THE STUDY OF HOW TO ENHANCE CHATBOT USER EXPERIENCES IN THAILAND

BY

MISS SASIPIM JINTANON

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE PROGRAM IN MARKETING
(INTERNATIONAL PROGRAM)
FACULTY OF COMMERCE AND ACCOUNTANCY
THAMMASAT UNIVERSITY
ACADEMIC YEAR 2017
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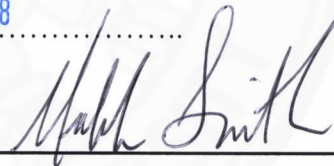
INDEPENDENT STUDY

BY

MISS SASIPIM JINTANON

ENTITLED

THE STUDY OF HOW TO ENHANCE CHATBOT USER EXPERIENCES
IN THAILAND

was approved as partial fulfillment of the requirements for

the degree of Master of Science Program in Marketing (International Program)

on........**1 0 MAY 2018**..../........

Chairman   _____

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Member and Advisor   _____

                                        (Associate Professor James E. Nelson, Ph.D.)

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Independent Study Title	THE STUDY OF HOW TO ENHANCE CHATBOT USER EXPERIENCES IN THAILAND
Author	Miss Sasipim Jintanon
Degree	Master of Science Program in Marketing (International Program)
Major Field/Faculty/University	Faculty of Commerce and Accountancy Thammasat University
Independent Study Advisor	Associate Professor James E. Nelson, Ph.D.
Academic Year	2017

ABSTRACT

This study is an applied marketing analysis in an area of technology focuses on customer service delivered via chatbot in Thailand. The study has been commenced from growing number of Thai companies which initiate chatbots for their benefits as a machine agent providing support to chatbot user. The study then conducted to get insightful from both user and prospect user side.

The main purpose of this paper is to acknowledge firms of how to enhance chatbot user experience in Thailand. The study achieved the main purpose with three main objectives completion as following; to identify the effective way of enhance chatbot usage in Thailand, to explore customer attitude toward current chatbot and to explore the possibilities of using chatbot to optimize customer satisfaction.

In Thailand, chatbots are disruptive technology which belong to introduction stage of marketing implication. There are very few Thai people who normally use chatbot. The study discussed on factor which affect to chatbot user expectation e.g. attitude etc. and user experience e.g. satisfaction or dissatisfaction, the researcher then conducted the qualitative research approach to get insightful of current service experience and customer expectation toward firm service.

The research methodology which has been implied to the study are these two methods; exploratory method and descriptive method. The exploratory research was determined of chatbot in term of definition and chatbot implementation due to

secondary resource. The descriptive research was conducted with in-depth interviews technique to two group of respondents as following; chatbot user and chatbot prospect user which fragmented into sub-group including non-user who aware of chatbot and non-user who unaware of chatbot. The data collection was accomplished by telephone interview and face-to-face interview. The data analysis was discussed with data reduction and iterative strategy on respondents' verbatim.

        The study shows that there are mainly two group of preference to accept the service. One group preferred communicate verbally and the other preferred use text messaging. All respondents have not satisfied with the past experience with service providers by personnel yet. It is an opportunity to draw people to use chatbot in the role that is not need to be delivered service by personnel. However, companies need to carefully consider of the readiness of chatbot usage. If users found it is not ready or useless, they will be discouraged to use chatbot again.

        The result will acknowledge reader of how to implement chatbot in the proper way to optimize chatbot utilities providing chatbot user the greater experience and how to avoid any actions which are able to cause company being risk of user dissatisfaction by using chatbot, crucially enough to imprint the inferior experience and to ruin a relationship between customers and companies themselves. Chatbots will be effective tools to execute market strategy, required proper implementation.

Keywords: Chatbots, Artificial Intelligence, Thai language, user experience, user expectation, conversational interface

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Miss Sasipim Jintanon

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CHAPTER 1
INTRODUCTION

1.1 Importance of Topic

Chatbots are the computer simulation which were programmed to chat with human across the online channel by message or voice. Chatbots were developed to be deployed on many instant messaging platforms such as Facebook Messenger, Slack, Line and etc. Many companies then interested in using chatbots with different way and outsourcing developer to create chatbot for business.

Many companies saw chatbots benefits and decided to take an advantage from chatbot technology. Chatbots were expected as a new opportunity to disrupt along to current customer relationship management process with the very basic support for instances providing basic information, report credit card transaction, checking remaining product, ordering product, booking service and furthermore.

There are four mainly aspects of benefit on investing in chatbot technology which corporates have commonly perceived. First of all, chatbots were expected to be a substitution or tools to increase efficiency in customer service role. There are significant amounts of payment that companies will take cost advantage on reducing employee salary or not to increase more number of employee which means more facilities for employee that must be provided following number of employee too.

Secondly, the great reduction of daily substantial transactions has been perceived as a chance for corporates of using this disruptive technology. Consequently, lesser transaction will be lower level of being risk from colliding between service providers and customers while they were confronting.

Thirdly, at the customer support where customer problems will be accomplished quickly at pre-stage or continue forwarded the issue to other service providers rely on degree of conflict that customer are dealing with. If the operator who is talking to the customer is not the right person in charge, the customer will be automatically forced to forward the call to other operators and repeat explaining an issue again. To consolidate the service consistency, chatbots are an alternative for

corporates to build the process which decrease direct encountering times of customers to service providers. The customer support process through chatbots enhance perceived service standard or deduct variation of service, heterogeneity (Bateson & Hoffman, 2008) which is the common characteristic of services.

Finally, chatbot technology is an alternative tool for companies to optimize companies' available service time for customers. In addition to the office hour regardless 24-hour-a-day working policy as a shift, companies left few choices for customers to deal with the problem by themselves for instances company website and social media page excluding messaging feature. Chatbots are an opportunity to be another option to providing service to customers for company consideration.

In 2016, 42.7% of total Thai population are active internet users (Thailand Internet Users, 2016). In 2017, Thai e-commerce market substantially grow with revenue 2,945 million USD (e-Commerce Market Report, 2017). Due to Bank of Thailand, e-Payments transactions valued at 8,460 billion USD in 2015 (Bank of Thailand, 2017). On this generation which is nurturing with technology and innovation, the future is coming over Thai companies to disrupt current customer service system. For business side, emerging technology is not only an advantage to be taken but companies which adapted those technologies will survive from lacking competitive advantage and losing market share to competitors at the end.

1.2 Research Objective

This study uses of contemporary topic in applied marketing. The research concept is in a technology opportunity in Thailand. The main purpose of this study is to identify key factors which enhance chatbot users experience. This research will be beneficial to Thai chatbot developers and service provider to use as guideline in chatbot implement and deployment in customer service process to deliver Thai customers with enriching users experience toward chatbot. The objectives of the study are as following.

To identify the effective way of enhancing chatbot usage in Thailand.

To identify existing problems which are annoying or upsetting customers. To define which firm's actions must be avoided to reduce risk of causing bad

experience through chatbot usage or dissatisfy customers once it was initiated to provide service. To find right implementation toward the type of service. To investigate their opinion of experiencing chatbots.

To explore customer attitude toward current chatbot.

To evaluate the attitude of chatbot user and non-user of which attitude before and after using chatbots whether positive, negative and neutral mindset of customer toward chatbot effect to customer decision or not.

To explore the possibilities of using chatbot to improve customer satisfaction.

To understand factors which cause satisfaction and dissatisfaction and affect to customer consideration set of using chatbot later. To define factors which improve satisfaction. To define factors which cause dissatisfaction over the customer limit of tolerance and how to avoid of it.

1.3 Organization of the report

This paper is comprised with four main chapters. All chapters are respectively described following research procedure thorough this report.

The first chapter or this chapter is introducing readers to the background of the study and how the study is meaningful to marketing implication. The research design in details is depicted in the second chapter. The third chapter is the result from the research and discussion of the result. The final chapter contains with the conclusion and the recommendation guiding readers of how to enhance chatbot user experience in Thailand.

CHAPTER 2
REVIEW OF LITERATURE

2.1 Definition

This paper has the content which related to disruptive technology. It contains with specific words which have been used in technical terms for instances chatbots, conversational interfaces, artificial intelligence and machine learning.

Chatbots are computer programs which belong to artificial intelligence technology which is an emerging technology. They have an ability to learn from database (Vanissaa, Ashoka, & Calin, 2017), to generate a human-like interaction and conversation (Coperich, Cudney, & Nembhard, 2017). The ability of chatbot is having an instant conversation with human. Software engineer deployed machine learning knowledge to program chatbots. Chatbots, embedded with then seem to respond similar to human by rapidly simulating reaction while human input a messaging or chatbots' voice sensors are able to capture either conversation or keywords.

There are two forms of chatbots learning which are the science practicing on programing the computer to generate human-like responses by itself when they get an input from human. It is an essential part of artificial intelligence. (TechTarget, 2018). The first one is **machine learning**, this type of chatbot will be trained based on a set of databases on how to respond to human. With this logic, this kind of chatbot will have limited interaction. The second one is deep learning, this type of chatbot which embedded with system utilizing neural network for development. This kind of chatbot can respond more similar to human and have more variety of interactions. The example of popular chatbots usage internationally such as Amazon's Alexa, Apple's Siri, and Microsoft's Cortana. The knowledge of chatbot technology in Thailand at the presence, are only available at pre-purchase stage in the form of machine learning. In Thailand, chatbot are programmed to provide basic information acting as a smart assistant. Even though, majority of Thai people do not aware of chatbot or cannot recognized whether they are using one, many companies begin to incorporate chatbot technology for customer service.

Conversational interface is a user interface which mock the human-like conversation. Conversational interfaces interact with more dynamic experience to human compared to what user interface does. (Botsociety, 2018)

Artificial intelligence is a knowledge engineering in the area of computer science, focusing on design a computer simulation reaction as close to human as possible. (techopedia, 2018)

2.2 Background

This topic covered of overview of the related work about chatbot developing and evaluation including the trend of Facebook platform growth.

Due to one of the study in a marketing communication approach (Killian & McManus, 2015), nowadays with raising numbers of social media platforms, managers concerned of how to manage all communication channels effectively. Also, in order to cater and enhance customers' experience and convenience. These problems lead to usage of chatbot. It has become an opportunity to reduce tasks in some platforms for the manager.

There are three aspects of conversation that must be controlled; the timing, the channel and the content (Mangold & Faulds, 2009). In conservative way, service provider can only contact within specific time. The customers can only choose the opening hour to receive service. Then company provides many channels for customer to contact with service provider e.g. phone call, social media channel and instant message application. According to the company itself, to handle all these channels use a lot of employees and train them to respond customers following the organization rulebook. It is hard to standardize all of responds because service is variability (Kotler & Keller, 2016). A service provider does not deliver exactly service to different customers. Then the more channels the company have, the more variations of service will be provided to customers which increase chance of the company to communicate to customers inconsistently. The content must be commit to the customers for surely functional benefits. Anyway, the service will be compelling if the company can provide emotional benefit through the content.

The aspects of conversation were described within these three primary themes (Killian & McManus, 2015); consistency, customization and commitment. The good communication the company should provide to customer must be aligned to the brand. The service must be customized to individual customer. The service must also be perceived useful or helpful by customers. If it is not useful, service providers often promise with the company name that it will solve the problem later. The service providers who do what they said, it will keep company's commitment to customers.

Conversation with chatbot has many advantages. Firstly, Chatbot is a machine so it does not need to sleep or take a rest like human. Hence the available timing (Mangold & Faulds, 2009) for chatbot is 24 hours unlike service providers as a human. This leads to more consistency and availability using chatbot service than rely on personnel. This supported by the study of social media integration strategy (Killian & McManus, 2015). Once the companies open up the channel but do not properly respond to customers' demand through that channel, it is better not to have that channel at all. Therefore, is it better to have the bot filling in the gap to save those losing opportunity cost.

Secondly, in term of channel (Mangold & Faulds, 2009), chatbot respond to many consumers at one time. Unlike the old way of having one admin per a social media channel to respond to all social media subscribers in order to reduce the risk of duplicate answers and manage consistent customer experience. It was inefficient. Chatbot manages each social media channel provides unique specific advantage to customers (Killian & McManus, 2015). Consumers will choose channel to communicate at their own free will. Managerial then must manage many channels at a presence. To manage all channels, the firm have to hire adequate number of employees to take responsibility of each channel. To apply chatbot technology to use in the firm help companies save those expenses.

Finally, the content that chatbot can provide are consistent but with limitation. It has limited answers which some variety contexts that consumer asked will not be answered. And the emotional value such as humorous can be only given to consumer in the first time then if consumer texts the same exact words, it cannot answer differently while human can. To obtain achievement (Leigh, Peters, & Shelton, 2006), any brand related interactions should be consistency. Brand characteristic can be ruined

by distinctive interactions. In contrary, to enhance customer experience and engagement with the brand, the respond of service provider must be customized to the customer presence needs (Killian & McManus, 2015).

However, chatbot is currently unable to be customized with the content related to customers like the human integrated approach ability. Commitment also is the challenge for chatbot utilities too. In another word, it reflects how advance of technology in the presence.

2.3 Chatbot and user experience

Consumer experience was enhanced by increasing of digital involvement, personalized service, and immersive engagement (Deloitte, 2016). Unfortunately, chatbot is not capable of responding to every user requirement. Its presence is limited due to technology acknowledgement. However, general population do not even realize that they are not talking to human being until the conversation with chatbots were getting into dialogue looping.

As the recent technology document of "Why People Use Chatbots (Brandtzag & Følstad, 2017)" in Norway, Westerner has adopted chatbot for widespread. There are key motivations to let people use chatbot. There are a lot of research to find balance relationship between human-chatbot and also was compared with relationship of human-human. Chatbot is the most humanlike system which provide consumers information than any other interactive system. Brandtzag & Følstad (2017) discussed that chatbots were increasing in many platforms. Chatbots are typically used for automated marketing and customer service. In the fact that human have no consistency of providing service in the same level to everyone and every time. There are mixing of customers who receive good and bad service. Customers who receive good service, it's their fortunate. It is difficult to train every single service provider to provide service in the same standard. So how about who took bad service, there is nothing to eliminate their experience and restart again. Chatbot can reduce risk, they have no emotions, like or hate, to service customer differently. We can supervise them to make customer has only good interaction. If chatbots may provide natural and feel good conversation in the future, it will enable organizations to reduce operational

costs and identify new opportunities for firm's customer relation management. Chatbots are an opportunity for companies to increase consistency into customer service system.

Chatbot seem benefits in providing service more than human because people will feel more comfortable with shorter speech, simple vocabulary and more casual word using with a machine agent. Then chatbot-human interaction is likely to stay longer than human-human interactions.

Chatbot users have similar expectation. They typically prefer quick searching and consistent response when they need assistant or information. However, they also prefer to achieve their purpose to get an information in a social and joyful manner. To achieve successful of chatbot creation, technological development and user experiences must be go along together.

2.4 Chatbot Opportunity

To maintain the brand social presence (Armano, 2010), if the brand representative does not fully reach to the core of the brand, consequently, consumer's perception to the brand presence will be affected and turned to be contrary outcome. Right communication can add value to customer, in contrast to use with the wrong communication it will cause opposite outcome.

In a few years, the firm which did not prepare for emerging technology, will have a chance to find struggle of applying new technology later. For instances, in the generation which computers were adopted only in a few firms, later on, computer is a key factor to increase productivity and being an effective tool to manage transaction system.

2.5 Key Findings from Literature

According to introduction part of the report, more over the benefits chatbot provided to company, chatbot also provide an opportunity for brand to expose both functional benefit and emotional benefit for user. For functional benefit, it can response automatedly. It will reduce customers waiting time. For emotional benefit, users can perceive brand emotional benefit. The human-like of chatbot characteristic will

strengthen brand perception and confident in company efficiency for users which lead to increase positive thought of customer toward company.

Even chatbot technology will be improved until it is smart as human, people will still perceive it is not alive. For the service stage which has to deliver sense of responsibility should use chatbot as an issue screener and to take users to the right person in charge quickly. Users will be entertained if chatbot is eventually effective. Helpless chatbot is not only useless but it can dilute the brand. However, chatbot mistake is more acceptable than personnel mistake. For personnel mistake, company has to perform much responsibility with sincerity for any level of mistake. Some of chatbot or machine mistake, if it is not so crucial mistake users will understand that system always have defects.
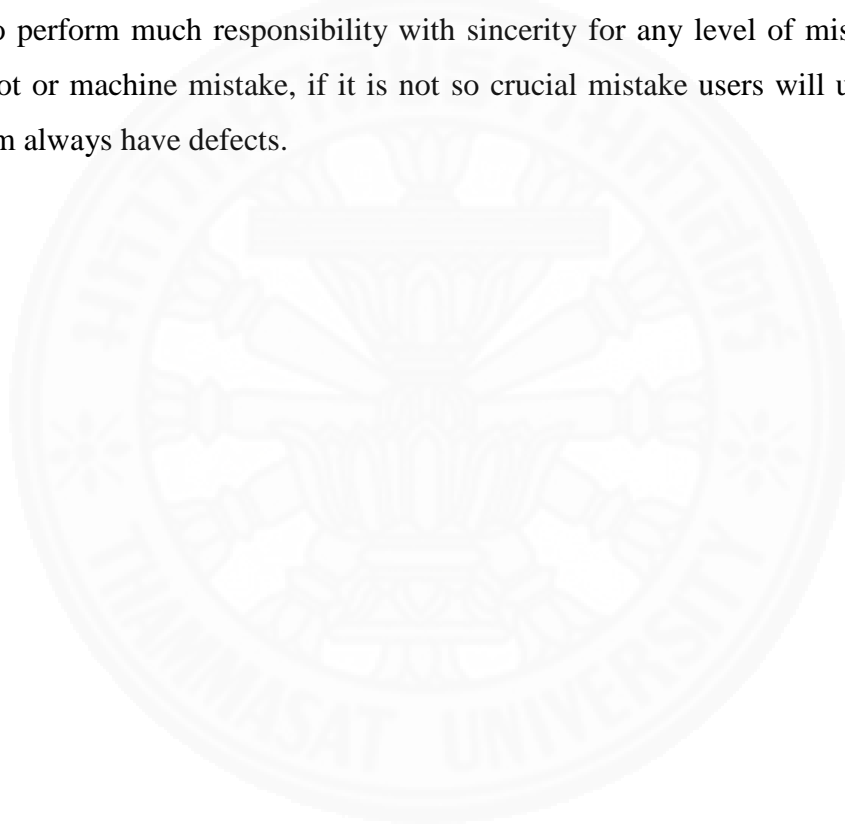
CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research methodology

Chatbot is the emerging technology in Thailand then there are few population of Thai chatbot users. Consequently, there is inadequate population to conduct the quantitative method. Therefore, in order to achieve these research objectives, only qualitative method will be used. The exploratory research was conducted with secondary research and observation. This research comprised with two data collections which are secondary data and primary data using exploratory research. The sequence of the study is shown as following; secondary research, qualitative research for chatbot user by in-depth interview and qualitative research for chatbot non-user by in-depth interview.

3.1.1 Exploratory Research

The secondary research was completed to find chatbot overview information and an insight of general chatbot users and chatbot technology basic knowledge.

Secondary Research

The secondary research was retrieved online by desk research with reliable source e.g. Google Scholar, document from international technology conference, academic journal on the concept of chatbot, research methodology, social media strategy, Artificial Intelligence, integrated marketing communication. The report of key consumer behavior toward digital era.

3.1.2 Descriptive Research

Two in-depth interviews were conducted within two phases. The first phase is an in-depth interview with chatbot user group of respondents to get an insightful information of chatbot using and the factors which cause satisfaction and dissatisfaction, and how to increase level of satisfaction to chatbot users. The second

phase is an in-depth interview with chatbot non-user group of respondents to get an insightful information on attitude, satisfaction and dissatisfaction on existing customer service. Wherever companies can improve user experience toward customer service by using chatbot. The appropriate role of chatbot in which customer service process.

Qualitative Research for chatbot user by in-depth interview

Five in-depth interviews with chatbot user were completed. To find the key insights and develop question for non-chatbot user. (See *Appendix A* for In-depth interview question for chatbot user)

Chatbot User Definition

Chatbot user is who use Thai-language chatbot within one year and able to discuss about chatbot using experience. Chatbot user has already known basic definition of chatbot.

Qualitative Research for chatbot non-user by in-depth interview

This second phase interview was conducted with the key questions which is originally generated based on hypothesis from the exploratory research results. The interview targeted 20 respondents of non-chatbot user. (See *Appendix B* for In-depth interview question for chatbot non-user)

Chatbot Non-User Definition

Chatbot non-user is a person who cannot explain the past experience toward themselves and chatbot. Chatbot non-user may have knowledge of chatbot or not.

3.2 Sampling Plan

3.2.1 Sample Size

At the first phase, five in-depth interviews were conducted to find the insight of chatbot user. At the second phase, 20 in-depth interviews were conducted to find the patterns of key factors which influence prospects to use chatbot and keep users continue using chatbot. Table 1 shows the number of sample size.

Session	Research Methodology	Data Collection Method	Sample Size	Annotation
Phase 1	Qualitative	In-depth Interview	Five respondents	All respondents must have used chatbot within year 2017 and be able to explain their experience with chatbot in details.
Phase 2	Qualitative	In-depth Interview	20 respondents	All respondents must have no memories about their experience and chatbot before the interview because the interview process allow this group of respondents to test the chatbot.

Table 1: Data Collection Method

3.2.2 Target Respondents

Sampling Criteria

Target respondents are social media users who speak Thai as a main language. The respondents are male and/or female age 18-38 years old. The respondents are internet heavy users who use internet everyday. Target respondents who are chatbot user must be able to explain their experience while they were using chatbot in details. Target respondents who are chatbot non-user must have no idea on chatbot usage.

Recruit Methodology

According to the time constraints, all respondents are convenience samples. They were recruited with the non-probability sampling method. All the respondents were recruited through phone, instant message application such as Line and Facebook messenger. The interviews were conducted by face-to-face and phone call.

3.3 Identification of Key Research Variables

Key variables of this study are comprised with independent variables and dependent variables.

Independent variables are 1) Demographic: e.g. gender, age, income, occupation, education, socioeconomic status and etc. and 2) Lifestyle: e.g. internet using behavior and instant message application they usually use (such as Facebook messenger, Slack messenger and LINE).

Dependents variables are 1) Consumer attitude toward chatbot 2) Factors which cause satisfaction and dissatisfaction toward customer service 3) Factors which cause satisfaction and dissatisfaction toward chatbot and 4) Expectation toward chatbot

3.4 Data Collection

At the first phase, five chatbot users were recruited for in-depth interview to obtain key insight of chatbot usage. An interview was conducted approximately an hour.

For the second phase, 20 non-chatbot users were chose for in-depth interview and chatbot testing. All of chatbots which used for testing are only allowed in Thai language chatbot. The chatbot testing was finished within ten minutes and not lesser than two minutes.

3.5 Data Analysis

The qualitative analysis of in-depth interview was used to determine chatbot user and non-user attitudes toward chatbot using behavior and attitude, current procedure to reach basic information and factors which motivate them to use or drop off chatbot.

Interviews were audio recorded. Participant speech and timing of the interview were transcribed. For the non-chatbot user group, their interaction and explicit word while using chatbot were also transcribed.

Then data collection from in-depth interview-phase two were also be auto recorded and transcribed and will be analyzed with data reduction including analysis of verbatim and iterative strategy.

CHAPTER 4
RESULTS AND DISCUSSION

4.1 Research Results

According to the data collection, there were total of 25 respondents. The data was collected from both current chatbot users and non-chatbot users. There were five chatbot users comprised of four males and one female aged between 28 and 33. There were 20 non-chatbot users, there were 11 males and eight females aged between 21 and 37. All respondents have education level higher than high school, the highest education level is Master Degree. The analysis was completed on chatbot users and non-chatbot users separately, then compared both the similarity and dissimilarity between their perception.

4.1.1 Key Finding from In-depth Interviewing with Chatbot User

Five Chatbot users were interviewed from October 2017 to November 2017. All respondents agreed that nowadays majority of their transactions have been conducted online. Likewise, the information search was also completed through online channels, especially on social media or through the use of search engine. They also did not hesitate to ask questions using live chats as a medium. They perceived that this method was more effective as it was highly responsive and reduce time needed waiting for call center.

> "Call centers always got busy line. To find information by myself is saved time better." - Pattra K., 31, Female

> "It is easily access. I generally use it on mobile phone." - Asvin K., 33, Male

> "It is faster and more convenient than I was finding the solution by myself." - Natthapat I., 31, Male

> "Chatbots is very convenient especially when I want to check credit card transaction and payment due date." - Chawin T., 27, Male

> "I always use for basic issues and I get the answer faster than human." - Suppatin T., 25, Male

Although, not all of the respondents were aware that they communicated with chatbot, they realized as the conversion progressed. Four out of five people realized when the conversation was apparently a looping pattern or provided buttons to choose different from human responses.

"I just knew it is a chatbot when it provided me buttons to be chose." - Natthapat I., 31, Male

"I just wanted to solve a problem then I started to type in Facebook Messenger. Firstly, I though the answer was from human. I realized when the answer repeatedly again and again." - Pattra K., 31, Female

"I knew it is a chatbot because it introduced itself firstly." - Suppatin T., 25, Male

"I intentionally use the chatbot at the first time so I knew it is not human." - Asvin K., 33, Male

They also agreed that chatbot concept and implication is very new. Two out of five enjoyed using chatbot as a mean to find new information as they perceived that chatbot was convenience and flexible way.

"At 2 A.M. of some night, the chatbot did still respond me." - Natthapat I., 31, Male

"Human is the best but if I have problems on 4 A.M., I still have a common sense enough to not make a call to the operators. There are very few operators who provide service all 24 hours a day." - Suppatin T., 25, Male

With limited number of users who aware of chatbot, it can be implied that chatbot concept and usage were not yet widely acknowledge in the mind of Thai consumers. The current chatbot users valued convenience as chatbot is always accessible and responsive regardless of operating time. Chatbot answered consumers' functional need in term of convenience and availability but it lacked emotional characteristic that would help enhance customer experience. The respondents mentioned four main suggestions for chatbot improvement.

Firstly, human interaction was preferred by all of the respondents. As participants could denote that they were communicating with the bot meaning that they

were not human like nor provided humanly interaction. Therefore, developer should take this aspect into account and design conversion that include more sense of humor.

> "I will be more pleasure if chatbots can talk with more **sense of human** and humor." - Asvin K., 33, Male

Secondly, customization function should be incorporated in chatbot suggestion. One of the respondents as stated below mentioned that he would be more please if chatbot has an annotation box feature. This feature would allow more customization in customers' order, hence better respond to customer overall need. This would help portray that the service providers care and pay careful attention to their customers.

> "Some of chatbot service cannot completed my customized request such as 'I do not want green pepper on the pizza'. If an **annotation box** was added into chatbot feature, I will be very satisfied." - Chawin T., 27, Male

Thirdly, the chatbot should be able to answer more complex or outdated questions. This means that chatbot providers would have to hold larger consumer database. This would help improve consumer satisfaction as this ability is beyond customers' expectation. However, this delightful ability will come with high price. In order to adapt to this suggestion, company have to weight this financial constraint to the benefit receive from doing so.

> "Sometimes, **old information** is deleted and unavailable, if chatbots can find it for me with **large database** I will be delightful." - Pattra K., 31, Female

Finally, Chatbot providers should be aware of its service limitation and be willing to refer customers to better and/or faster alternatives. Two of chatbot users complained that their questions were too complex for Chatbot to comprehend, but they did not know, so ended up wasting time with the bot instead of calling the call center for help. With this limitation, providing internal direct number to call the operators will be a better solution.

> "When I want to **contact the service provider**, chatbots process are seem **too many steps** for me." - Suppatin T., 25, Male

"It was annoying me when I ask a chatbot but it cannot provide me an answer and give me options to choose. It took **too many steps** but I still cannot find the right one. Finally, I have to call operators by myself." - Natthapat I., 31, Male

4.1.2 Key Finding from In-depth Interviewing with Chatbot Non-User

Twenty Chatbot non-users were interviewed from February 2018 to March 2018. These participants were asked in term of their present experience in receiving customer service provided by a person as a service provider prior to using a Chatbot of their choice in receiving the same/similar service. They were asked for their perception of Chatbot prior to their usage as well as after their usage.

All of the respondents were somewhat dissatisfied with current customer support provided by service provider personnel. The majority of reasons were difficulty in reaching the service provider, long wait time, or multiple transfers before reaching the person in charge.

"I always annoy when I dial to call center and the voice at the end of the line answering me 'All operator lines are full now, please hold your mobile phone for a second.'" **-** Tanase S.,28, Male

"Call center is my last choice. My problems were not solved easily and **I was forced to listen companies' advertising and jingle music**. Simultaneously, my phone call bills are increasing." - Chonchanok T., 31, Female

One out of three respondents experienced being runaround by more than two operators which was also mentioned as the cause in one of the research study (Bateson & Hoffman, 2008). It both annoyed and upset customers. Moreover, with human as a service provider, information given might be inconsistent. This was mentioned by two of the respondents. With inconsistent information, company's creditability and trustworthiness were in question.

"I don't suddenly call the service provider as the first option because they are likely to forward my call to another operator and another. At the end, I was thrown back to the first one I have talked to." - O Techadilok, 32, Male

"Each service provider in the same companies **talks differently**." - O Techadilok, 32, Male

One respondent mentioned that her problems were not permanently fixed. The problems were actually solved for a period of three weeks then resurfaced again. She has to reexplained the whole issue which caused time and effort to do so. With being a long-time customer (more than ten service years), she felt that her treatment and solution to her problems were unacceptable hence she decided to switch the brand.

"I am dissatisfied when I ask service provider to solve the product issue. **Problems have just been solved only for a while** and later the same problems occurred again. It wasted time to explain service provider again." - Nattaporn S., 24, Female

One respondent perceived he was ignored and brush-off from a service provider which was also mention in one of the literature review (Bateson & Hoffman, 2008). He felt that a service provider did not see him nor his problem as important.

"I was bother by service providers when they kept talking like they want to finish the conversation as soon as possible. They do not care my feelings at all." - Worachart D., 32, Male

Then the respondents discussed about their expectation of Chatbot. They perceived that machines would provide more accurate answer than human with correct input keywords. They hence tried guess the keyword until it reached their zone of tolerance (Bateson & Hoffman, 2008). Also, about a quarter of respondents love to try efficiency in new technology.

"If I input **right keyword** toward chatbots, they will answer me accurately." - Nattaporn S., 24, Female

"Firstly, I feel excited when the chatbot is able to answer my question. It is a new experience." - O Techadilok, 32, Male

One respondent expected that if he talks about the chatbot's brand even in the aspect that is not only for problem solving but also other aspects for instances appreciation of the product, the chatbot should be able to answer them.

"I expected chatbots can answer my teasingly question **which is about its own brand**." - Tanase S., 28, Male

One respondent was very skeptical about how chatbot operate and was reluctant in giving her personal information even if the transaction could be completed through chatbot. She felt that the information might be leaked out to some unknown sources.

"I avoid to press button 'Apply now'. I do not sure a chatbot will take me to payment part or not." - Siwaporn P., 33, Female

Based on the respondents' communication method preference, they can be separated into two groups which were verbal preferred and texting preferred. There were three out of five respondents who prefer to use verbal language and the remaining were keen on text messaging. The first group preferred to communicate verbally because they did not want to think, nor type. They thought speaking was more natural for them and it felt more connected.

"I prefer talking to human because I know that robots don't truly understand human language and I'm **too lazy to think before typing**" **-** Tanase S.,28, Male

"I like **tone of voice** of whom I talked to." **-** O Techadilok, 32, Male

"I like **tone of voice** and sincerity while we are speaking." **-** Tanchanok A., 27, Female

Another group preferred to communicate through text messaging as they could avoid confrontation emotionally from a service provider as well as it left clear evidence of topic that had been discussed or confirm. This evidence can be revisit and provided solid data for future discussion.

"I prefer instant message the most for contacting to service providers because there is message left as an evidence of chatting with staff." - Czarina L. T., 28, Female

"I also prefer online shopping more than going to physical store by myself because of two main reasons. First, it is my physical capability. Second, I do

not like when I perceived those service providers **just want to close the deal or issue quickly by ignoring my feelings."** - Chonchanok T., 31, Female

Chatbot was not considered as a top of mind choice when it comes to case of emergency. It would only be used when there were no other alternatives. Generally, when people face urgent problem, they will try to contact person in charge. For examples, if they found that they lost their credit card or ATM card in the middle of the night and they want to cancel their cards. This kind of scenario were not suitable and not yet obtainable via chatbots usage.

"**Availability** of service is high concerned, especially, in case of **high degree of urgency**." - O Techadilok, 32, Male

"In the **urgent case**, I will **definitely connect to call center** without hesitation."
- Nattaporn S., 24, Female

All in all, human interaction and confirmation was still preferred by majority of the respondents despite dissatisfaction at some point during the service.

"I love to talk to anything which has an **emotion**." - *O Techadilok, 32, Male*

4.2 Discussion

4.2.1 Similarity and Differentiation of Both Groups of Respondents

All respondents prefer human more than robots. One interesting pattern was shown from these interview sessions is that female respondents tend to enjoy conversation with chatbot while male respondents perceived that chatbot is giving out too much information.

The Similarity among Both Groups of Respondents

The respondents showed positive opinion regarding to chatbots performance. They were impressed with the human-like interaction which chatbots could provide.

"I expected nothing but once I perceived that the chatbot is talkative, it surprised me a lot." - Asvin K., 33, Male, Chatbot User

"I tried more casual conversation and the chatbot answered me with **sense of humor**. I like it. It **feels good**." - Nattaporn S., 24, Female, Chatbot Non-User

"I like its sense of humor." - Siwaporn P., 33, Female, Chatbot Non-User

Shopping habit is another aspect which both group of respondents have the similar opinion. They were not shopping type of person but they sometime purchased specific type of goods online. They were aware of both benefits and drew back of online purchases. The respondent also expected that delivery service must ordered by online.

"I quite prefer online shopping for some specific product because I do not want to carry every heavy thing back home by myself. Furthermore, pricing of both online and offline channel does not seem different." - Chawin T., 27, Male, Chatbot User

"The only thing I buy online is way protein. It is the product which already has obvious guarantee label. I do not have to wait and look forward that product is good or bad quality. I always eat the same product brand. It is an everyday consuming product which I will never let it run out. I found two benefits from shopping online. Firstly, I don't have to search for product by myself in a lot of stores. Secondly, I always consume big size of product and it is pretty heavy. If I have to take it from a department store, it wasted too much afford and time. Delivery is the solution for me." - Panyod P., 32, Male, Chatbot Non-User

The Differentiation between Both Groups of Respondents

Chatbot users and non-chatbot users had different reasons in using text messaging. Chatbot users preferred text message because he loved to read more than listen. For female non-chatbot user, one out of three respondents wanted text evidence and avoided negative emotional from service provider.

"I like to **read** more than listen." - Natthapat I., 31, Male

"I prefer chatbot because I don't have to waste my time for waiting a service provider to respond me, queueing and taking risk from staff's negative mood." - Czarina L. T., 28, Female

"I prefer messaging in Facebook and Line more than calling or directly talking to service provider because I can look back to the message. If the opponent

charged me that I have made a mistake, all **evidences have already shown up in the instant message application**." - Chonchanok T., 31, Female

Finally, the fact that people are well accept talking to chatbot in getting information or getting to operators faster but not for doing thing more complex through chatbot. Until Thais can become accustomed to technological assistant, then chatbot value can be greatly improved. This is why this study focus mainly on understanding Thai users attitude in order to build a strong foundation for further chatbot acceptance and development in Thai society.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

There are many companies in Thailand that have applied chatbots technology in order to offer it as an alternative channel for customer service. Chatbots are currently used mainly to provide information, and partly to complete purchase transactions. Chatbots claimed to help provide consistent service, extend available period, and reduce customer wait time which are the abilities are difficult to achieve by human providers. It is also recognized by many companies as cost effective way to provide customer service.

The study showed that people who current were aware and adopted the chatbot usage tend to be familiar with technology and favor the use of text messaging. These people recognized chatbot as a convenience alternative that is readily available and instantaneously responsive to their questions. As they are familiar with technology, they understood the chatbot's limitations and abilities. They strongly believe that chatbots could be tremendously improved.

The non-chatbot users could be divided into two groups based on their preference on methods of communication. One group preferred to communicate verbally and the other preferred to use text messaging. Both groups were not yet satisfied with existing service provided by companies of their using. They perceived that human as providers caused many errors ranging from difficulty in reaching the service provider, long wait time, not understanding the problems and unable to solve the problem permanently. Moreover, many of the respondents has mentioned that negative emotion confrontation was the main drawback of using this type of service. These people have high expectation of chatbot. They expected that it will provide accurate answers given the right inputs and it could recognized joke. However, they were still skeptical about security involving in chatbot usage, hence reluctant in proving personal information via this channel. Finally, consumers would not turn to chatbots in case on emergency. With these results, it is clear that the development of chatbots is necessary, yet it cannot replace human providers. Despite all the problems associated

with human providers, when there were available, they can provide reliable solutions to complex problems while instantly ensuring customers of their solutions.

Based on both primary and secondary research, it can be concluded that chatbot services in Thailand were not yet capable. Chatbots had limited abilities and often with backed up by small supported database. These limitations restricted many of chatbot functionalities, hence caused bad impression among the first-time users. With bad first impression, Thai consumers were discouraged to use chatbot and would be reluctant to try it again even after major improvement have been made. Therefore, prior to chatbot application, companies need to carefully consider the pros and cons and readiness of chatbots. The implication of the chatbot should help enhance customer experience not increase the dissatisfaction currently existed.

5.2 Recommendations

The chatbot development in Thailand should be developed based on a reliable and a large enough database. This is often not yet readily available in Thailand; hence companies should immediately start collecting customers data if they aim to apply chatbot technology in the future. The database should be comprehensive and extensive enough to be able to answer somewhat complex questions from customers. This will enhance customer experience and help create good first impression for Thai consumers.

The chatbot usage does not fit for all companies in the market. It is more suitable toward product or service of low-involvement requirement where customers can make their own decision based on information provided by the machine. It is not suitable for product or service which require high customer attention. Thus, in applying chatbot technology, the companies need to understand their own customers' requirement.

Moreover, chatbot should recognize a cutoff point where customers were unable to be served by chatbots. These points may include repeated questions, no as a respond when asking whether chatbots solved the issues, etc. This can signal that the answers chatbots provided were not sufficient to respond to consumers' need. Then chatbot should provide alternative solutions such as direct transfer to human

respondents via text or call center, or a call back option by companies' personnel based on current issued discussed.

5.3 Limitation of This Study

This is a qualitative research which only focused on few respondents regarding their opinions on the chatbot usage. The limited number of respondents were based on limited usage of chatbots. Thus, the results cannot be generalized as a representative of Thai population. It can only provide a reliable guideline for further study to be done on this research topic. Moreover, the chatbot services available in Thailand were not efficient and had not be tested prior to their implications. Therefore, the results of this study might be bias in a negative way. Also, the respondents' ages were concentrated around 18 – 38 years old. Therefore, the results were not represented for all age groups in which other age groups might have different opinion on this matter.

The demographic information of the respondents is not much variation. Education levels of the respondents are currently studying in the university and above. Education level may be a factor that effect to chatbot non-user's changes in behavior of phrasing a conversation. Because they understand Occupations of the respondents are student, university teacher, event organizer, freelancer, cabin crew and marketing manager. All the respondents have not get married. All chatbot users(n=5) began to use chatbot when they started living outside the hometown and interested in technology daily news. For the chatbot non-users, the respondents who are living on their own or not being with their families(n=9) are likely to use chatbot in the future. The reason may tend to be they have much responsibility of living on their own and there are a lot of things in routine life to be managed, they then have to find the way to solve their issue as quick as they can.

Furthermore, respondents were draw to use chatbot as they had faced difficulty or were seeking for answers to their problems. However, due to time constraints, the researcher was unable to recruit participants who have unsolved problems to test the chatbots. The tests were completed on respondents who might not need to use the service. Thus, there was no urgency nor intensity toward the usage. This might lessen the appreciation in term of solutions provided by chatbots.

5.4 Further Research Suggestion

People with different age might have different perception in regard to chatbot usages. Therefore, further study should be done on different age groups and then compared their perception and expectation toward the usage. As different companies target customers among different age ranges, therefore to make their chatbot most appearing to their target consumers, further study is recommended.

Moreover, chatbots exist to solve consumers' problems, hence deep understanding about consumers' problems is required. This research will tend to be company's specific requirement. This will help strengthen chatbot functions and answer it will support.
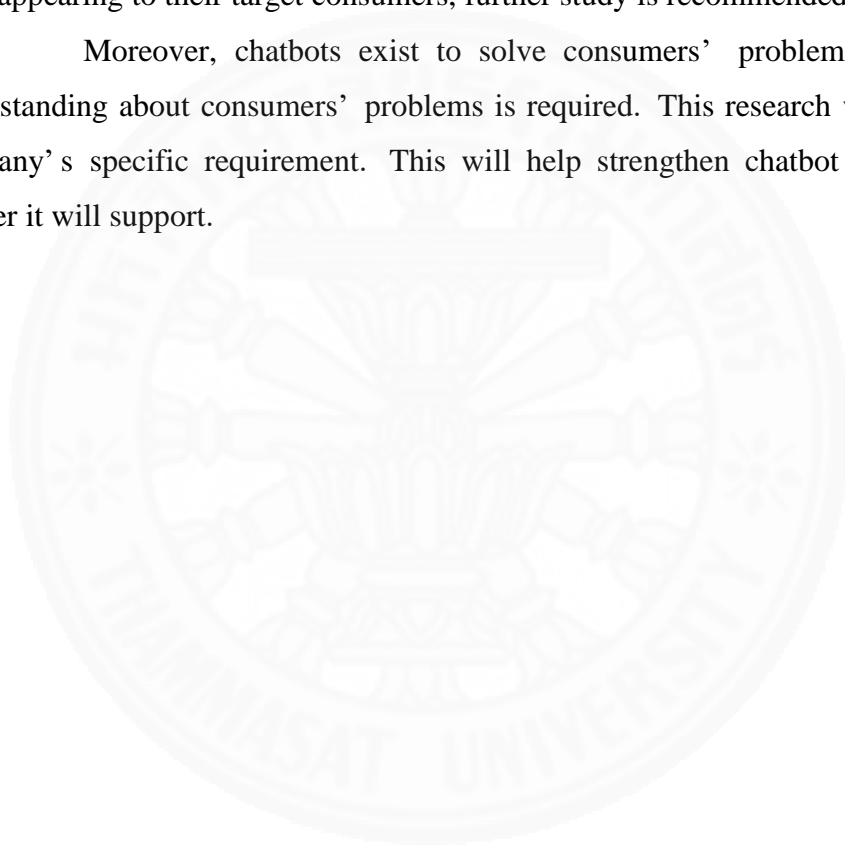
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APPENDICES

APPENDIX A

In-depth Interview Question for Chatbot User

1. What is your last time using chatbot?

2. Which chatbot did you use?

3. Did you know at the first time that it is not human?

4. Why you use chatbot?

5. What is your expectation from chatbot?

6. How often do you used chatbot?

7. How long do you chatbot?

8. Did it able to help you effectively? How?

9. Is it faster than other way to receive information?

10. How it different from other solution such as searching on website or calling call center?

11. Which one do you prefer more between obtain service from human or robot? Why?

12. How long you can wait for receiving service?

APPENDIX B

In-depth Interview Qusetion For Chatbot Non-User

Screening Questions

1. Do you work for chatbot service company or a marketing research relative to chatbot topic?

    Yes (TERMINATE)

    No (CONTINUE WITH Q.2)

2. How old are you?

    Under or over 18-38 years old (TERMINATE)

    In-between 18-38 years old (CONTINUE WITH Q.3 and keep the answer as Demographic result)

3. How frequency do you use internet?

    Less than 4 times a week (TERMINATE)

    More than 4 times a week (CONTINUE WITH Q.4)

4. Have you ever find product or service basic information or promotion by yourself?

    Yes (CONTINUE WITH Q.5)

    No, Why, explain? (TERMINATE)

Main Questions

5. Please explain the solution you always use for finding information and customer support. What satisfy and dissatisfy you?

6. If there is other way to reaching the information, do you tend to use? Why?

7. Do you know Chatbot?

Give Chatbot Definition

    Chatbot is an emerging technology which relied on usage of Artificial Intelligence(AI) in order to respond users with human-like interaction. It has been assigned with the set of answers by developer which can respond user following how it was designed.

9. From the Chatbot definition, do you think you want to use Chatbot?

10. What is your expectation from Chatbot?

Give an experiment with sample Chatbot

11. The respondents will choose chatbot to have an experience within 10 minutes.

12. How do you think about Chatbot? Is it helpful? How?

13. Which one do you prefer moreover between computer and human to provide you service? Why?

14. Do you think you tend to use Chatbot in further?

15. Do you have any suggestion?

Demographic Question

16. What is your job position?

17. What is your education level?
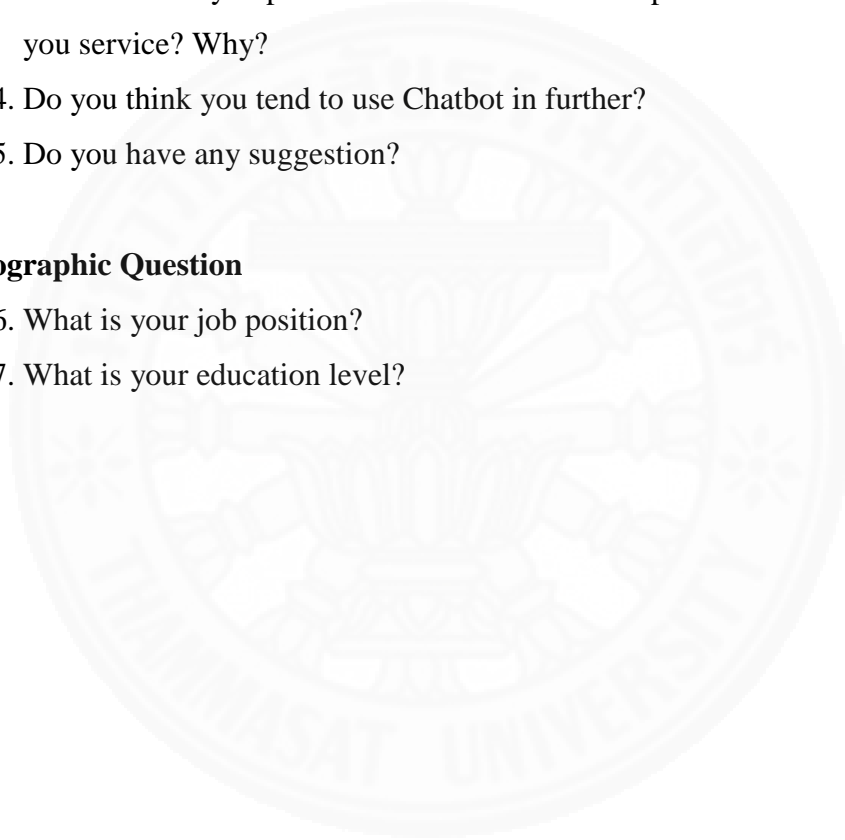
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