Gratifications Theory in Taiwan.* (M.A.). National Taiwan University of Arts, Taiwan.

Chen, J.-S., Tsou, H.-T., Chou, C. Y., & Ciou, C.-H. (2019). Effect of multichannel service delivery quality on customers' continued engagement intention. *Asia Pacific Journal of Marketing and Logistics, 32*(2), 473-494.

Chen, P. H. (2018). *Exploring the Impact of Human-Computer Interfaces on Online Shopping - The Case of Virtual Reality and Web.* (M.A.). National Central University.

Claffey, E., & Brady, M. (2017). Examining Consumers' Motivations to Engage in Firm-Hosted Virtual Communities. *Psychology & Marketing, 34*(4), 356-375. doi:10.1002/mar.20994

Corrada, M. S., Flecha, J. A., & Lopez, E. (2020). The gratifications in the experience of the use of social media and its impact on the purchase and repurchase of products and services. *European Business Review, 32*(1).

Greenberg, S. B. (1974). Gratifications of television viewing and their correlates for British children.

Hennig-Thurau, T., Malthouse, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A., & Skiera, B. (2010). The impact of new media on customer relationships. *Journal of Service Research, 13*(3), 311-330.

Hicks, A., Comp, S., Horovitz, J., Hovarter, M., Miki, M., & Bevan, J. L. (2012). Why people use Yelp.com: An exploration of uses and gratifications. *Computers in Human Behavior, 28*(6), 2274-2279.

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer Brand Engagement in Social Media: Conceptualization, Scale Development and Validation. *Journal of Interactive Marketing, 28*(2), 149-165. doi:10.1016/j.intmar.2013.12.002

Huang, E. (2008). Use and gratification in e-consumers *Internet Research, 18*(4), 405-426.

Hur, K., Kim, T. T., Karatepe, O. M., & Lee, G. (2017). An exploration of the factors influencing social media continuance usage and information sharing intentions among Korean travellers. *Tourism Management, 63*, 170-178

Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and Gratifications Research. *The Public Opinion Quarterly, 37*(4), 509-523.

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). *The Uses of Mass Communications: Current Perspectives on Gratifications Research*: SAGE Publications, Inc.

Korgaonkar, P. K., & Wolin, L. D. (1999). A multivariate analysis of Web usage. *Journal of Advertising Research, 39*(2), 53-68.

Lin, C. (1993). Modeling the gratification-seeking process of television viewing. *Human Communication Research, 20*(2), 224–244.

Lin, C. (1999). Online service adoption likelihood. *Journal of Advertising Research, 39*(2), 79-89.

Lu, L., Cai, R., & Gursoy, D. (2019). Developing and Validating a Service Robot Integration Willingness Scale. *International Journal of Hospitality Management, 80*, 36–51.

Lull, J. (1982). How families select television programs: A mass-observational study. *Journal of Broadcasting & Electronic Media, 20*(2), 801–811.

Luo, M. M., Chea, S., & Bui, T. X. (2016). *Post-Adoption Behavior of Digital Media: The Merge of U&G Theory and Affect Event Theory*. Paper presented at the PACIS 2016.

Lusch, R. F., & Vargo, S. L. (2010). *S–D logic: Accommodating, integrating, transdisciplinary.* University of Cambridge, Cambridge.

Nisar, T. M., & Prabhakar, G. (2017). What factors determine e-satisfaction and consumer spending in e-commerce retailing? *Journal of Retailing and Consumer Services, 39*, 135-144.

Panetta, K. (2017). From bots and AI to counterfeit reality and fake news, these predictions require IT leaders to pace their adoption.

Panetta, K. (2019). Technologies from AI to cryptocurrency and online shopping are changing how we live and what it means to be human. CIOs and IT leaders must help their organizations

adapt in this changing world. *Smarter With Gartner*.

Roy, S. K. (2009). Internet uses and gratifications: A survey in the Indian context. *Computers in Human Behavior, 25*(4), 878-886.

Rubin, A. M. (1984). An examination of television viewing motives. *Journal of Communication, 8*(3), 141–165.

Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication and Society, 3*(1), 3–37.

Sands, S., Ferraro, C., Campbell, C., & Tsao, H.-Y. (2020). Managing the human–chatbot divide: how service scripts influence service experience. *Journal of Service Management, ahead-of-print*(ahead-of-print).

Severin, W. J., & Taknard, W. J. (1997). *Communication theories origins, methods, and uses in the mass media*: Longman.

Shaver, J. L. (1983). The uses of cable television, Unpublished master thesis, University of Kentucky, Lexington, KY. USA.

Stafford, F. T., Stafford, R. M., & Schkade, L. L. (2004). Determining uses and gratifications for the Internet. *Decision Sciences, 35*(2), 259–288.

Trusov, M., Bucklin, R. E., & Pauwels, K. (2009). Effects of word-of-mouth versus traditional marketing: findings from an internet social networking site. *Journal of Marketing, 73*(5), 90-102.

Tseng, Y. Y. (2019). New trends in e-commerce services carry out warm dialogues: "Chatbot" to create efficient interactions. *United News Network*.

van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D. N., & Pirner, P. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research, 13*(3), 253–266.

Vivek, S. D., Beatty, S. E., & Morgan, R. (2012). Consumer engagement: Exploring consumer relationships beyond purchase. *Journal of Marketing Theory and Practice, 20*(2), 127-145.

Whiting, A., & Williams, D. (2013). Why people use social media: a uses and gratifications approach. *Qualitative Market Research, 16*(4), 362–369.