

# The Study of Using Facebook in Taiwan's Elderly Population—a Case Study in Learners of the Senior Citizens Academy in a City of Taiwan

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**Abstract.** Mark Zuckerberg founded Facebook site in 2004, and open to e-mail applications use in 2006. The global active users of the Facebook site surpassed one billion people on September 14th, 2012. It spent 13 years that the users of the Google site founded in 1998 surpassed one billion people in 2011. It spent 8 years that the Facebook site to do so. The official statistics of the Facebook site represented that there are about 15 million users visited the Facebook site monthly and there are about 12 million people visited the site by using the mobile Internet devices in the fourth quarter of 2013 in Taiwan. In the same time, there are about 11 million users visited the Facebook site daily and there are about 8.5 million people visited the site by using the mobile Internet devices in Taiwan. Taiwan is a mature market for the Facebook site, the website penetration is the highest in the world.

Taiwan in where the Facebook site utility rate is so high faces the rapidly aging population issue. According to the statistics from Ministry of the Interior, Republic of China, the ratio of the population over 65 years old has exceeded 7 % in 1993. It means that Taiwan is the aging society. The ratio of the population over 65 years old is 11.90 % in October, 2014. With the statistics from Council for Economic Planning and Development in the Republic of China Executive Yuan, the ratio of Taiwan elderly population will exceed 14 % in 2018, and Taiwan will be the aged society. The ratio of Taiwan elderly population will increase quickly from 2014 to 2025 because of the effect of the postwar baby boom.

This investigation using action research discusses the elderly people studying IT lessons in the Senior Citizens Academy of a city in Taiwan. How do they use the Facebook site? We found that the elderly people is not the main usage group of the Facebook site, but using the Facebook site impacts positively for their learning, social networking, and the interactions among their family members. There are two difficulties for elderly people to use the Facebook site, one reason is they are not used to share their thinking to others, and the other reason is the computer operation is difficult for them. We also found that some of the elderly people begin to use the mobile Internet devices what are new things for them, and they use the internet, the Facebook site, Line by making use of the mobile Internet devices.

## 1 Introduction

The author served as the Senior Citizens Academy lecturer since 2008, and the main teaching subject is computer and internet using. Most of the students are over 65 years old. According to the author's observation, they face the serious digital divide. The reason is the city they lived is a small city in Taiwan (The city area of 60.0256 square kilometers is the smallest city in the Taiwan Island.), most of the students' sons and daughters live and work in the other big cities such as Taipei, Taichung and Kaohsiung. The students don't have the opportunities to live with their sons and daughters, so they can't exchange of new knowledge with their families. They lack the opportunities to learn something new, their lifestyle cannot keep up with the Internet era, and their source of information is still television programs, newspapers or magazines.

In March 2008, the Senior Citizens Academy first ran computer courses in the city that the study refers to. When the senior citizens found that they have the opportunities to learn the computer technology and the internet, they found the focus of life, and the focus is to learn something new from the internet. They watch videos or listen music from YouTube, read news from Yahoo news, and contact others with emails. In recent years, Facebook users have a substantial increase. In order to catch up with the trend of the times, they started to learn how to use Facebook, to share their recent life with others and observe others' life. They found that they can see almost everything they want on the computer screen.

As the lecturer of trainees, we want to find how they use the Facebook? Do they have any difficult on using Facebook or computer? Is the interface of computer using or Facebook using friendly to the senior citizens? What teaching methods are suitable for the elderly to learn computer and internet using? This is the motivation for the study.

## 2 Literature Review

How can we define that people become to old? We will discuss the thing in four aspects (Huang 2007):

First, the point of real ages. Every country defines elderly people in different ages. In China, Russia and France, people over sixty years old are elderly. In America, England, Italy and Canada, people over sixty-five years old are elderly. In Taiwan, the government formulated the law of Senior Citizens Welfare Act. We define that people over sixty-five years old are elderly.

Second, the point of biological ages. When the individual organs reach maturity, they will begin to lose its proper function. There are four indicators:

1. The loss of reproductive capacity: The menopause occurrence is about fifty years old before or after for female. There are generally no obvious signs for male.
2. Grayed hair: What is the age for people's hair being gray? There is considerable variation between individuals, but the appearance is most likely to be considered to be an important feature of the elderly.

3. Physiological dysfunction: including audiovisual capabilities recession, shortness of breath, reduced lung capacity, decreased muscle elasticity, balance diminished capacity, inadequate stamina. The changes are the individual's self-perception and the impacting on the individual's self-identify. They will make individuals to define themselves becoming old.
4. Chronic generation: The chronic is the disease of unknown causes, no way to cure, controlling symptoms by drugs, such as hypertension, diabetes, arthritis, etc. When individuals suffer from the chronic diseases, and the diseases become a part of life, we think the individuals grow old.

Third, the point of psychology. This is the age of the individual at the psychologically subjective feelings. These feelings come from social and psychological factors. The social factors include that the children growing up and getting away from home, the birth of grandsons, the death of the spouse, the forgetfulness on the everyday life, the loss of the patience and so on. The psychological factors include that the loss of the thinking ability, memory loss, inability to concentrate, lack of capacity to solve problems and so on.

Fourth, the point of socialization. The social status of an individual or a particular behavior occurring will be treated as the individual development indicators. Individual aging indicators often consist of the following three:

1. Retirement: It means the individual don't work for full time or work for pay. His income is a pension. The retirement is generally considered an important of the elderly.
2. Becoming grandparents: The age to be grandparents was about fifty years old. Because of the change of social pattern, the general situation of late marriage, the age to be grandparents is older than before.
3. The parents loss: When the individual lose parents, he become the oldest generation in the family. The situation means the individual become old.

The most significant characteristics of the elderly are aging, followed by forgetting (Zhan 1991). The physical and psychological aging can be attributed to the natural laws, but how much time is the old age depends on the length of life. Some people live longer because they have a long old age, and some people die when they are not old because of various factors. Forgetfulness is another feature of the elderly. They often forget things around, but they remember for the last things very clearly. When a person regular wallows in the past things, maybe he is old.

The above references tell us that the meanings of old have different standards including age, physiology, psychology and social perception. The aspects of old contain subjective awareness more or less or the standards of old are different. Therefore, the definition of age as old is the most common definition and the definition is based on the laws.

The professionals for educating and serving the elderly adopt for four different thinking (Moody 1976).

1. Denial mode: The elderly population created limited economic value, so the elderly education is uneconomic. This idea does not meet the viewpoint of modern education, and the elderly population also has the right to continue learning. This idea is inconsistent with modern society.
2. Social serving mode: The problems caused by the increasing in the elderly population can be improved through changes in public policy. The observation emphasizes social justice and equality and does not research the problems that the elderly face and solve them. The elderly take the serves passively and do not face the life by enhancing their abilities. This viewpoint is derogatory (Long 1986).
3. Active mode: This viewpoint is certainly worth the elderly population because of their abilities, experience and living skills. The elderly can help our society to face some problems. Therefore, the elderly education can encourage and help them to participate in our society, to prepare reemployment, or to be volunteers.
4. Self-realization mode: This viewpoint extends from the active mode. It emphasizes that the educational activities enhance the spiritual growth. Moody said that the important feature of the elderly population is to seek the purpose of life from spirit level. Bramwell (1992) said that elderly education should focus on self-fulfillment, self-realization, self-growth and self-transcendence. Walker (1996) said that the final purpose of the elderly education is self-realization.

From the above literature, we find that helping the elderly to enhance their knowledge and ability to adapt to the ever-changing society is a part of the purpose of elderly education. The self-realization and the advancement of social status are important in the elderly education, too.

Until Dec. 2014, the population is 270,883 people in this small city in Taiwan, and the elderly (over 65 years old) is 33,336 people, over 12 % of the city population. The elderly is 2,808,690 people in Taiwan, accounting for 11.99 % of the country's total population. Establishment of ageing-friendly environment will be an important government policy.

For elderly computer users, unfriendly user interface (too much words, too small word, etc.) often causes trouble on the use of internet (Hui-Ming Guo et al. 2007). The scholars had pointed out that the reasons that the elderly refuse to learn new technology are the complex operation flow and unfriendly user interface (Zhao et al. 2009).

### 3 Research Methods

Action Research is a process of self-reflection inquiry in the social or educational context. Participants included teachers, students, principals and others. The research aims at rationality and justice of social or educational practices. It helps researchers to understand the practical work, and makes works more efficiently (Carr and Kemmis 1986).

On the teaching part, Action Research is a research method for educational environment. Its purpose is to understand the quality of teaching and looking for a better way to teach (Hensen 1996). It includes the observation of the teaching process, finding and solving the problems, and is a systematic and sequential method for research (Dinkelman 1997).

According to Johnson's book (*A Short Guild to Action Research*); he pointed out ten characteristics about Action Research:

- Action research is a systematic researching method.
- The researchers have no any presumptions.
- It is not necessary to get the way of research complex.
- It needs detailed plans to collect data.
- The research is no time limit.
- Regular observation is necessary, but it is not necessary to spend a lot of time on observation.
- The research process can be simple and informal, and it can be rigorous and formal, too.
- Action Research requires theoretical foundation.
- Action Research is not a quantitative research.
- When the research result is quantitated, the application of the result will be limited.

The object of the study is 89 elderly students attending the computer courses in the Senior Citizens Academy. The author is the course instructor, his jobs are teaching the elderly students to use the internet, to read the messages on the screen, to input the words (Traditional Chinese characters), etc.

## 4 Results

The computer courses are popular in the Senior Citizens Academy. We have to spend more than 8 weeks (3 h in a week) to teach the students the basic operations. The basic operations are turning on and off the computer, using the keyboard to input the words in Traditional Chinese Characters, using the mouse to click the desktop icon on the screen (to click the mouse left button twice quickly, this is the most hard operation process in the beginning of the courses), browsing the internet, learning to find something on the internet, etc.

When we start to teach the using of Facebook, it is difficult to teach the students to sign up a new username. It's too much data for them to input, and they have to write the username and password in their notebook, or they will forget the words (Some students' memory is not as strong as the young men). We understand that the point of the teaching is how to use Facebook, not to sign up, so we suggest that the instructor sign up for the elderly students before class, and give the username and password to the students in class. It will save a lot of time.

Taiwanese conservative personality makes the elderly students not used to share their motions to others. They don't understand why we share everything in Facebook. They will not share their thinking in Facebook. First of all, we suggest them to be the instructor's Facebook friend. They will understand what they can share in Facebook, just as the instructor share. And the next, we will suggest them to click the < Like > button. They will understand how to interact with others in Facebook. When they click the < Like > button, we will teach them how to leave a message in others' Facebook. They will input "Good!" or "Nice!".

To share photos is a good begin in the Facebook using. But the elderly students have to connect their camera and computer to download their photos to the computer's disk, and upload the photos to Facebook. The process is complex for them. We have to review the process for them several times and maybe 10 to 20 percent of the elderly will give up. It is necessary to encourage them to share their life in Facebook, and get more Facebook friends, just like their sons, daughters and grandchildren. It will make them be interested in using Facebook.

We will tell them how to share news or articles in Facebook. It is another way to use their Facebook. Maybe they would not share their feeling or thinking in their Facebook, but they like to share the articles to others, especially the content of the articles is about health. It is important for them to be healthy.

A handful of the elderly like to share their life experience in their Facebook, and this is our goal, to save their stories in Facebook. Typing is difficult for the elderly, and the handwriting input devices are not convenient for them. For our elderly students, to input words is always a trouble. How to improve the method of input is worthy of study.

After we finish the class, less than 25 % of the elderly students keep using their Facebook. To maintain the relationships with Facebook is maybe important for us, but not important for them. They maintain their relationships in a dinner party or regular meetings.

In the teaching process, we set up a bicycle team for the elderly students and set up a Facebook page for the team. At first the idea is to encourage the elderly to exercise for their healthy. We spent four days riding the bicycles to travel, and total distance is 220 km. We uploaded the photos taken in the activity to the Facebook page. The team members took the initiative to find ways to download their photos in Facebook page. It is the way to encourage the elderly to use Facebook.

In the observation, we found that when the elderly find something interesting or relate to them in the internet, they would take the initiative to learn the knowledge about the internet. Creating the goal is a good way to encourage the elderly to learn.

Due to the trend of the times, we set up the courses to teach the elderly students to use MID (mobile internet devices). The elderly students would set their personal data in their smartphone or tablet computer. When they use their MID, they don't need to input their username and password every time, and it is convenient for the elderly to maintain their Facebook running.

## 5 Future Research Directions

According to the survey about Taiwan wireless internet use, the proportion of people in Taiwan to use wireless internet access continue to increase. The internet applications people use most often with mobile internet are using the internet community websites, using instant messaging and visiting the websites (TWNIC 2015). We also found that Line (instant messaging) is popular in the elderly. The software makes a new way to communicate to others. The situation is suitable to be explained with Technology Acceptance Model. When the elderly students find an App (application) that is useful and using easily, they would like to learn the using and start to use it.

To keep one's Facebook running with desktop computer is maybe difficult for the elderly, but to do the same thing with MID is maybe easy for them. On the other hand, maybe Facebook is not their need. They are not used to share something in words. When they need to share some photos, they use the instant messaging just as Line. The interface of Line is simpler than Facebook.

On the point of Perceived ease of use, which one is easier to use for the elderly? Desktop computers or MID? When they don't need to type, the handwriting on MID is useful for them. To observe on their usage of MID is the next step for us to research. What kind of interface on MID is the elderly need? It is the future research directions.

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