

Factors Influencing the Use of Social Media of Elderly in Chainat Municipality, Thailand

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Abstract— This research aims to study the factors influencing the use of social media of the elderly in Chainat municipality. In this study, the primary variables were divided into two parts: demographic characteristics and factors affecting the use of social media. The questionnaire was an instrument for data survey. The research sampling was 282 people with sample random sampling. The statistics used in data analysis were divided into two parts, 1) descriptive statistical analysis included frequency and percentage to analyze basic data set and 2) inferential statistics included ANOVA and multiple regression to analyze the relationship between factors influencing the use of social media of the elderly.

For the main finding, the results of the study of factors influencing the use of social media of the elderly in Chainat municipality were summarized as follows: education level, monthly income, perceive usefulness and the ease of use of social media influence on the use of online social media of the elderly in Chainat municipality statistically significant 0.05.

Keywords- factors influencing; Chainat elderly-friendly design; elderly technology acceptance model (E-TAM); elderly literacy; elderly care social media

I. INTRODUCTION

The development of information technology and the internet network system has made the world society enter the era of communication without borders. Moreover, social network has increasingly played a role in daily life. The advanced information and communication technology (ICT) provide communication system quickly and high agility. This makes the use of social networks widely popular. It creates a new social interaction where you can connect with others, exchange knowledge, and expand knowledge in various fields through the internet network system. It has changed the people way of life [1]. There are various types of businesses on the internet network system. This leads people of all ages to be involved the social networks. The rate of the use of social networks among the elderly is also on the rise [2].

The survey results by the National Statistical Office showing the percentage of the elderly population in Thailand in 2019 was 17.5%. It means that Thailand has now stepped into an aging society. This is because there

are more than 10% of the population aged 60 years which defined by the United Nations [3]. However, the Elderly Act 2003, Section 11 claims that the elderly have the right to receive protection, promotion and support in various fields such as education, religion, and information that are beneficial to their lives. This also mentions that it is important to educate the elderly to embrace modern technology. But the elderly still has limited access to social networks, whether it is their learning ability or even their willingness to learn modern technology.

For the problem formulation, the study of factors affecting the use of social media among the elderly is therefore necessary as a channel for the development of the elderly's potential. The elderly need to acquire skills and should pursue new knowledge in order to develop and adapt to modern technology. For the contribution, the significant findings can be used to supplement e-commerce careers as well to encourage the elderly to earn more.

This paper is organized into 5 parts. Part 2 is literature reviews. Methodology and finding are in part 3 and part 4, respectively. And part 5 concludes the interpreted results and future outlook.

II. LITERATURE REVIEWS

A. Theories and concepts of acceptance

There are various of theories and concepts of acceptance as follows,

G. M. Foster [4] claims that the people learn through education process which can be described through acceptance learning. This can happen if you have learned it yourself. Learning would be effective if the person has practiced. When he is sure that the invention can be useful, he dares to invest in it.

E. M. Roger and F. Showmaker [5] states that the acceptance is an individual's mental process that begins from the perception of news about an innovation or technology to acceptance of that technology.

P. Aerdum [6] purposes that acceptance is a process that helps to develop personal qualities such as knowledge, values, and attitudes. It makes people to perceive changes and understand new things. In addition, constant contact with people, and interest in receiving

new information from journalism plays an important role in generating awareness of interest leading to the acceptance.

B. Technology Acceptance Model

The technology acceptance model (TAM) is one of the most influential and widely used as the theory for predicting and explanation of users' behavior. There are two variables in TAM which are perceived usefulness (PU) and perceived ease of use (PEOU) [7]. It suggested that the individual's belief determined the attitude (AT) towards using the system, and the attitude leads to the behavioral intention to use (BI).

However, TAM evolved from Ajzen and Fishbein's Theory of Reasoned Action (TRA) to provide a general explanation of the determinants of computer acceptance, capable of explaining user behavior across a wide range of end-user computing technologies and user populations, while remaining both parsimonious and theoretically justified.

C. Elderly and Social Media

According to a survey of the National Statistical Office during 2011 – 2014 found that the main demographic group that always used social networks the most compared to other group was the youth (15–24 years old), with the usage rate increasing from 19.2 % in 2011 to 63.8 % in 2014. While the second group were the adult (ages 25–59 years) and children (ages 6–14 years) who used social networks, found increased from 4.2 % and 3.5 % in 2011 to 24.8 % and 18.2 % in 2014 respectively. Interestingly, the elderly population (age 60 and over) who by nature, does not seem to be interested in technology. However, this data survey reflects the change in behavior of using the internet and social media that are more accessible to the elderly. That is, in 2011, only 0.1 % of Thai elderly people who used it. social network. But after just three years, the percentage of use increased to 2.1 %. Although this percentage did not appear to be high compared to other populations. When considering the nature of life, most elderly don't want to have the hassle of learning new things, especially the use of communication tools or various technology. It can be said that the increase in the use of social media among the elderly is particularly interesting.

III. METHODOLOGY

A. Purpose of the Study

The purpose of this research is to study the factors influencing the use of social media of the elderly in Chainat municipality.

B. Conceptual Framework

The conceptual framework of this study is as follows.

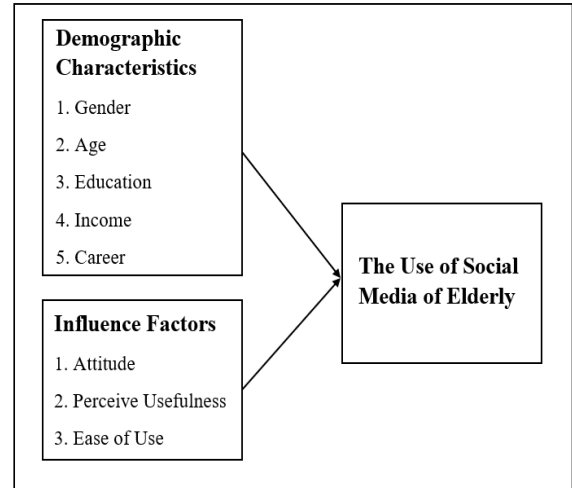


Figure 1. Research Framework

C. Population and Sampling

This research was conducted as survey research. The questionnaire was an instrument for data survey. The population was members of the elderly of Chainat municipality 950 people. The research sampling calculated by [8] was 282 people with sample random sampling.

D. Statistics Analysis

The statistics used in data analysis were divided into two parts, 1) descriptive statistical analysis included frequency and percentage to analyze basic data set and 2) inferential statistics included ANOVA and multiple regression to analyze the relationship between factors influencing the use of social media of the elderly.

IV. FINDINGS

A. General Information of the Sampling Group

The details of general information of the sampling group were described in the following table.

TABLE I. GENERAL INFORMATION OF THE SAMPLING GROUP

Items	Classification	Result (%)
Gender	Male	24.50
	Female	75.50
Age (years)	60 – 64	29.10
	65 – 69	24.80
	70 – 74	26.20
	75 – 79	16.70
	More than 80	3.20
Education	(1) Under Bachelor's Degree	91.10
	(2) Bachelor's Degree and Above	8.90
Income per month (Baht)	(1) Less than 20,000	86.90
	(2) More than 20,000	13.10
Career	(1) Government Officer	13.20
	(2) Employee	11.20
	(3) Personal Business	24.50
	(4) Farmers	3.50
	(5) Others	47.40

B. Data Analysis Results

The result of considering this data was based on the primary variable that affects the dependent variable. In this study, the primary variables were divided into two parts: demographic characteristics and factors affecting the use of social media. Statistics used to test the hypothesis between gender, education level and monthly income affecting to dependent variables were t-tests. While age and career affecting to dependent variables was ANOVA. The multiple regression analysis used to test attitude factors, perceived usefulness and ease of use affecting the dependent variable. The details were as follows.

TABLE II. COMPARISON BETWEEN GENDER AND THE USE OF SOCIAL MEDIA

Gender	n	Mean	S.D.	t	p
Male	69	3.13	1.5414	0.838	0.408
Female	213	3.04	1.5116		

Significant level at 0.05

The results of the study in table 2 showed that there was no difference in the use of online social networks among the male and female elderly.

TABLE III. COMPARISON BETWEEN AGE AND THE USE OF SOCIAL MEDIA

Variance	SS	df	MS	F	Sig
Between Group	11.7	4	2.941	1.28	0.227
Within Group	634.6	277	2.291		
Total	646.3	281			

Significant level at 0.05

The results from table 3 showed that the use of social media of the elderly in each age group was not different.

TABLE IV. COMPARISON BETWEEN EDUCATION AND THE USE OF SOCIAL MEDIA

Education	n	Mean	S.D.	t	p
(1)	257	2.96	1.512	-3.971	0.00
(2)	25	4.19	1.053		

Significant level at 0.05

The results from table 4 showed that the use of social media of the elderly with bachelor's degree or higher was different from the elderly with lower education levels than the bachelor's degree on the statistically significant at the 0.05 level

TABLE V. COMPARISON BETWEEN INCOME AND THE USE OF SOCIAL MEDIA

Income	n	Mean	S.D.	t	p
(1)	245	2.93	1.493	-3.834	0.00
(2)	37	3.93	1.392		

Significant level at 0.05

The results from table 5 showed that the use of social media of the elderly with income per month less than 20,000 baht was different from the elderly with income per month more than 20,000 baht on the statistically significant at the 0.05 level

TABLE VI. COMPARISON BETWEEN CAREER AND THE USE OF SOCIAL MEDIA

Variance	SS	df	MS	F	Sig
Between Group	21.2	4	5.321	2.358	0.054
Within Group	625.1	277	2.257		
Total	646.3	281			

Significant level at 0.05

The results of the study from table 6 showed that the use of social media of the elderly in different career was not different.

TABLE VII. MULTIPLE REGRESSION ANALYSIS BETWEEN FACTORS AND THE USE OF SOCIAL MEDIA

Factors	B	Beta	t	Sig
Attitude	0.01	0.012	0.429	0.668
Perceive Usefulness	0.43	0.437	10.297	0.000
Ease of Use	0.54	0.527	12.998	0.000

R² = 0.872, N = 282, p < 0.05

The results from table 7 showed that the perceived usefulness factor and the factor of ease of use influence on the use of social media of the elderly in Chainat municipality statistically significant at the 0.05 level. However, the attitude factor was not affected to the use of social media of elderly in Chainat municipality.

V. CONCLUSION AND FUTURE STUDY

As it related to research question, the results of the study of factors influencing the use of social media of the elderly in Chainat municipality were summarized as follows: education level, monthly income, perceive usefulness and the ease of use of social media influence on the use of online social media of the elderly in Chainat municipality statistically significant 0.05.

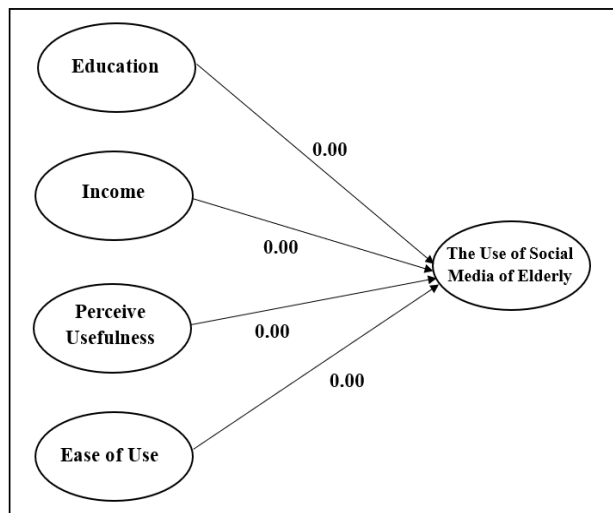


Figure 2. Factors Influencing the Use of Social Media of Elderly in Chainat Municipality

From the results of this study can be able to develop activities or training to use social media in a simple way. This also promote awareness of the benefits of using social media. It can also develop social media user manual for the elderly as well. Chandrakasem Rajabhat University as a university for local development which is aware of the development of the elderly in various fields such as health, career building including the development of skills in using modern technology for the elderly Therefore, the results of this research can be used as preliminary information to develop the need for social media use of the elderly in other areas as well.

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discover knowledge and also included in Chandrakasem Rajabhat University Chainat’s open dataset (<https://chainat.chandra.ac.th/>) to be available for other researchers to solve the local problems from the elderly requirements.



Figure 3. Chandrakasem Chainat’s Open Dataset

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