

**CUSTOMER PERCEPTIONS TOWARD COMPANIES'
CHATBOTS ON E-COMMERCE AND SOCIAL COMMERCE
PLATFORMS IN THAILAND**



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THAILAND**

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ABSTRACT

Nowadays, selling products on e-commerce and social commerce platforms are popular in Thailand due to the development of technology and changes in customer behaviors. Whilst companies use chatbots to interact with both potential and existing customers on their platforms with the view to increase business competitiveness, customers and companies may have different perspectives on their purpose. This paper aims to understand the perceptions of Thai customers toward chatbots. This research is a qualitative methods, applying an in-depth interview technique; alongside the relevant research and literature review.

The results showed that Thai customers have the intention to use chatbots as they perceive the convenience value of chatbots through their ability to answer simple questions. The good responsiveness of chatbots also creates value in the eyes of the customer, interestingly trust has no relationship with the intention to use chatbots.

KEY WORDS: Chatbots / Perceived value / Intention to use / Thailand

48 pages

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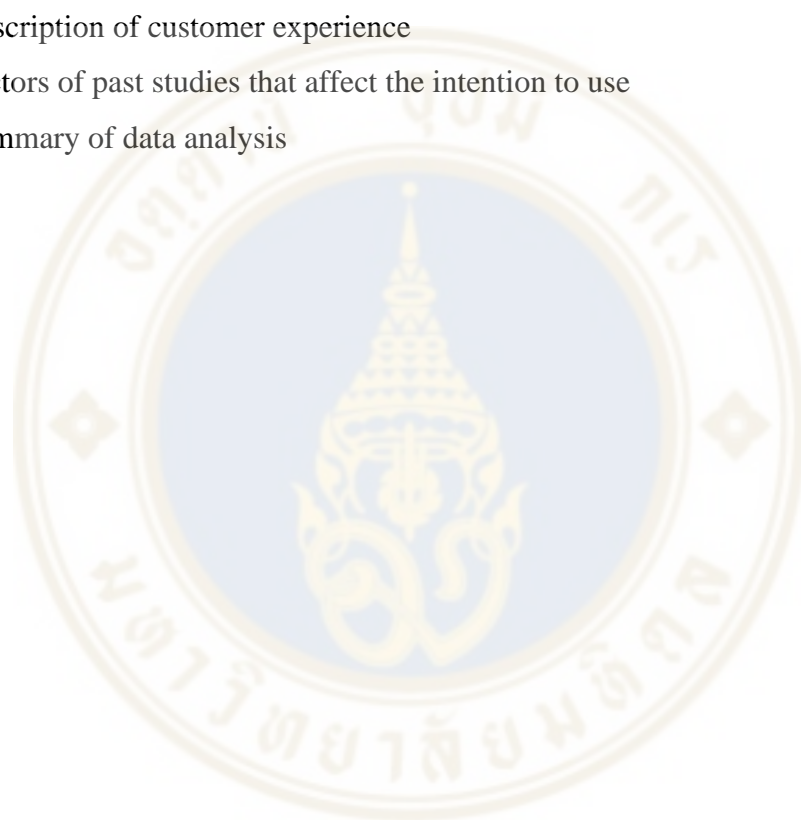
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CHAPTER I

INTRODUCTION

The global marketing automation has grown rapidly. In 2019, it grew around 3.3 billion U.S. dollars. By 2024, it is expected to grow 6.4 billion U.S. dollars with 13.9% compound annual growth rate (CAGR) rate. This information shows the opportunity for marketing automation market. The growth is from many factors such as the increasing of needs for automating repetitive marketing processes and demands for personalized marketing. In Asia Pacific or APAC, marketing automation is also growing significantly, since many companies would like to enhance customer experience. APAC is expected to grow at the highest CAGR rate, while North America is likely to have the largest market size of marketing automation globally (Marketing automation market, 2019).

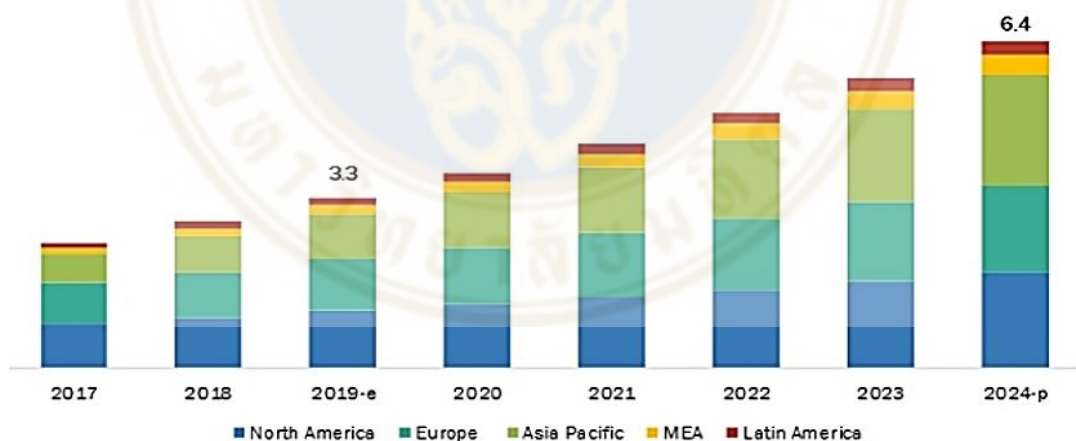


Figure 1.1 Marketing automation market by region (USD Billion)

The Marketing automation includes email campaigns, chatbots, mobile communications, data migrations, etc. In addition, around 28 percent of marketers revealed that marketing automation helped increase the revenue per sale.

Chatbots play significant roles in reducing the marketing expenses and customer service costs. In addition, they save the working hours around 2.5 billion by 2023 (Donahue & Hajizadeh, 2019). Brandtzaeg and Følstad (2018) stated that people spend a lot of time on messaging platforms i.e., Facebook messenger and there were more than 1.2 billion users using Facebook messenger per month in 2017. With the increase of social media usage, chatbots can be integrated to the social media and used as the main tool to reach customers.

Selling products online via social media is called the social commerce. The social commerce or conversational commerce (C-Commerce) is the use of social media such as Facebook, LINE, Instagram, YouTube, etc. for promoting and selling the products to customers or users (Dollarhide, 2019). In Thailand, social commerce is growing due to the widely use of social media across the country. According to Electronic Transactions Development Agency or ETDA, Thais spend an average of 3.5 hours a day on YouTube, Facebook, and LINE. They are the top three of social media platforms that Thai people mostly use in Thailand (Pornwasin, 2018). Mr. Thanawat, chief executive of Priceza, stated that Thailand has become the global leader in social commerce (Nguansuk, 2019). The social commerce is second in popularity only to e-commerce. According to Economic Intelligence Center (EIC), 51 percent of Thai consumers embrace shopping online through social media i.e., Facebook and Instagram and 65 percent of Thai shoppers bought products from e-commerce i.e., Lazada (Buasang, 2017). Chulamane (2020) showed that more than 60 percent of Thai shoppers chatted online with brands while shopping and 93 percent tends to buy products from the shops that they can send messages to. Buasang (2017) also indicated that social media such as Facebook and LINE application have developed their platforms to support the chatbot function. In Thailand, shop owners who sell products on Facebook and LINE application can add chatbot to interact with their customers in order to reduce staff cost, shorten sales process, provide information instantly, etc.

The e-commerce market in Southeast Asia is quite large. Singapore, Malaysia, Philippines, Indonesia and Thailand generated US\$14.8 billion from online sales in 2016. It was also predicted that ASEAN's digital consumers' spending on

average will triple from 125 U.S. dollars in 2018 to 390 U.S. dollars in 2025 (Hasnan, 2019). In Thailand, the value of e-commerce has been growing between 8 to 10 percent per year (ETDA, 2019). In addition, many e-commerce sites in Thailand have expanded their capacities to support the increasing number of online shoppers. Some of the companies have integrated chatbots to their businesses and used them as primary method to communicate with their shoppers in order to deliver a better personal experience (Hasnan, 2019). Artificial intelligence (AI) is also introduced to develop the quality of Chatbots (ETDA, 2019). Thus, some companies in Thailand started employing chatbots to interact with their potential and existing customers on their websites to gain advantages for the brands.

A Chatbot is regarded as a new communication tool that enable firms to reach their customers easily through a company's website or social media platforms. Chatbot is one of the most effective tools for building better customer relationship (Zumstein & Hundertmark, 2017). In Thailand, there are not so many Thais who are familiar with the chatbots and they do not tend to use chatbots if they have other choices. Some companies also view that chatbots are complicated to implement and too expensive for small businesses (Kateryna, 2019). Although chatbot is not a new trend, 25 percent of marketers still ignore it. The reasons for not implementing chatbots may vary. Even though the companies already implemented the chatbots, customer experience and intention to use are still low which could lead to service failures and negative word of mouth. In the early stage of chatbot deployment, many developers and companies ignore user needs and experiences (Brandtzaeg & Følstad, 2018) which impedes the performance of customer service (Feine et al., 2019). In addition, the absence of outstanding results of the use of chatbot technology restricts the growth of chatbot market (Wood, 2019). According to the 2019 state of conversational marketing report, customers tend to use chatbots for answering their questions which is accounted for 32 percent. However, there were not so many people used the chatbots for purchasing items. When money is involved, people are more concern and hesitate to use the technology (Kilens, 2019).

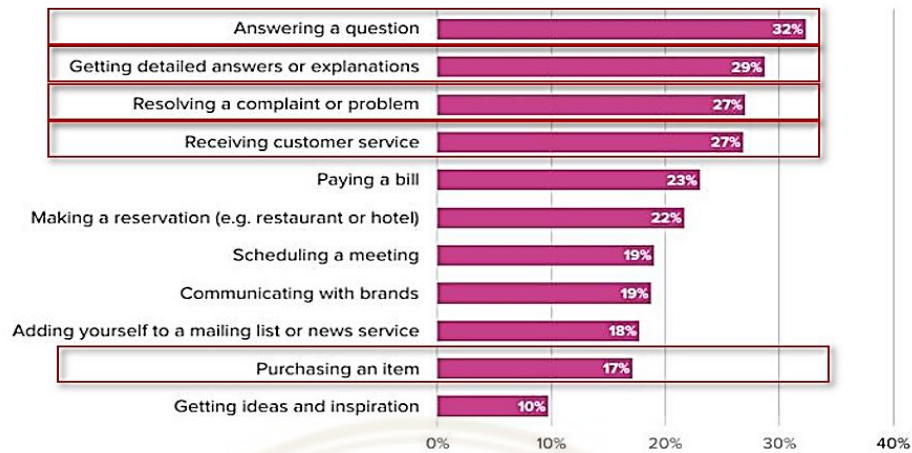


Figure 1.2 Purposes of using chatbots

There are no studies focusing on in-depth information of Thai user perceptions on the chatbots of companies in Thailand. Therefore, understanding users' reasons for using chatbots and their thoughts on chatbots could be beneficial for the companies and marketers can utilize the information provided in this study to develop better chatbots' responses based on the results in order to increase the intention to use chatbots.

In this paper, researcher will study on Thai customer perceptions toward chatbots of the companies in different industries such as online retails, airlines, garments, and logistics. In addition, researcher would like to find out the detailed and hidden information of the 3 main factors including perceived value, customer experience, and trust. Moreover, the paper will also show the information of the factors that impact on the intention to use the chatbots. This study was conducted by using the in-depth interviews technique with the purpose of gaining deeper understanding of customer perceptions on chatbots. Thus, the chatbot developers, companies and people who are interested in chatbot technology can use the finding results for information and developments.

Research Objectives

To understand Thai customer perceptions toward chatbots of companies based in Thailand and know the reasons for using the chatbots in details.

Research Questions

1. How do Thai customers feel toward chatbots?
2. What are the reasons that make customers use chatbots?



CHAPTER II

LITERATURE REVIEW

2.1 Chatbot

Chatbot has been introduced to the businesses by companies in order to assist customers in terms of providing information, solving customers' problems, and suggesting the products or services. The chatbot is regarded as a machine agent that provides natural language to users through text or voice (Brandtzaeg & Følstad, 2018). Chatbot (also known as conversational agent, talk bot, and messaging-bot) is a computer program or a software application that mimics human conversations which can be in many languages with the purpose of simulating conversations with human users (Shawar & Atwell, 2007). The term chatbot was from two words including chat and robot. Reshmi and Balakrishnan (2016) defined chatbot as a software that reacts to human inputs and tries to mimic a real person in a particular conversation. Chatbots can operate on many communication channels such as LINE, WeChat, Facebook, and websites. In addition, it can be accessible from various devices such as PCs and mobile phones (Feine & Gnewuch, 2019).

Chatbot is regarded as an emerging technology that is used to improve and support services in many fields such as library, banking, and e-commerce (Mckie & Narayan, 2019). Due to the fast-changing world of technology, more and more companies have introduced a system called chatbot to their businesses. For example, banking and financial sectors adopted the chatbot system in order to have better customer services (Doherty & Curran, 2019). There are many purposes of using chatbots such as for entertainment, business and commerce. Companies are interested in investing on chatbots for their businesses since they can reduce costs in customer services and deal with many customers at a time.

In e-commerce and social commerce, chatbots can assist users in suggesting the products and services that are suitable for them (Gupta et al., 2015). In addition, the chatbots can assist users to find information easier. The users can chat with the chatbots and ask questions in order to get responses instantly (Vegeesna et al., 2018). According to Hasnan (2019), chatbot is very useful for online sellers. It helps them to deal with customers' requests more effectively by automating the communication between a chatbot and a customer. The Chatbot works through two systems which are flow-based and sophisticated chatbot. For the flow-based chatbot, the pre-packaged answers are provided to customers via chats. For sophisticated chatbot, it will be powered by artificial intelligence (AI) and machine learning (ML).

Chatbots play the significant role in customer service. They are considered to be one of the best ways to support customers because they can constantly operate 24/7. Chatbots act like customer service representatives to provide the users a useful information (Cui et al., 2017). Moreover, chatbots can help companies to automate online customer service and enhance online customer experience. They can be the first point to interact with customers and assist customer service employees in answering and screening customers' questions and handing over the conversations to the right agents when required (Feine & Gnewuch, 2019).

2.2 Perceived value

Individuals create value by developing services, products, processes, or other contributions perceived to be value by users which relate to the users' needs (Lepak, Smith and Taylor, 2007). Consumer perceived value is important in retailing sector, retailers have to deliver the value that can increase customers' shopping intension by delivering good shopping experiences to customers (Parasuraman & Grewal, 2000). Many previous studies have proved that the value is given when customers satisfy a product or service (Morar, 2013).

According to Morar (2013), perceived value is a concept that has various meanings. The meanings are different according to the context and defined from customers' point of views. Hollebeek (2013) stated that the perceived value has been

stated in various contextual applications such as relationship marketing (McColl-Kennedy et al. 2008), the service dominant logic literature (Gummesson 2008) and e-commerce settings (Chen & Dubinsky, 2003). Zeithaml (1988) indicated that perceived value is a customer's final assessment of a product or a service based on perceptions of what is given. In addition, perceived value is perceived as something between benefits and sacrifices. Originally sacrifices are relevant to money which are things that are related to price. However, they can also be a non-monetary price which is the risk of poor performance (Liljander & Strandvik, 1993). Woodruff (1997) stated that the different definitions of perceived value are changing according to consumers' behaviors. Moreover, perceived value is defined as an exchange between what is received and what is given (Iglesias & Guillen, 2004). Another definition of perceived value mentioned by Keller (1998) is that it is the combination of cost and quality perceived by consumers. Day (1999) believed that perceived value is like the equation of perceived benefits diminish the perceived cost of a customer. Zeithaml (1988) stated that price, quality, and perceived value affect people perceptions and evaluation of products. In addition, perceived value positively affects the intention to use smartphones of Thai users (Pitchayadejanant, 2011). Boontarig (2012) indicated that perceived value has a strong significant on intention to use smartphone of the elderly. In this paper, perceived value means a customer' evaluation on the perceptions of what is perceived as more benefits than cost which is the poor performance of using chatbots.

Table 2.1 Description of perceived value

Factor	Description	References
Perceived value	An exchange between what is received and what is given.	Iglesias and Guillen (2004)
	Perceived value has a strong significant on intention to use smartphone of the elderly.	Boontarig (2012)
	Perceived value positively affects the intention to use smartphones of Thai users.	Pitchayadejanant (2011)

2.3 Trust

Historically, trust was defined and mentioned only in the context of interpersonal relations, organizations and society. Trust is an internal state of a human's mind consisting of the intention to accept vulnerability based on positive expectations of the intentions (Rousseau et al., 1998). Botsman (2017) also stated that trust is defined as a sense of belonging, interaction and collaboration between humans.

Luger and Sellen (2016) stated that there were many conversational agents (CA) that did not meet user expectations. Users did not trust conversational agents (CA) to perform their tasks because they failed to meet user expectations. Trust impacts on people's willingness to accept the robots (Freedy et al., 2007). In addition, Li et al. (2008) stated that trust can be a main indicator of technology usage and a primary form to understand user perceptions of technology. In soldier context, one study showed the difficulty of soldiers to trust the robots. In Iraq, there were a system named the special weapons observation reconnaissance detection or SWORD. It was deployed in 2007 to support the military operations; however, the soldiers never used the robots in the field. They did not trust that in the serious situations the robots could perform effectively because the soldiers believed that unexpected movements of robots could occur anytime (Ogreten et al., 2010). In addition, trust can also affect the inattention meaning that people have less attention toward something and are directed to other tasks instead. A person may ignore robots for long periods if they do not perform well (Goodrich et al., 2003).

According to Følstad et al. (2018), trust is seen as perceptions of credibility and risk. Their study showed that communicating with chatbots in human natural language with some humors could build trust and make people feel better. Moreover, brand is very important for trust. If the brand hosting the chatbot is trustworthy, users tend to trust that chatbot more than the chatbot of unknown brand. In this paper, trust is defined as the assurance on a chatbot's ability to create credibility for itself.

Table 2.2 Description of trust

Factor	Description	References
Trust	Users did not trust conversational agents to perform their tasks because they failed to meet user expectations.	Luger and Sellen (2016)
	Trust impacts on people's willingness to accept the robots.	Freedy et al. (2007)
	Trust can be a main indicator of technology usage and a primary form to understand user perceptions of technology.	Li et al. (2008)
	Human-like style communication could build trust and make people feel better.	Følstad et al. (2018)
	People tend to trust chatbots of famous brands more than the chatbots of unknown brands.	

2.4 Customer experience

Customer experience is the internal response of customers. They normally have the customer experience when they contact a company directly or indirectly. The direct contact happens when customers are in the purchase stage, use stage, and service stage of the customer journey. The indirect contact involves with the indirect encounters with the companies' products, services, or brands. For example, the logos pop up on websites are considered to be the indirect contact with a company (Meyer & Schwager, 2007). In addition, Keyser et al. (2015) described the customer experience as the combinations of sensorial, physical, spiritual, cognitive, and emotional elements that indicate the customers' direct and indirect interactions with the companies.

Many companies collect data from customer experience but they do not get around and measure the results. Bain & Company, an American management consultancy, conducted surveys across several industries from 362 companies and

found that 80 percent of companies believed that they provided their customers a superior customer experience ; however, there were only few numbers of customers around 8 percent perceived the experience as a superior (Coffman & Stotz, 2007). Many companies have focused more on the customer experience because customers have more complex choices and can interact with companies in multiple channels (Brynjolfsson et al., 2013; Meyer & Schwager, 2007). However, the customer experience and the customer journey are difficult for the companies to take control since they have been more complex overtime (Brynjolfsson et al., 2013; Rapp et al., 2015).

Chung and Kwon (2009) indicated that a customer experience on mobile banking affects the intention to use. Their findings confirmed that customer experience has a positive impact on the intention to use mobile banking. In this study, customer experience is defined as a customer's internal responses which are perceived ease of use and quality of chatbots' responses from the direct interaction with a company's chatbot.

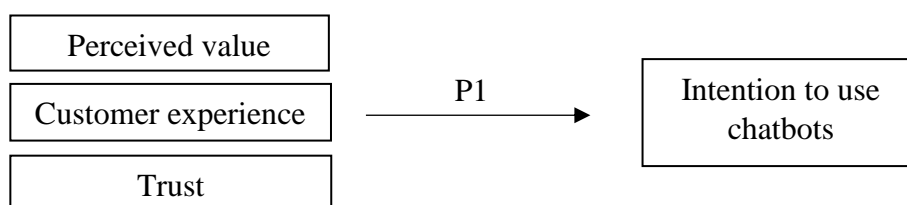
Table 2.3 Description of customer experience

Factor	Description	References
Customer experience	Combinations of sensorial, physical, spiritual, cognitive, and emotional elements that indicate the customers' direct and indirect interactions with the companies.	Keyser et al. (2015)
	Many companies have focused more on the customer experience because customers have more complex choices and can interact with companies in multiple channels.	Brynjolfsson et al. (2013) Meyer and Schwager (2007)
	Customer experience has a positive impact on the intention to use mobile banking.	Chung and Kwon (2009)

Table 2.4 Factors of past studies that affect the intention to use.

Factors	Pitchayadejanant (2011)	Boontarig et al. (2012)	Li et al. (2008)	Chung and Kwon (2009)	Følstad et al. (2018)
Trust	-	-	/	-	/
Perceived value	/	/	-	-	-
Customer experience	-	-	-	/	/
Perceived usefulness	-	-	-	/	-
Perceived ease of use	-	-	-	/	-
Facilitating condition	/	-	-	-	-
Benefit	-	-	-	-	/

According to the table 2.4, several studies have indicated that the factors such as trust, perceived value, perceived usefulness, perceived ease of use, customer experience, facilitating condition, and benefit affect users' intention to use for the particular things. Based on the previous studies, the three factors which are trust, perceived value, and customer experience were mentioned most that they could affect the intention to use. In this paper, researcher would like to have deeper understanding and explore the relationships of perceived value, customer experience, and trust to the intention to use chatbots. The benefit and perceived usefulness factors can be categorized under perceived value. The perceived ease of use can also be categorized under customer experience. Thus, researcher propose the conceptual framework based the past studies as follows.



P1 : Perceived value, customer experience, and trust have relationships with the intention to use chatbots.

Figure 2.5 Conceptual framework

CHAPTER III

RESEARCH METHODOLOGY

This research is a qualitative research conducted by using in-depth interview method. Researcher collected data from 30 participants (both males and females) who are Thai and live in Bangkok, Thailand. The participants had experiences of using chatbots on either e-commerce or social commerce platforms. By using the in-depth interview method, participants could express their perspectives insightfully on chatbots. The qualitative approach was adopted in this research because researcher would like to have deeper understanding of user perspectives toward chatbots and analyze the reasons of using them.

3.1 Instrument construction

Researcher arranged face-to-face interviews with interviewees. If the interviewees were not convenient to do the face-to-face interviews, the phone interviews were used. Researcher asked participants individually with open-ended questions that are relevant to the literature review of chapter 2. The participants could express their thoughts and perspectives insightfully. In addition, interviewer asked interviewees for the permissions to record their voices during the interviews and distribute the given information. After finishing all of the interviews, interviewer transcribed and grouped the information in a table in order to find and match the important data that are relevant to this research.

The open-ended questions were developed to ask participants for the purpose of understanding the research questions. To ensure that all participants understand the meaning of a chatbot, the definition of the chatbot was given in the introduction of the interviews: “*Chatbot is a software application that imitates human*

conversations via written text and can operate on both e-commerce and social commerce platforms i.e., on companies' websites (e-commerce) and on Facebook messenger (social commerce)."

3.2 Question design

Researcher interviewed customers and users of companies' chatbots operating on either e-commerce or social commerce platforms with a set of questions. Firstly, they were asked to provide their demographic information. Then, researcher asked interviewees the questions that were related to the factors that would have relationships with the intention to use the chatbots and allowed them to express their thoughts and explain in details in order to reflect their perspectives toward chatbots. The required demographic information and the list of open-ended questions are shown as follows:

Demographic information

Full-name:

Gender and age:

The highest level of education:

Questions

1. How often do you use technologies in your daily life?
2. Have you ever used chatbots? If so, from which companies? through which channels? and in which languages ?
 - 2.1. How often do you use chatbots?
 - 2.2. Do you like it? If so, why? / If not, why?
 - 2.3. Are there any features of chatbots that you like? Please explain.
3. Can you rely on chatbots to solve your issues or assist you when shopping online? If so, please explain / If not, what can make you rely on it? Why?
4. Why did you use chatbots?

4.1 How can chatbots assist you when you talked to it?

5. Have you ever experienced any poor performance of chatbots? If so, please explain. / Do you still want to use them?
6. Can you please explain the steps when using chatbots? What do you think about that steps ?
7. How well could chatbots understand your questions? Please explain.
8. What do you think about the information provided by chatbots?
9. Would you use chatbots again in the near future and why?
10. Do you have any suggestions for chatbots to be improved in a better way?

Besides the questions above, some of the interviewees were also asked additional questions which depended on the situations during the interviews. The participants were asked individually at different times. Thus, they could feel comfortable answering the questions and be more open-minded when they talked. Lastly, the researcher kept all answers confidentially and did not reveal the respondents' names.

3.2 Data collection

Data were collected from 29/02/2020 to 12/03/2020. The 30 participants were Thais who live in Bangkok, Thailand, except 1 participant, he is half Thai half Polish who lives in Bangkok, Thailand for more than 10 years and speaks Thai fluently. So, researcher considered him as Thai. Researcher interviewed participants who used chatbots of companies based in Thailand. The companies that own chatbots are in several industries including electric light, airline, wearing apparel, online retail, logistic, electronic device, hotel, cosmetic and skin care, and organic food. All of the participants spoke English and English was used as a communication language during the interviews. Researcher interviewed 30 participants which were 16 females and 14 males. Their ages were between 22 to 46 years old and the age mean was 29 years old. 29 participants graduated with Bachelor's degrees and 1 participant graduated with Master's degree.

CHAPTER IV

DATA ANALYSIS

This chapter will show the results from the data collection. The data was collected by interviewing 30 participants who used chatbots of companies operating on e-commerce or social commerce platforms based in Thailand. The questions aimed to understand Thai customer perspectives on chatbots and know the reasons for using chatbots in details.

4.1 Demographic information and chatbot usage

There were 30 people, both males and females participated in the interviews. 14 people were males. 12 males used chatbots of e-commerce companies on website and 2 males used chatbots of social commerce companies on Facebook Messenger. Average hours of technology usage of males were 9.5 hours per day. 5 out of 14 males had technology background. Males averagely used chatbots 1 time per month. Male users used chatbots in electric light, airline, wearing apparel, online retail, logistic, electronic device and hotel industries. For females, there were 16 people. 12 females used chatbots of e-commerce companies on website and 4 females used chatbots of social commerce companies on Facebook Messenger. Average hours of technology usage of females were 9.6 hours per day. 3 out of 16 females had technology background. Females averagely used chatbots 2 times per month. Female users used chatbots in cosmetic and skin care, online retail, organic food, airline, wearing apparel, and logistic industries.

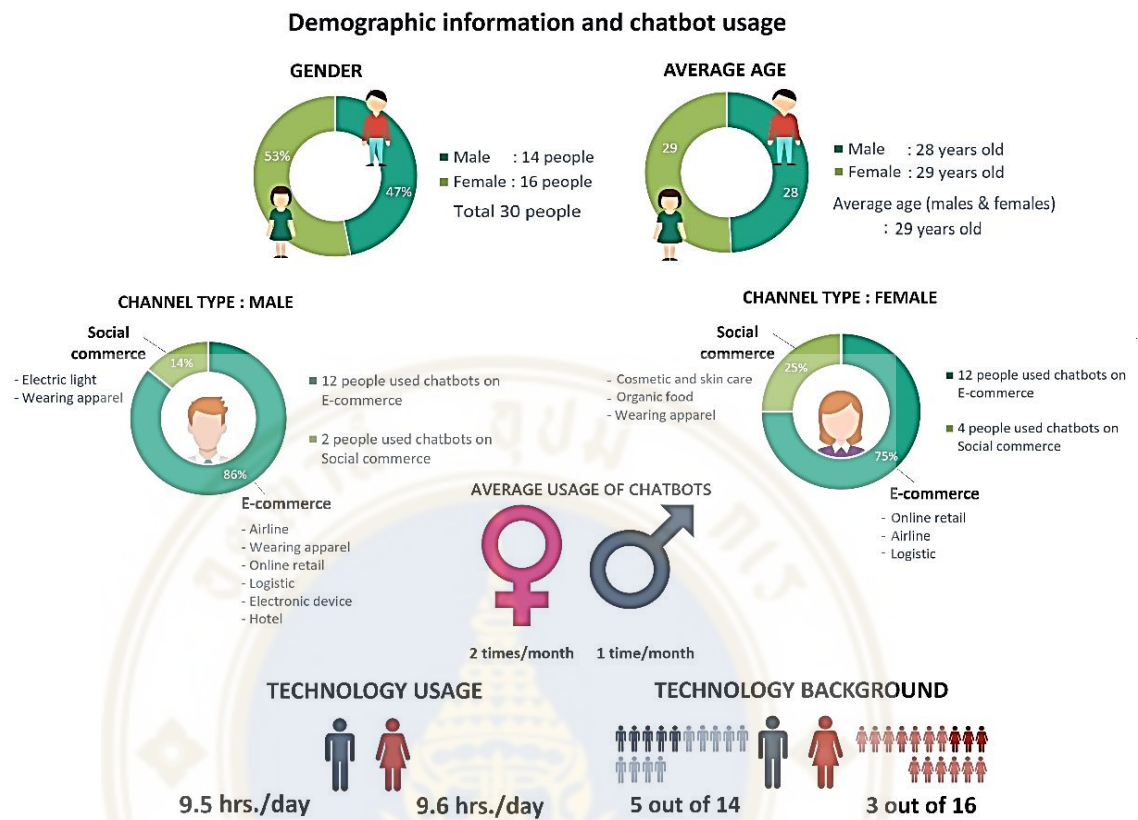


Figure 4.1 Demographic information and chatbot usage

4.2 Perceived value

From the interviews, the intention to use depended on perceived value factor. Convenience value has the relationship with the intention to use. According to Day (1999), perceived value is the equation that a customer’s perceived benefits diminish the perceived cost. Researcher found that the value that participants perceived is convenience value including time saving and buying process assistance. The convenience value could influence customers to use the chatbots. According to demographic information of participants, people who had higher hours of technology usage also had higher times of chatbot usage. Since females had higher rates of

technology and chatbot usage, they had higher tendency, around 10% to perceive value of chatbots more than males. The ages and technology background were not relevant to the perceived value of chatbots. Each aspect of convenience value was analyzed as follows.

4.2.1 Convenience

Nowadays, people are using technologies in their daily lives. They try to find the ways to keep pace with accelerated lifestyles. The automation can be one of the main factors that helps people overcome obstacles in everyday lives to effortless their livings. When talking about convenience, it is one of the main motivations that have relationship with the intention to use chatbots. The convenience value includes 2 aspects which are time saving and buying process assistance.

Firstly, the time saving, customers did not need to contact call centers and wait for a long time. They can communicate with chatbots instead. Most of people did not like to wait for something for a long time. Waiting for call centers can waste them both time and money. Chatbots can provide fast responses to customers. Chatbots operated 24/7 which is good for people who have busy lifestyles. In addition, chatbots could also provide general information or frequently asked questions (FAQs) instantly to all users without the help of humans. So customers or users can get information easily and fast.

“It replied me instantly and I did not need to wait so long for call centers because it wasted my money.” (Participant 17)

“For simple questions, i.e., ‘how to apply the wallet?’, chatbot was very useful and could save my time. I did not need to call the call centers to ask the simple questions. For complex questions, i.e., ‘how many banks do I need to enroll before using the wallet?’, chatbot could not answer me for that.” (Participant 5)

“I like chatbot because it took me very short time to get information and buy the products. It collected my keywords and replied me immediately.” (Participant 4)

“For basic questions, I received the answers right away during off-work hours (night time).” (Participant 8)

“It provided me the information that I was looking for instantly and I did not need to search myself on website. I just asked the chatbot directly.” (Participant 20)

Secondly, the buying process assistant, chatbots can help customers or users complete their buying process.

“It helped me complete the buying process from the beginning until the end. I think that was good because it was very convenience for me. I did not need to go anywhere. I just talked to the chatbot and it bought me to the last steps of paying the products.” (Participant 1)

However, the participants perceived convenience value only for simple or general questions. For complex questions, they revealed that chatbots were not convenient for them to talk with since the chatbots were not smart enough to understand and solve their issues. Participants preferred to talk with real staff when it came to solving complex questions or issues.

“For complex questions, I would like the chatbot to connect me to the support team because chatbots could catch only some of my keywords and could not answer my questions.” (Participant 23)

“I didn't think that chatbots could provide me the answers that I wanted since my questions were not simple questions.” (Participant 14)

“For FAQs, i.e., price, it's fine to use chatbots but when it came to cosmetic advice, I wanted to talk to real people more. For example, sometime you have skin concerns and you knew that robot could not answer your questions.” (Participant 2)

Participants expressed their perceptions on chatbots that they perceived convenience value of chatbots only for simple or general questions. However, for complex questions or advice, participants did not perceive the value instead becoming more of a cost rather than beneficial to their need. Thus, chatbots were perceived as

convenience in terms of time saving and buying process assistance only for general questions.

4.3 Customer experience

Customer experience plays a role as responsiveness. The responsiveness measures the quality of chatbots' responses. Chatbots need to provide accurate information, sufficient information, understand customers' questions, and be easy to use. If chatbots have those mentioned aspects, they are considered to have good responsiveness and customers would also have good customer experience. According to demographic information of participants, people who used technology 10-12 hrs./day and use chatbots on e-commerce platforms had higher chance to have good customer experience than people who used less hours and use chatbots on social commerce platforms. Females tended to have better customer experience than males. The technology background, chatbot usage, and ages did not show the relationship with customer experience. The responsiveness of the chatbots can be either good or bad. The details were provided as follows.

4.3.1 Responsiveness

The good responsiveness of chatbots includes providing accurate information, sufficient information, keywords understanding, and ease of use. The low responsiveness of chatbots includes providing wrong answers, insufficient information, and failure to understand the keywords. The good responsiveness of chatbots could improve customer experience and the low responsiveness of chatbots could reduce customer experience of chatbot users.

Good customer experience

“The information that I received from chatbot was good. It was accurate and did not have many fault information. I mostly got what I want.”

(Participant 3)

“I asked chatbot about the status of my parcel and it provided me the information with details.” (Participant 28)

“Chatbots did not ask me too many questions and got to the point. It seemed to understand what I want.” (Participant 30)

“I can just click from what it provided i.e., the options to get the information.” (Participant 26)

“I feel like the steps of using chatbots were straight forward and easy to use. For the basic questions, I typed information to chatbots or selected the available options and then it replied to me.” (Participant 10)

Bad customer experience

“Chatbots did not answer me the right answers, especially when I asked in Thai. I needed to adjust my words by changing keywords, retyping, or shortening my sentences in order to get the right answers.” (Participant 13)

“I would like to know how much did I need to pay if my luggage weight was more than the airline limit. The airline’s chatbot only answered me that I needed to buy more weights which was not the answer that I was looking for. I needed to contact call center for the answers instead.” (Participant 19)

“My question was ‘what is the refund process if my products that I bought from you have some defects?’. I did not have a good experience talking to chatbots since they could not answer my questions and did not understand me.” (Participant 11)

“Chatbot did not understand me completely. So, if I say ‘refund’ or ‘return’, it will just send me the return steps, but it wouldn't understand the complexity.” (Participant 23)

Good responsiveness indirectly influenced the intention to use chatbots through perceived value. If the chatbots have good responsiveness, customers will

have good experience of using the chatbots. The good experience has direct relationship with the perceived value. Customers would perceive convenience value and have intention to use the chatbots when they have good customer experience. However, the bad experience could create negative intention to use the chatbots by preventing customers to perceive the convenience value.

4.4 Trust

Trust plays a role as reliability. According to the literature review, trust are seen as perceptions of credibility and risk. Human likeness of chatbots and brand reputation are the important factors on trust (Følstad et al., 2018). From the interviews, human likeness and brand reputation allowed customers to trust the chatbots. Even customers trusted the chatbots of the companies, they did not prefer chatbots to assist them in solving their specific issues or questions since they were aware of chatbots limitations and not confident that chatbots could assist them. The intention to use the chatbots of customers depended on the chatbots' ability to solve their complex issues. If customers trust the chatbots of the companies but the chatbots do not have ability to do so, the customers will avoid using chatbots. So, customers trusted chatbots to assist them for simple questions because the chatbots had the ability to do that. The demographic information of participants such as age, sex, technology usage, and chatbot usage were not relevant to the trust factor.

4.4.1 Reliability

From the interviews, the human-like style could make customers trust the chatbots since it could make customers feel better to communicate with the chatbots. However, there were some participants indicated that making human-like chatbots was not a good idea since participants also needed to know if they talked to real persons or chatbots. There was one thing mentioned by some participants that they did not rely on the chatbots to assist them because the chatbots were not human which can be

implied that the chatbots were not smart enough to assist customers in some cases. Even the companies try to make chatbots be like humans, some customers still preferred talking to real humans to solve their complex issues because they did not get what they wanted from the chatbots when they asked the complex questions.

“When I talked to a chatbot and it replied me in the human-like style, it made me feel like I talked to real person and feel that I could rely on it.”

(Participant 1)

“I did not think that it was very good idea that you make all answers to be humanized. The companies should not try to fake that chatbots are the real human because I did not know if I talked to bots or humans.” (Participant 2)

“I would not trust the chatbots to assist me because they were not human. They were the patterns that were set by the companies. I was not so sure if they could really help me or not.” (Participant 12)

“I would say, if I needed an assistance, I would look for a human because the way I explained my issues were not the way chatbots were structured to catch.”

(Participant 11)

For brand reputation, participants mentioned that they would trust the chatbot if the brands that own chatbots were well-known brands.

“If I talk to chatbot system of a good reputation company, I found it was reliable. If I go to the store, the store clerks will see all communications and the summaries and he knew what was my problem. I could trust that chatbot. But if I talk to not well-known company, they will not have such a sophisticated chatbot system, so the complains would be in the ended loops.” (Participant 23)

Participants would use the chatbots to assist them only for the simple or common questions but not for complex questions.

“If it is Yes or No questions, I could rely on it. But for specific cases that I wanted to ask for advices not for the facts, I did not rely on it to assist me.”

(Participant 2)

“The simple questions, chatbots could be reliable but for precise information I don’t think chatbots could be reliable. I am still afraid of making a full purchase with chatbots. I needed to make sure that everything was correct and it was what I wanted with real staff before purchasing the products. It was okay talking with chatbots but I still needed real person to finalize my orders before I made the payments.” (Participant 8)

There is no support that when customers trust the chatbots, they will use the chatbots to assist them. In this research, trust could not be stated as an important factor to explain the intention to use. According to Wu et al. (2011), in South Korea, trust is not significant on the intention to use. The interviews showed that even if customers trusted the brands that own chatbots or liked the human-like style of chatbots, they would prefer to avoid using chatbots when it came to solving complex issues because customers were aware of chatbots existing limitations.

4.5 Summary

From the in-depth-interviews on the topic *Customer perceptions toward companies’ chatbots on e-commerce and social commerce platforms in Thailand*, researcher has summarized all of the results in the table below. Customers perceived value of chatbots in terms of convenience only for simple questions. For complex questions, they did not perceive the value instead becoming more of a cost rather than beneficial to their need. So, convenience has relationship with the intention to use chatbots. Referring to proposition 1 (P1), perceived value, customer experience, and trust have relationships with the intention to use chatbots. All customers or users who perceived convenience value which includes time saving and buying process assistance had intention to use chatbots again in the near future. For customer experience, it plays role as responsiveness. The good customer experience is from the good responsiveness of chatbots including accurate information, sufficient information, keywords understanding, and ease of use. From the interviews, good responsiveness could improve customer experience and low responsiveness could

reduce good customer experience. The customer experience has direct relationship with the perceived value. If customers have good customer experience, they will also perceive convenience value and also have the intention to use the chatbots. However, if customers have bad experience of using chatbots, they will not perceive the convenience value and will not have intention to use the chatbots. Thus, customer experience does not have relationship with the intention to use but has relationship with the perceived value. For trust, it plays role as reliability which are human-likeness and brand reputation. However, there was no support from the interviews that when people trusted chatbots, they would use the chatbots to assist them. Even if customers trusted the brands that own chatbots or liked the human-like style of chatbots, they would prefer to avoid using chatbots when it came to solving complex issues because customers were aware of chatbots existing limitations. The limitations are parts of the responsiveness of chatbots which are relevant to customer experience. Therefore, trust factor is excluded from the proposed framework.

Table 4.2 Summary of data analysis

Factor	Summary
PERCEIVED VALUE	
Convenience	<p>Time saving</p> <ul style="list-style-type: none"> - Customers do not need to contact call centers and wait for a long time. - Chatbots provided fast responses. - Chatbots operated 24/7. - Chatbots provided general information or FAQs instantly. <p>Buying process assistance</p> <ul style="list-style-type: none"> - Chatbots could help customers complete their buying process since the beginning steps.
<p>** Customers perceived value in terms of convenience only for simple questions. For complex questions or advice, they did not perceive the value instead becoming more of a cost rather than beneficial to their need.</p>	
CUSTOMER EXPERIENCE	
Responsiveness	<p>Accurate information</p> <ul style="list-style-type: none"> - Chatbots provided accurate and right information to customers. <p>Sufficient information</p> <ul style="list-style-type: none"> - Chatbots provided sufficient information to customers. - The information provided by chatbots covered all information that customers required. <p>Keywords understanding</p> <ul style="list-style-type: none"> - Chatbots did not ask too many questions in order to acquire information from customers. - Chatbots understood keywords or customers' questions. <p>Ease of use</p> <ul style="list-style-type: none"> - Steps of using chatbots were straight forward. - Chatbots provided choices for customers to choose.
<p>** Good responsiveness could improve customer experience but low responsiveness could reduce good customer experience.</p>	
TRUST	
Reliability	<p>Human-likeness</p> <ul style="list-style-type: none"> - Human-like style of chatbots made customers feel better but they also would like to know if they talked to the chatbots or real human. <p>Brand reputation</p> <ul style="list-style-type: none"> - Customers trusted the chatbots of well-known brands than unknown brands.
<p>** Reliability allowed customers to trust chatbots. Even if customers trusted the brands that own chatbots or liked the human-like style of chatbots, they would prefer to avoid using chatbots when it came to solving complex issues because customers were aware of chatbots existing limitations.</p>	

CHAPTER V

CONCLUSION AND RECOMMENDATION

This final chapter will provide the conclusion of the research following by the limitations, recommendations for the future research, theoretical contributions, and managerial implications, respectively.

5.1 Conclusion

The value of e-commerce has been growing between 8 to 10 percent per year (ETDA, 2019). Social commerce is second in popularity only to e-commerce. 51 percent of Thai consumers embrace shopping online through social media and 65 percent of Thai shoppers bought products from e-commerce (Buasang, 2017). Because of these, some companies in Thailand have introduced chatbots to their businesses and use them to interact with potential and existing customers on their online platforms to increase business competitiveness. Customers perceived convenience value and had the intention to use chatbots only when they had good customer experience. Interestingly, trust was found not to be an influential factor on the intention to use. The details information was concluded as follows.

Firstly, customers perceived value of chatbots in terms of convenience in 2 aspects including time saving and buying process assistance. According to literature review, perceived value means a customer's evaluation based on perception of what is perceived as more benefits than cost. From the interviews, all participants who perceived convenience value, perceived the benefits of chatbots over the cost. In this case, the cost is the poor performance of chatbots. Customers perceived convenience value only for simple questions because they perceived more benefits over the cost.

For complex questions, they did not perceive the value since they perceived more cost which is the poor performance of chatbots than the benefits.

Secondly, participants had both good and bad customer experience when using the chatbots. From the literature review, customer experience is the customers' internal response regarding the company's offerings. According to the interviews, customers expressed that the good customer experience was from good responsiveness of chatbots. The low responsiveness of chatbots including providing wrong answers, insufficient information, and failure to understand the keywords. The low responsiveness could reduce good customer experience and prevent customers to have the intention to use chatbots.

Thirdly, trust plays a role as reliability. According to the literature review, trust is defined as the assurance on a chatbot's ability to create credibility for itself. The human-like style and brand reputation could make people trust the chatbots. However, there was no support that when customers trust the chatbots, they would use the chatbots to assist them. Even if customers trusted the brands that own chatbots or liked the human-like style of chatbots, they would prefer to avoid using chatbots when it came to solving complex issues because customers were aware of chatbots' existing limitations. Nevertheless, customers could rely on the chatbots to assist them solving the simple or common issues because chatbots were able to do that which means chatbots had good responsiveness for simple questions and customers had good experience using the chatbots. Thus, trust does not have a relationship with the intention to use.

In summary, Thai customers perceive value of chatbots in terms of convenience since chatbots help them save time and assist them to complete their buying process. As long as customers see more benefits over the poor performance of chatbots, they will perceive convenience value and use the chatbots. In addition, responsiveness has a relationship with the intention to use. Good responsiveness improves customer experience but low responsiveness reduces good customer experience. Lastly, trust plays a role as reliability; however, there is no support that when customers trust the chatbots, they will use the chatbots. Thus, chatbots can grow but

they need to be improved and understand customers more because chatbots today in Thailand are not smart enough.

5.2 Implications

Customer experience has direct relationship with perceived value and the perceived value has relationship with the intention to use chatbots. Trust cannot be revealed as an important factor on the intention to use.

5.2.1 Theoretical contributions

Some of the findings are consistent with the previous studies. From the interviews, perceived value has relationship with the intention to use when customers have good experience from the good responsiveness of chatbots. Customers perceive convenience value of chatbots for simple questions but they do not perceived value for complex questions because they perceive more cost than the benefits. The cost is the poor performance of chatbots which can be linked to the low responsiveness of chatbots such as unable to understand customers' questions, providing insufficient information, or providing wrong answers which leads to bad customer experience. The low responsiveness leads to bad customer experience which prevent customers to perceive value and have intention to use the chatbots. Thus, good customer experience helps reduce the bad perception of the poor performance of chatbots and enhance good perception on perceived benefits which lead customers to perceive value. So, researcher confirms that perceived value has relationship with the intention to use which is consistent with previous study. However, the customer experience does not have direct relationship with intention to use but has relationship with the perceived value. Moreover, trust is not regarded as an important factor on the intention to use.

5.2.2 Managerial implications

There are some implications for chatbot developers and companies that are implementing or have an intention to implement the chatbots in order to increase the rates of chatbot adoptions in Thailand. Nowadays, most chatbots on e-commerce and social commerce platforms in Thailand are the algorithm based or flow-based chatbots which aim to solve users' queries by guiding users through a prescribed flow. Things can become blunt if the flow pattern is not well designed (Rebrandly, 2019). For companies' point of view, having chatbots is a cost-effective way of being available for customers at all time and reducing administration cost (Rebrandly, 2019). However, from the interviews, customers like the point that chatbots are available for them all the time but the chatbots need to response fast with the right answers for both simple and complex issues of customers as well. Many people primary view chatbots as solutions for getting detailed answers and solving problems. However, chatbots can also be used as assistances for purchasing items but people often hesitate to use the chatbots to assist them when the money is involved (Kilens, 2019). Developers should consider 2 aspects which are practical and technical aspects to increase the rates of chatbot usage. For practical aspect, chatbots need to be smart in terms of being able to solve customers' complex problems to increase customer experience and customer perceived value. Customers would also like chatbots to learn from previous questions asked by other users in order to solve their complex questions. In other words, customers prefer AI based chatbots than the flow-based chatbots since they believe that the AI based chatbots are able to solve their complex issues. Chanakarn Chinchatchawal, founder of Zwiz.AI, a Bangkok-based startup and bot developer, indicated that chatbots can shorten sales process by providing information and the ways for customers to order and pay directly via chat (Puglisi, 2019). Even customers do like chatbots to assist them in completing the buying process, some chatbot users are afraid of making full purchase with the chatbots. To solve this problem, chatbots should be able to analyze or summarize information in order to show that chatbots can really understand the customers and can reconfirm the information before customers make the purchases. With that ability, customers will not hesitate to make full purchases with the chatbots. In addition, the companies need to keep updating flow-based chatbots for the new keywords, providing more choices, and predicting the right questions asked by customers. Moreover, chatbot developers and companies

need to make sure that chatbots provide the correct, accurate and detailed information to customers since they like to read detailed information and judge the chatbot performances based on the responsiveness which has direct relationship with the perceived value. In terms of technical aspect, currently, chatbots are not able to assist in answering customers' complex questions which could make customers feel frustrated. From the interviews, customers would like chatbots to assist them in answering both simple and complex questions. If chatbots cannot answer customers' complex questions, customers prefer talking to real staff. However, they do not want to wait for a long time for real staff to reply. Researcher suggest having real online staff to be available at all time and step in right away when chatbots cannot solve customers' issues. In addition, chatbot developers should reduce the complexity of the steps in acquiring customers' information in order to increase customer experience. Moreover, the companies should have nice chatbot icon to attract people on e-commerce platform. Chatbots on both e-commerce and social commerce should have the auto messages of introduction popup right after customers click the chat icon in order to introduce themselves and notice the customers that an administrator that replies customers' messages is a chatbot not real human. Most of the participants need to know if they talk to a chatbot or real human since the very beginning of the conversations.

Chatbots have transformed the way companies interact with their consumers and have been introduced to promote a business and increase customer buying experience by having the actual conversation with customers. The implementation of the chatbots can be the good opportunity to build meaningful relationships with the customers if the companies and developers do it correctly. Every e-commerce and social commerce companies should have both practical and technical aspects in order to increase the rates of chatbot adoptions in Thailand. For the practical aspect, chatbots need to be smart in terms of solving customers' complex problems, learning from previous questions asked by other users, updating new keywords, providing more choices, accurate and detailed information, predicting the right questions asked by customers and assisting customers in buying process by providing the summarized information. For technical aspect, if chatbots are not able to assist customers from the beginning to the end of their journey, companies should

have real online staff to be available at all time and step in right away when chatbots cannot solve customers' issues since the waiting gap can make customers change their minds. In addition, developers should reduce the complexity of the steps in acquiring customers' information, have a nice chatbot icon on e-commerce platform, and have auto messages of chatbot introduction for both platforms.

5.3 Limitations

This study has some limitations. Firstly, the research was conducted by using only one technique which was the in-depth interview by interviewing 14 males and 16 females. Secondly, the age range of chatbot users both males and females were between 22 to 46 years old with the average age at 29 years' old which could not represent all of the age groups. Thirdly, the participants were Thai who live in Bangkok only. This research could not represent entire country of Thailand.

5.4 Recommendations for future research

For further research, researchers should expand the scope of the study to other provinces in Thailand or other counties in order to understand the perspectives on the chatbots of people in different locations. Moreover, researchers should also conduct both qualitative and quantitative with more numbers of people to gain more insight information. In addition, the future research should apply other frameworks or theories apart from the Technology Acceptance Model (TAM) to link with the study. By using other frameworks or models as the theoretical foundations of the research, the results may show other aspects that this research lacks. The research will be more complete and solid. In addition, interviewers should begin the interview with ice breaking by having conversations in general topics with participants first before asking the insight information to make them feel relaxed and less stressful. Moreover, interviewers should randomly select the interviewees to prevent bias information and

need to make sure that all the interviewees are not prepared for the answers before doing the interviews. In terms of privacy, the interview should be conducted in a private room to make them feel more comfortable to talk.



REFERENCES

- Anderson, E. W., Fornell, C. & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *Journal of Marketing*, 58(7), 53-66.
- Boontarig, W., Chutimaskul, W., Chongsuphajaisiddhi, V., & Papasratorn, B. (2012). *Factors influencing the Thai elderly intention to use smartphone for e-Health services*. Paper presented at the 2012 IEEE symposium on humanities, science and engineering research, Kuala Lumpur, Malaysia.
- Botsman, R. (2017). *Who can you trust?: how technology brought us together—and why it could drive us apart*. Penguin UK.
- Brandtzaeg, P. B., & Følstad, A. (2018). Chatbots: changing user needs and motivations. *Interactions*, 25(5), 38-43.
- Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the Age of Omnichannel Retailing. *MIT Sloan Management Review*, 54(4), 23–29.
- Buasang, W. (2017, Sep 14). *Social Commerce เทรนด์ค้าออนไลน์ที่มาแรงไม่แพ้ Lazada*. Retrieved January 1, 2020, from <https://www.scbeic.com/th/detail/product/3924>
- Chen, Z., & Dubinsky, A. J. (2003). A conceptual model of perceived customer value in e-Commerce: A preliminary investigation. *Psychology and Marketing*, 20(4), 323–347.
- Chulamane, W. (2020). *จับตา Social Commerce โอกาสโตของธุรกิจ รับเทรนด์ “ชีวิตติดแชท”*. Retrieved January 1, 2020 from <https://heroleads.asia/th/blog/social-commerce-trends-2020/>
- Chung, N., & Kwon, S. J. (2009). The effects of customers' mobile experience and technical support on the intention to use mobile banking. *Cyberpsychology & Behavior*, 12(5), 539-543.
- Coffman, J., & Stotz, D. (2007, May 11). *How some banks turn clients into advocates*. Retrieved January 1, 2020 from <https://www.bain.com/insights/how-some-banks-turn-clients-into-advocates/>
- Cronin Jr, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.

- Cui, L., Huang, S., Wei, F., Tan, C., Duan, C., & Zhou, M. (2017, Jul/Aug 2017). *Superagent: A customer service chatbot for e-commerce websites*. Paper presented at the 55th Annual Meeting of the Association for Computational Linguistics-System Demonstrations, Vancouver, Canada.
- Day, G. S. (1999). *Market driven strategy*. Processes for creating value. (2nd ed.). New York: The Free Press.
- Doherty, D., & Curran, K. (2019). Chatbots for online banking services. *Web Intelligence*, 17, 327-342.
- Dollarhide, M. E. (2019, Jul 3). *Social commerce*. Retrieved February 3, 2020 from <https://www.investopedia.com/terms/s/social-commerce.asp>
- Donahue, L., & Hajizadeh, F. (2019). Artificial intelligence in cloud marketing. In S. S. Jones & F. M. Groom (Eds.), *Artificial intelligence and machine learning for business for non-engineers* (pp. 77). Boca Raton: CRC Press.
- Etda.or.th. (2019, Feb 2). *ETDA reveals that the value of Thai e-commerce has grown consistently Shoots up to 3.2 trillion baht in 2018*. Retrieved February 3, 2020 from <https://www.eta.or.th/content/eta-เผย-ฉีคอมเมิร์ซ-ไทย-โตต่อเนื่อง-2561-3-2-ล้านล้านบาท.html>
- Feine, J., Morana, S., & Gnewuch, U. (2019, Feb 24-27). *Measuring service encounter satisfaction with customer service chatbots using sentiment analysis*. Paper presented at the 14th International Conference on Wirtschaftsinformatik, Siegen, Germany.
- Følstad, A., Nordheim, C. B., & Bjørkli, C. A. (2018). *What makes users trust a chatbot for customer service? An exploratory interview study*. Paper presented at the International Conference on Internet Science, Springer, Cham.
- Freedly, A., Visser, E. D., Weltman, G., & Coeyman, N. (2007, June 2007). *Measurement of trust in human-robot collaboration*. Paper presented at the Proceedings of the 2007 International Conference on Collaborative Technologies and Systems, Orlando, USA.
- Goodrich, M. A., Crandall, J. W., & Stimpson, J. (2003). *Neglect tolerant teaming: Issues and dilemmas*. Paper presented at the 2003 AAAI Spring Symposium on Human Interaction with Autonomous Systems in Complex Environments, Palo Alto, CA.
- Gummesson, E. (2008). Quality, service-dominant logic and many-to-many marketing. *The TQM Journal*, 20(2), 143-153.
- Gupta, S., Borkar, D., Mello, C. D., & Patil, S. (2015). An E-commerce website based chatbot. *International Journal of Computer Science and Information Technologies*, 6(2), 1483-1485.

- Hasnan, L. (2019, Nov 2). *Chatbots: Automating customer service in ASEAN*. Retrieved February 3, 2020 from <https://theaseanpost.com/article/chatbots-automating-customer-service-asean>
- Hollebeek, L. D. (2013). The customer engagement/value interface: An exploratory investigation. *Australasian Marketing Journal*, 21(1), 17–24.
- Iglesias, M. P., & Guillén, M. J. Y. (2004). Perceived quality and price: their impact on the satisfaction of restaurant customers. *International Journal of Contemporary hospitality management*, 16(6), 373-379.
- Kateryna, N. (2019, Sep 2). *20 Research-backed marketing automation stats you should know in 2019*. Retrieved January 1, 2020 from <https://automateonline.com.au/blog/20-research-backed-marketing-automation-stats-you-should-know-in-2019>
- Keller, K. (1998). *Strategic brand management: building, measuring, and managing brand equity*. Upper Saddle River, New Jersey: Prentice Hall.
- Keyser, A. D., Lemon, K. N., Klaus, P., & Keiningham, T. L. (2015). *A framework for understanding and managing the customer experience* (MSI working paper series 2015 No. 15-121). Cambridge, MA: Marketing Science Institute.
- Kilens, M. (2019, July 16). *2019 State of conversational marketing*. Retrieved January 1, 2020 from <https://www.drift.com/blog/state-of-conversational-marketing/>
- Lepak, D. P., Smith, K. G., & Taylor, M. S. (2007). Value creation and value capture: A multilevel perspective. *Academy of management review*, 32(1), 180-194.
- Liljander, V., & Strandvik, T. (1993). Estimating zones of tolerance in perceived service quality and perceived service value. *International Journal of Service Industry Management*, 4(2), 6-28.
- Liljander, V., & Strandvik, T. (1997). Emotions in service satisfaction. *International Journal of Service Industry Management*, 8(2), 148-160.
- Li, X., Hess, T. J., & Valacich, J. S. (2008). Why do we trust new technology? A study of initial trust formation with organizational information systems. *The Journal of Strategic Information Systems*, 17(1), 39-71.
- Luger, E., & Sellen, A. (2016, May 7-12). *“Like having a really bad PA” The gulf between user expectation and experience of conversational agents*. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, California, USA.
- Markets and markets. (2019, Sep). *Marketing Automation Market*. Retrieved February 23, 2020 from <https://www.marketsandmarkets.com/Market-Reports/marketing-automation-software-market-155627928.html>

- McColl-Kennedy, J. R., Sweeney, J. C., Soutar, G. N. & Amonini, C. (2008). Professional service firms are relationship marketers : But does size matter?. *Australasian Marketing Journal*, 16(1), 30–47.
- Mckie, I. S., & Narayan, B. (2019). Enhancing the academic library experience with chatbots: An exploration of research and implications for practice. *Journal of the Australian Library & Information Association*, 68(3), 268-277.
- Meyer, C., & Schwager, A. (2007). Understanding customer experience. *Harvard Business Review*, 85(2), 116.
- Morar, D. D. (2013). An overview of the consumer value literature—perceived value, desired value. *Marketing From Information to Decision*, (6), 169-186.
- Nguansuk, S. (2019, Nov 28). *Thais setting the pace for social commerce*. Retrieved February 23, 2020 from <https://www.bangkokpost.com/tech/1803754/thais-setting-the-pace-for-social-commerce>
- Ogreten, S., Lackey, S., & Nicholson, D. (2010). *Recommended roles for uninhabited team members within mixed-initiative combat teams*. Paper presented at the 2010 International Symposium on Collaborative Technology Systems, Chicago, IL.
- Parasuraman, A., & Grewal, D. (2000). The impact of technology on the quality-value-loyalty chain: a research agenda. *Journal of the academy of marketing science*, 28(1), 168-174.
- Pitchayadejanant, K. (2011, Jun 13). *Intention to use of smart phone in Bangkok extended UTAUT model by perceived value*. In Proceedings of the International Conference on Management (ICM 2011), Penang, Malaysia.
- Puglisi, G. (2019, Aug 9). *Chatbots find fertile ground in Thailand, Southeast Asia's largest social commerce market*. Retrieved March 23, 2020 from <https://kr-asia.com/chatbots-find-fertile-ground-in-thailand-southeast-asias-largest-social-commerce-market>
- Pornwasin, A. (2018, Jul 28). *Social commerce rides social media boom*. Retrieved February 23, 2020 from https://www.nationthailand.com/Startup_and_IT/30350986
- Rapp, A., Baker, T. L., Bachrach, D. G., Ogilvie, J., and Beitelspacher, L. S. (2015). Perceived customer showrooming behavior and the effect on retail salesperson self-efficacy and performance. *Journal of Retailing*, 91(2), 358–69.
- Rebrandly. (2019, Feb 19). *The website chatbot: the evolution of conversational marketing*. Retrieved March 23, 2020 from <https://blog.rebrandly.com/website-chatbot/>
- Reshmi, S., & Balakrishnan, K. (2016). Implementation of an inquisitive chatbot for database supported knowledge bases. *Sadhana*, 41(10), 1173-1178.

- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of management review*, 23(3), 393-404.
- Sanchez, J., Callarisa, L. L. J., Rodriguez, R. M. & Moliner, M. A. (2006). Perceived value of the purchase of a tourism product. *Tourism Management*, 27(4), 394-409.
- Shawar, B. A., & Atwell, E. (2007, Apr 2007). *Different measurement metrics to evaluate chatbot system*. In Proceedings of the workshop on bridging the gap: Academic and industrial research in dialog technologies, New York, USA.
- Vegesna, A., Jain, P., & Porwal, D. (2018). Ontology based chatbot (for e-commerce website). *International Journal of Computer Applications*, 179(14), 51-55.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Wood, L. (2019, Dec 12). *Global Chatbot Market Anticipated to Reach \$9.4 Billion by 2024 - Robust Opportunities to Arise in Retail & e-commerce*. Retrieved February 3, 2020 from <https://markets.businessinsider.com/news/stocks/global-chatbot-market-anticipated-to-reach-9-4-billion-by-2024-robust-opportunities-to-arise-in-retail-ecommerce-1028759508>
- Woodruff, R. B. (1997). Customer value: the next source for competitive advantage. *Journal of the academy of marketing science*, 25(2), 139-153.
- Wu, K., Zhao, Y., Zhu, Q., Tan, X., & Zheng, H. (2011). A meta-analysis of the impact of trust on technology acceptance model: Investigation of moderating influence of subject and context type. *International Journal of Information Management*, 31(6), 572-581.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.
- Zumstein, D., & Hundertmark, S. (2017). Chatbots an interactive technology for personalized communication, transactions and services. *IADIS International Journal*, 15(1), 96-109



APPENDIX A

Demographic information of chatbot users and general information of the companies that employ chatbots

No.	Age	Gender	Level of education	Technology usage	Technology Background	Chatbot usage	Channel	Channel type	Industry
1	33	Male	Bachelor's degree	Everyday / 12 hrs.	Yes	2 times/month	Facebook	Social commerce	Electric light
2	22	Female	Bachelor's degree	Everyday / 10 hrs.	No	2 times/month	Facebook	Social commerce	Cosmetic and skin care
3	26	Male	Bachelor's degree	Everyday / 12 hrs.	No	1 time/month	Website	e-commerce	Airline
4	26	Male	Bachelor's degree	Everyday / 10 hrs.	No	1 time/month	Facebook	Social commerce	Wearing apparel
5	39	Female	Bachelor's degree	Everyday / 10 hrs.	No	2 times/month	Website	e-commerce	Online retail
6	25	Male	Bachelor's degree	Everyday / 6 hrs.	No	1 time/month	Website	e-commerce	Wearing apparel
7	27	Male	Bachelor's degree	Everyday / 5 hrs.	No	2 times/month	Website	e-commerce	Airline
8	26	Female	Bachelor's degree	Everyday / 8 hrs.	Yes	1 time/month	Facebook	Social commerce	Organic food
9	27	Female	Master's degree	Everyday / 8 hrs.	No	2 times/month	Website	e-commerce	Airline and online retail
10	27	Male	Bachelor's degree	Everyday / 9 hrs.	No	2 times/month	Website	e-commerce	Airline
11	30	Female	Bachelor's degree	Everyday / 12 hrs.	Yes	2 times/month	Facebook	Social commerce	Cosmetic and skin care
12	26	Female	Bachelor's degree	Everyday / 6 hrs.	No	2 times/month	Website	e-commerce	Cosmetic and skin care
13	27	Female	Bachelor's degree	Everyday / 10 hrs.	No	1 time/month	Website	e-commerce	Airline
14	26	Female	Bachelor's degree	Everyday / 10 hrs.	No	1 time/month	Website	e-commerce	Online retail
15	24	Male	Bachelor's degree	Everyday / 7 hrs.	Yes	2 times/month	Website	e-commerce	Online retail
16	23	Female	Bachelor's degree	Everyday / 8 hrs.	Yes	3 times/month	Website	e-commerce	Online retail
17	25	Male	Bachelor's degree	Everyday / 12 hrs.	Yes	1 time/month	Website	e-commerce	Logistic
18	29	Female	Bachelor's degree	Everyday / 8 hrs.	No	1 time/month	Facebook	Social commerce	Wearing apparel
19	26	Male	Bachelor's degree	Everyday / 8 hrs.	Yes	1 time/month	Website	e-commerce	Airline
20	22	Male	Bachelor's degree	Everyday / 10 hrs.	Yes	1 time/month	Website	e-commerce	Airline
21	32	Female	Bachelor's degree	Everyday / 8 hrs.	No	1 time/month	Website	e-commerce	Online retail
22	23	Male	Bachelor's degree	Everyday / 12 hrs.	No	1 time/month	Website	e-commerce	Airline and logistic
23	32	Male	Bachelor's degree	Everyday / 12 hrs.	No	1 time/month	Website	e-commerce	Electronic devices
24	34	Male	Bachelor's degree	Everyday / 8 hrs.	No	1 time/month	Website	e-commerce	Airline
25	46	Male	Bachelor's degree	Everyday / 10 hrs.	No	1 time/month	Website	e-commerce	Online retail
26	27	Female	Bachelor's degree	Everyday / 12 hrs.	No	2 times/month	Website	e-commerce	Airline
27	38	Female	Bachelor's degree	Everyday / 8 hrs.	No	1 time/month	Website	e-commerce	Logistic
28	33	Female	Bachelor's degree	Everyday / 12 hrs.	No	2 times/month	Website	e-commerce	Airline
29	32	Female	Bachelor's degree	Everyday / 12 hrs.	No	2 times/month	Website	e-commerce	Airline
30	28	Female	Bachelor's degree	Everyday / 12 hrs.	No	2 times/month	Website	e-commerce	Logistic