A STUDY ON RELATIONSHIP BETWEEN HUMAN CAPITAL AND AGING PREPAREDNESS OF MILLION BIRTH COHORT TEACHERS IN PRIMARY SCHOOL AFFILIATED WITH SUKHOTHAI PRIMARY EDUCATIONAL SERVICE AREA OFFICE 1

Kiratikan Sadakorn

A Dissertation Submitted in Partial
Fulfillment of the Requirements for the Degree of
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School of Social and Environmental Development
National Institute of Development Administration
2019

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ABSTRACT

Title of Dissertation	A STUDY ON RELATIONSHIP BETWEEN HUMAN CAPITAL AND AGING PREPAREDNESS OF MILLION BIRTH COHORT TEACHERS IN PRIMARY SCHOOL AFFILIATED WITH SUKHOTHAI PRIMARY EDUCATIONAL SERVICE AREA OFFICE 1
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The main purposes of this study were to examine: 1) the relationship between human capital and aging preparedness; and 2) the moderating effect of social support on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. The correlational research design and the cross-sectional study were employed. The partial least squares structural equation modeling technique was applied. The research results indicated that the human capital had a partial significantly positive effect on the aging preparedness, and the social support had a partial significantly positive moderating effect on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. The fit indices showed that the model fit the data well. The results showed that the direction of aging preparedness policy should enhance and develop knowledge-based society in the context of high social support.

Keywords: human capital, aging preparedness, social support, million birth cohort

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CHAPTER 1

INTRODUCTION

1.1 Statement and Significance of the Study

Since 2005 approximately, Thailand has entered into an increase in size wave of becoming an ‘aging society’ with the prediction to be a ‘complete-aged society’ by 2021, and to become ‘super-aged society’ in 2031 (Foundation of Thai Gerontology Research and Development Institute, 2016). For Thailand to become an ‘aging society’ without a good preparedness, then, the effects will include as a consequence of the decreasing number of working-age people, less tax-paying contributions to the government revenue pool, the increase health-related expenses caused by caring for the elderly. Therefore, there will be a predictable decrease budgetary allocation to all areas of government spending.

In addition to the aging society, Thailand has to deal with the large aging population called ‘million birth cohort’ (MBC), which name is applied to the population born from 1963 to 1983, which has the highest birth rate of over 1,000,000 births p.a. This generation of approximately 20,000,000 equates to 1/3 of Thailand’s total population (Thai Health Promotion Foundation, 2010). Currently, this MBC generation is within the working-age and will enter into an aging society in 2023 and will increase the number of elderly people in Thailand, dramatically.

As a result of Thailand aging society both public and private organizations realize the importance of aging preparedness at all levels to be able to cope with the aging society. Because, a good preparedness will encourage people ready for various changes and able to adjust well. However, past experience the elderly has been shown to be inadequate preparedness and do not possess the required information for aging preparedness. Kuea Wongboonsin, Suwanee Surasiangsung, Patcharawalai Wongboonsin, and Somkiat Iamkanjanalai (2007) have proposed a concept to prepare for the future aging society, which is to prepare human capital to be higher quality

people. They believe that if a person receives the necessary knowledge and skill in accordance with societal conditions before entering the elderly age, then it will be beneficial to create more opportunities and alternatives to improve their aging preparedness.

For the above study it shows the importance of the relationship between human capital and self-aging preparedness to enter into older age. Initial research of relevant from ThaiLis Digital Collection, Chulalongkorn University Library and Information Network and Thai Citation Index found a lack of researches for relationship between human capital and aging preparedness. It was found that only the research has been conducted by Supaporn Kumruangrit (2014): Human capital and the preparation for old age by themselves in Thailand, into this important subject. Therefore, the purpose of this study is to examine the relationship between human capital and aging preparedness.

Additionally, when conducting internet-based research on the human capital and/or aging preparedness subject in aging society context, it was found that most studies have used unit of analysis in organization or countries level. But those studies did not focus on unit of analysis at an individual level. For this reason, this study aims to study using unit of analysis at an individual level by focusing the study on the MBC. Therefore, the purpose of this study is to examine the relationship between human capital and aging preparedness of MBC.

From information available in 2015 on the Thai elderly population, it was found that the North of Thailand has the highest number of elderly and Thambon Grainork, Sukhothai Province has the highest ratio of elderly at 35% of the total Thambon population. Therefore, Sukhothai Province is suitable area in which to conduct this study. (Wirawin Srimot, 2016, May 14)

Developing a society's human capital should start with the teacher who is able to represent the role model and well able to pass on the necessary skill and knowledge into the population. By preparing teachers to be ready to enter into elderly age will not only improve their quality of life, the model can be used in human capital development or to promote the preparedness of the wider population for entering elderly aged living. Therefore, the purpose of this study is to examine the relationship

between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

Furthermore, living in society, the person needs to relate to others as the interaction or network ties of people in social network. This relationship supports the person in different ways which is called the social support. This process effects the individual's thinking and behaviour. Therefore, the purpose of this study is to examine moderating effect of social support on the relationship between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This purpose has differentiated this study from the others. From the above matter, several important research questions arise as follows:

1. How does the human capital relate to the aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1?

2. How does the social support affect the relationship between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1?

1.2 Objectives

1.2.1 To examine the relationship between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

1.2.2 To examine moderating effect of social support on the relationship between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1

1.2.3 To promote aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 by considering the influences of human capital and social support.

1.3 Expected Benefits of the Study

1.3.1 To acknowledge the degree of relationship between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

1.3.2 To acknowledge the degree of moderating effect of social support on the relationship between human capital and aging preparedness of MBC teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

1.3.3 To promote aging preparedness of MBC by considering the influences of human capital and social support.

1.4 Scope of the Study

1.4.1 Population and sample of this study: As of academic year 2018, the population in this study was the MBC teachers, in primary-school affiliated with Sukhothai Primary Educational Service Area Office 1, those was born from 1963 to 1983 and whose ages ranged from 35 to 55 years (at that time of collecting data). There were 135 schools comprised of 751 teachers. Within this study, all schools were selected and then the four teachers of the MBC were selected as respondents for each school. There were totally 540 questionnaires sent out with 487 questionnaires received and the receipt percentage was rated at 90.19 percent.

1.4.2 Variables of this study: Within present study, the human capital as independent variable was defined with the combination between knowledge, skill and personality characteristic. The knowledge as a part of the human capital consisted of 5 composites; 1) Global awareness, 2) Financial, economic, business and entrepreneurial literacy, 3) Civil literacy, 4) Health literacy, and 5) Environmental literacy. The skill as a part of the human capital consisted of 3 composites; 1) Learning and innovation skill, 2) Life and career skill, and 3) Information, media and technology skill. The personality characteristic as a part of the human capital consisted of 1 composite that was attributes. Social support as a moderator variable consisted of 1 composite that was social support itself. Aging preparedness as a

dependent variable consisted of 5 composites: 1) Economy, 2) Physical health, 3) Mental health, 4) Accommodation, and 5) Free time usage.

1.4.3 Period of data collection was in June-July, 2018.

1.4.4 Scope of area is all 135 schools affiliated with Sukhothai Primary Educational Service Area Office 1.

CHAPTER 2

LITERATURE REVIEW

2.1 Aging Society

In the last century Thai population structure has changed a lot. The first Thai census was completed in 1910, when the population was 8,000,000. After this census the Thai demographic was affected by population growth to be 34,000,000 in 1970 (Pramote Prasartkul & Patama Vapattanavong, 2005).

From 1963 to 1983, the population increased by in excess of 1,000,000 p.a. The million birth cohort (MBC) as so named by academics. Comparing to other age groups, the MBC population is the largest, see Figure 2.1, caused the government seriously and continuously announced the, 'Anti-natalist Policy' and introduced a birth-control program. Therefore, Thailand's birth rate of post 1984 decreased to less than 1,000,000 births p.a. and reduced to 736,352 in 2015 (Foundation of Thai Gerontology Research and Development Institute, 2016). See Figure 2.2.

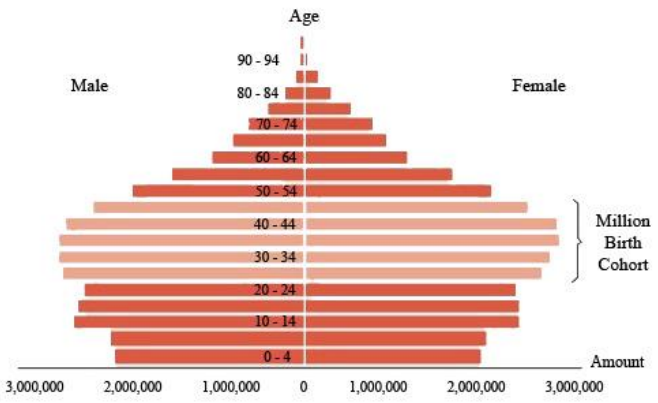

Figure 2.1 Pyramid of Million Birth Cohort Structure

Source: Thai Health Promotion Foundation (2010)

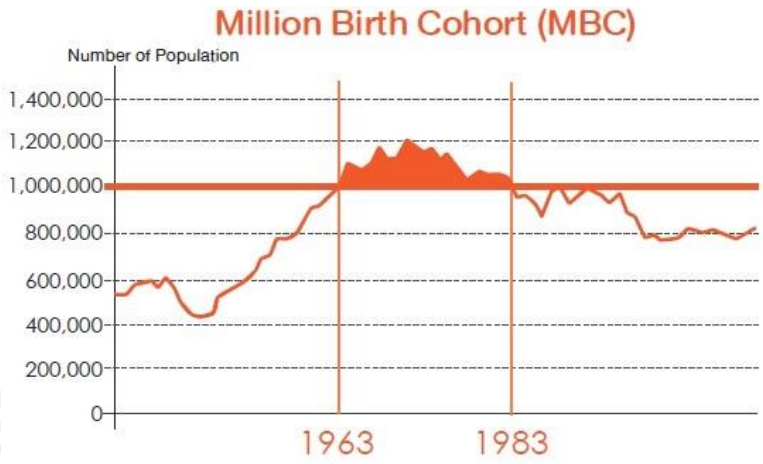

Figure 2.2 Million Birth Cohort

Source: Pramote Prasartkul and Patama Vapattanavong (2005)

The result from decreasing the birth rate caused the youth population to decrease, but at the same time, caused the proportion of elderly to increase, which changed the population structure to be aging society'. See Figure 2.3 that shows the Thai population rate of aging over time. In 2019, the elderly population with have a higher ration than the youth population. See Figure 2.4. Thailand's elderly population being higher than the youth population can be shown to negatively affect the rate of production as well as economic development.

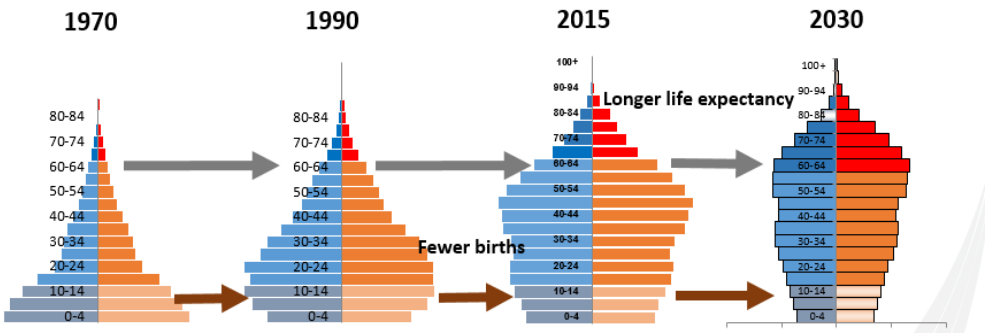

Figure 2.3 Changing Age Structure of Thai Population

Sources: National Economic and Social Development Board (2013)

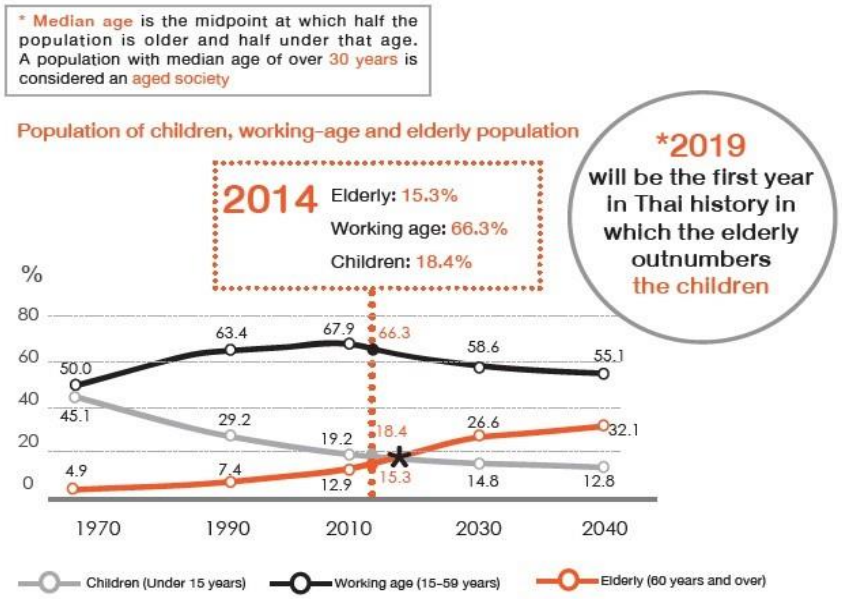

Figure 2.4 Speed of Population Aging in Thailand

Source: Foundation of Thai Gerontology Research and Development Institute (2015)

In 2005, Thailand had an elderly population (over 60 years) at 10% of the total population and entered into being aging society. The Office of the National Economic and Social Development has forecast that Thailand will become a complete aged society in 2021, by having 20% of the population be elderly and will become super aged society, by having 28% of the population be elderly in 2031 (Foundation of Thai Gerontology Research and Development Institute, 2016). The population structural change will create many problems in the economy and society. Therefore, the aging preparedness is very important for managing the aging society with quality.

2.2 Million Birth Cohort

An Additional factor that stimulates the wave is the total number of elderlies in the population. As stated, MBC born from 1963 to 1983 has the highest birth rate at more than 1,000,000 births p.a. This generation of approximately 20,000,000, equates to 1/3 of Thailand's total population (Thai Health Promotion Foundation, 2010). The MBC has considerable economic power is due to their sheer size, which influences the economic and societal policies of the country.

Currently, the MBC is within the working age and represents the highest ratio group of the total population and will enter into elderly aged in 2023 and from 2023 the MBC will transition from tax-paying to one of financial dependence on the Thai economy for a period of at least the next 20 years i.e. to 2043. As shown in Figure 2.5

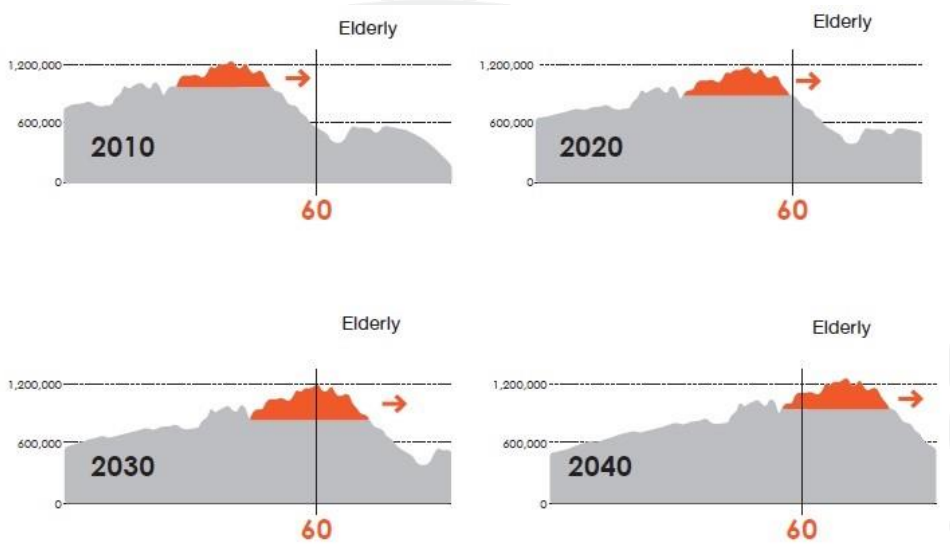

Figure 2.5 Movement of Million Birth Cohort to be Elderly
Source: Pramote Prasartkul (2013)

The Census and Housing information has compared reproductive behaviour of the MBC and the previous generation (PG) and found that the difference between these generations to be the MBC contains more single people, with less children birthed with smaller family size (Thai Health Promotion Foundation, 2010).

The MBC have a single status more than the PG. It was found the marriage rate of the MBC population reduced to a rate of almost half of the PG. In the 35 to 44 years age group (both men and women), the overall proportion of marriages has decreased by 1/3 of that for the PG, while the proportion of divorce has increased. There were 50,000 divorces in year 1997 but, in 2007, the number has increased to 100,000 divorces. See Figure 2.6 There is a tendency for the MBC group to live singularly.

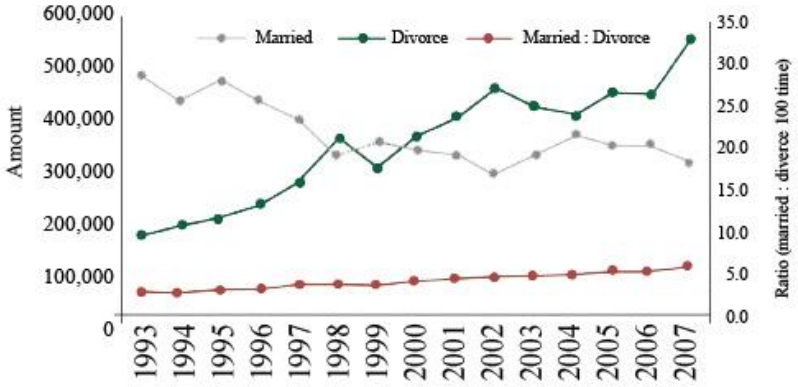

Figure 2.6 Rate of Marriage, Divorce and Ratio of Marriage: Divorce 100 times
Source: Thai Health Promotion Foundation (2010)

Women in the MBC have less children than the previous generation per family, where comparing the birth rates of MBC to PG. It was found the birth rate of, 'Children Ever Born' (CEB) women in the MBC is 3 times lower than that of PG women. While PG women aged 40 – 44 years had 6 children, MBC women had only 2 children. Further, in each age group MBC recorded birth rates were lower than PG. See Figure 2.7. The research predicted lower birth rates, with a consequent decrease in the total number of available workers.

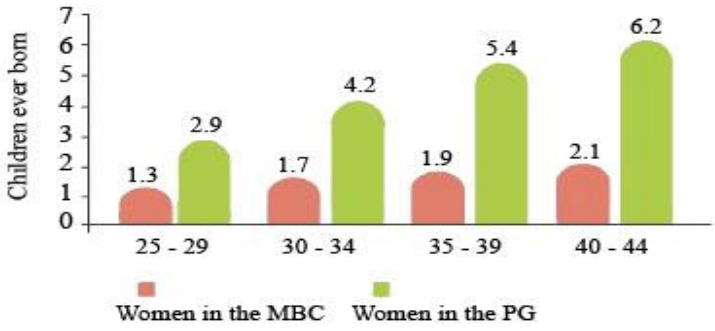

Figure 2.7 Comparing Children Ever Born of Women in the MBC and Women in the PG
Source: Thai Health Promotion Foundation (2010)

The smaller MBC has smaller family size due to the extended family becoming a single family. From the 1970 population census, the average number of people in each family was about 5.7 members. In 2000 average number of people in each family was about 3.8. Therefore, the prediction is average number of people in each family will contract even further. See Figure 2.8. Therefore, the date shows the MBC will increasingly live alone or by themselves. See Figure 2.9.

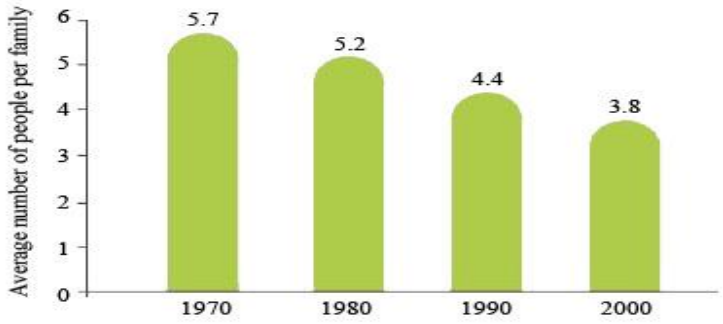

Figure 2.8 Trend of Family Size in Thailand, 1970-2000
Source: Thai Health Promotion Foundation (2010)

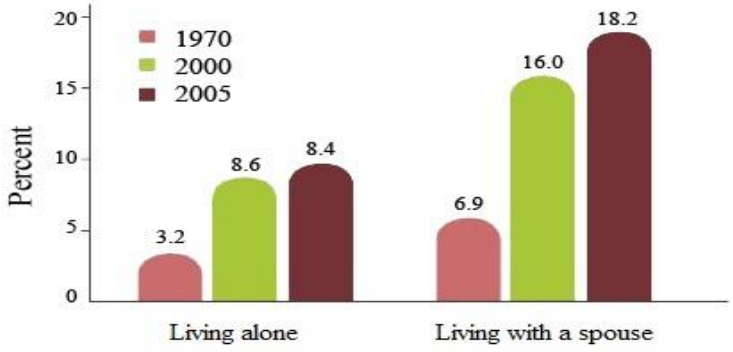

Figure 2.9 Percentage of Living Alone and Living with a Spouse in 2005 Comparing in 1970 and 2000
Source: Thai Health Promotion Foundation (2010)

2.3 Elderly

2.3.1 Definition

There is no definite age for being classified, ‘elderly’. There is no international standard. Each country has different standard or definition what ‘elderly’ means according to their culture standard of living. For example, in developed countries it is usual to define people aged over 65 years as being elderly (WHO, 2002. as cited in Foundation of Thai Gerontology Research and Development Institute (2017)). However, the United Nations use statistical data and indicators relating to the elder from a population group aged 60 years and older (Foundation of Thai Gerontology Research and Development Institute, 2017). Thailand has officially defined, ‘elderly’ in the ‘Elderly Person Act 2003’ at section 3 “… as a person who is 60 years old and/or older and has Thai nationality.” From above information, it can be seen that the international definition of ‘elderly’ is consistent with Thai definition.

Therefore, the definition of the ‘elderly’ in this study refers to a person who is 60 years old and/or older and has Thai nationality, including both men and women by counting age according to international calendar.

2.3.2 Problems and Issues Facing of the Elderly

Issue the elderly face today are different than from those of the same age who have gone before them due to the growth of economics and the modernization of technology, including better medical and public health. In summary, the major current problems for the elderly can be considered in three main areas, which include health issues, economic issues and housing issues.

Health issues: A 2004 physical examination health survey found the diseases commonly found in the elderly are in the Non-Communicable Diseases (NCDs) group, including arthritis/osteoarthritis, hypertension, diabetes and obesity caused by the lack of maintaining awareness of the importance of taking care of one’s health, before entering into elderly age, compounded by a lack of knowledge about suitable/ necessary good health-behaviours (Foundation of Thai Gerontology Research and Development Institute, 2014).

Additionally, it was found that more than 10% of the elderly have difficulty walking up and down stairs, with fecal incontinence or urinary incontinence issues. There exists 4% of the 'Oldest Old' (over 80 years old) that require care takers but, are not able to find one (Foundation of Thai Gerontology Research and Development Institute, 2016).

Economics issue: The 2015 population survey found that there were 34.3% of elderly or 1/3 of the total elderly population had an income less than the poverty graph where their main source of income is from their children (Foundation of Thai Gerontology Research and Development Institute, 2017). See Figure 2.10.

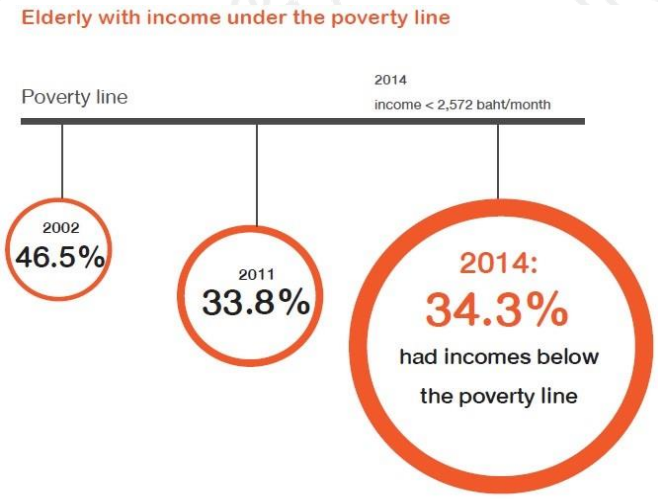

Figure 2.10 Elderly with Income under the Poverty Line
Source: Foundation of Thai Gerontology Research and Development Institute (2015)

However, the main source of income received from children has decreased from 52% in 2007 to 34% in 2014. At the same time the income from elderly working tends to be increasing, which means the elderly today are relying on themselves more and more and have a need to earn their income from working more so then in the past. See Figures 2.11 and 2.12.

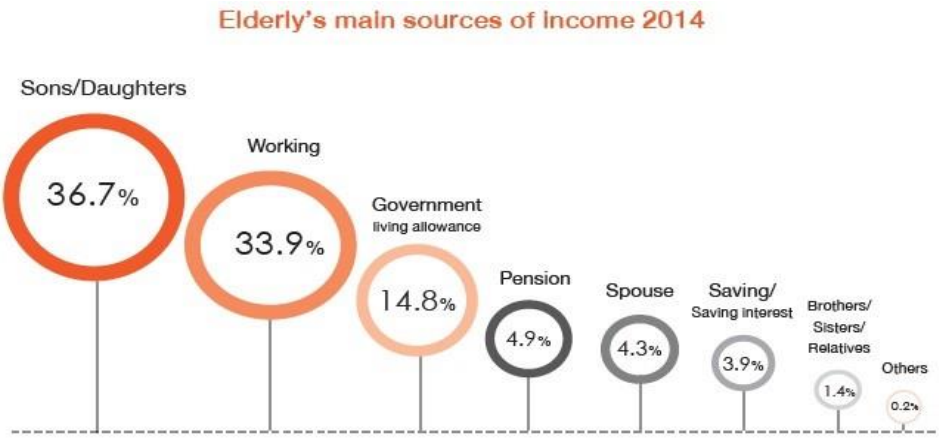

Figure 2.11 Elderly's Main Sources of Income

Source: Foundation of Thai Gerontology Research and Development Institute (2015)

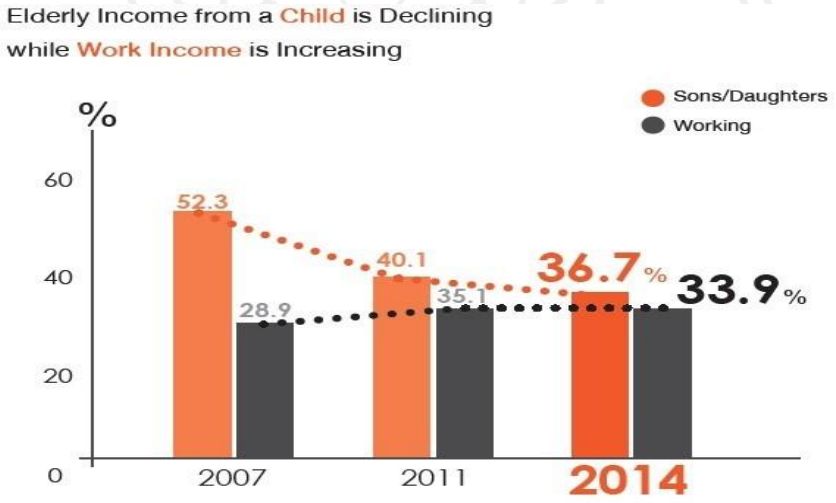

Figure 2.12 Elderly's Income from a Child and Work Income

Source: Foundation of Thai Gerontology Research and Development Institute (2015)

Housing issues: Currently, most of the Thai elderly live in a smaller household from the average of 5 people per household 50 years ago down to 4 people in 2000 and 3 people in 2015. The interesting subject is the proportion of the elderly who live alone or with their spouse tends to increase over the same period. From the survey in 2002 it was found that the elderly who live alone about 6% and that has increased to

9% in 2014. The elderly who live solely with their spouse has increased from 16% in 2002 to 19% in 2014. See Figure 2.13.

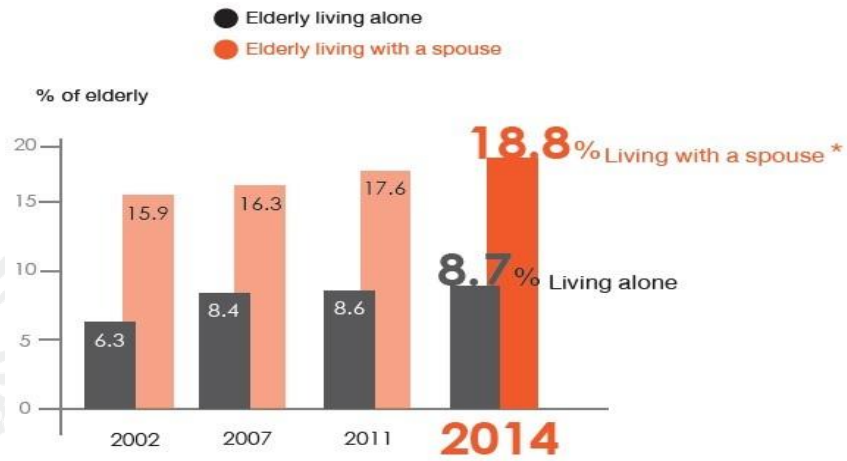

Figure 2.13 The Elderly Who Live Alone and Live with Their Spouse, 2002 – 2014
Source: Foundation of Thai Gerontology Research and Development Institute (2015)

From the above the issue arises about the lack of quality care taken for the elderly and lack of monitoring systems, when the elderly is at the stage of dependency or is unable to help themselves.

From 2014, Aging Population survey it was found that 82% of the elderly are property owners, which represents that most of the elderly stay in the house that they own. Therefore, improving the house's condition to elderly living suitable is necessary; especially for safety reasons, including the safe and handy location within in close proximity for the safety of the elderly (Office of Welfare Promotion; Protection and Empowerment of Vulnerable Groups, 2013).

2.4 Human Capital

In 1961, Theodore W. Schultz (1961), Nobel Prize winner, proposed the concept of human capital as valuable features in various capacities, either from innate or from accumulated capital by learning and these features can develop to grow, with appropriate investment in learning (Nisada Wedchayanon, 2008). In 1999, Davenport (1999) gave the definition of human capital is elements of capability, behaviour and

endeavour that have been accumulated over time. These elements promote humans to have higher potential (Supot Naksawat, 2016). These definitions are similar to the definition from the Organization for Economic Cooperation and Development (OECD, 1998), which is the element of knowledge, skill, capability and personality characteristic.

Kuea Wongboonsin (2004), a Thai academic commented that the importance of human resource development is the investment in building human capital by increasing knowledge, working skill and capacities to people which will be beneficial in overall development of population, economics and society. This definition consistent with Nisada Wedchayanon's concept of human capital (Nisada Wedchayanon, 2008) which is the various features including the ability existing in humans including knowledge, skill, ability by which, partly by innate or accumulated over time or investment. And, this concept is consistent with the concept of Sirapassorn Wongthongdee (2014) who gave the definition of human capital to be the overall result from the elements of knowledge, ability, skill including personality characteristic that accumulate and reinforce since young age through family unit, education unit, environment as well as from learning and gaining experience. More of these elements mean more of human capital. This concept is similar to the concept of Supot Naksawat (2016) who referred to human capital as knowledge, skill, ability, characteristic, behaviour, endeavour and experience from learning and training of the organization's members which leading to creating innovation and value added to organization.

This study uses human capital concept from OECD (1998) conjunction with the context of living in 'Society in 21 century' (Wichan Panit, 2012) which is the current society from 2001 to 2100 in which people in society have a way of life different from the past by relying on technology in working and in daily life, in increasingly interacting through technology, and in accessing to information technology, media and communication in a digital world, which is fast and convenient. Under this social standard, there is a need to rely on new knowledge, skill and personality characteristic to be able to live in the society.

Therefore, human capital in this study means knowledge, skill and personality characteristic that is accumulated in a person from study, experience or other learning

process. By considering human capital with the context of the way of life of people in the 21st century, human capital can be divided in three sectors which are knowledge, skill and personality characteristic.

2.4.1 Knowledge

Davenport and Prusak (1998) provided the definition of knowledge as the use of experience, value, information technology, expertise and instinct to define the working environment and framework. However, each person has different ways to gain experience and to receive information. Davenport's definition is consistent with the Royal Institute Dictionary B.E. 2542 (Royal Society of Thailand, 2003) defines the meaning of knowledge as what has been accumulated from experience, what has been heard, listened to, thought or practiced in each subject which is similar to Porntipa Dumnern (2006) who defined knowledge as the entire experience from the process of learning, practicing or may be from the upgrading of information to be appended with the context or environment to be applied in working for the society or organization to be developed for efficiency and effectiveness. Porntipa's definition of knowledge is in line with Tippawan Lorsuwannarat's definition of knowledge which is the valuable information, brought from experiences, judgment, ideas, values and wisdom to analyze for working support or problem solving (Tippawan Lorsuwannarat, 2006).

From above meaning reviews, knowledge means the information through the process of thinking, comparing, connecting until it becomes understanding through different experience accumulating and learning process of each person which is valuable in applying to making a decision or to operate. When considering the context of society in 21st century, knowledge means the ability to use information which is the result from experience in accumulating and learning processes with various methods, which creates knowledge and understanding; important matters in society. This knowledge about society conditions of the 21st century learning environment (Wichan Panit, 2012) is making people have more potential for living.

Knowledge as a part of human capital consists of 5 areas: 1) Global awareness, which means knowledge and understanding of a person's coexistence in human in society, and the understanding of a global society that is different in race,

religions, languages, cultures and age, leading to the coexistence of people in society appropriately. 2) Financial, economic, Business and entrepreneurial literacy, which means individual's knowledge and understanding about how economics and finance plays a role in a society and the ways of life of people in the 21st century, including the knowledge of how to do business and how to be a small entrepreneur so as to increase income or to increase opportunity and choice for self and for locals. 3) Civil literacy means knowledge and understanding of the role of good citizenship in society through respecting other's right and opinions, considering the benefits of public before self, understanding the process of how to handle conflict in a peaceful way and play a part in political appropriately. 4) Health literacy means knowledge and understanding about information that is useful in looking after self-health by using knowledge to get necessary nutrition for the body in different stages, being aware of various diseases and illnesses and how to strengthen the body's immunity. 5) Environmental literacy means knowledge and understanding of people through recognizing the importance of the natural environment that affects humans and society to participate in helping to conserve resources and prevent environmental problems (Ministry of Education; Office of the Basic Education Commission, n.d.; Wichan Panit, 2012)

2.4.2 Skill

Davenport (1999) has defined skill as fluency, knowing the steps and how to complete a mission and to compete well. Skills range from physical strength to activeness, agility and specific learning. Therefore, skill is an expertise in specific area/subject matter. Davenport's definition is consistent with opinion of Katz (1955) who commented that skills mean the ability to work fast, be agile, perform accurately and correctly and have expertise and practice until becoming a trusted and accepted person. These concepts are similar with the meaning of skill by Prasert Thunsakul (1995) who said the meaning of skill is clarity and expertise in a particular subject, which a person can build from learning, including professional skills, sports, working with others, reading, teaching, managing, math skills, language skills, technology skills, etc. These skills are external skills that can be clearly seen from action or from practice. These skills are necessary for living, which allows people, with these skills,

to have a good life and be able to live in society by having better opportunities than those without skill.

By considering the definition of skill, in conjunction with human capital of society in the 21st century, the definition of skill means expertise, the ability to perform any mission correctly and proficiently, which are skills related to social conditions in the 21st century skills (Wichan Panit, 2012), for people to have greater potential for living. These skills consist of 3 main skills: 1) Learning and innovation skill 2) Life and career skill, and 3) Information, media and technology skill (Wichan Panit, 2012).

The first key skill is Learning and innovation skill, which consist of (1) Critical thinking and problem solving. This skill creates thinking skills in various ways, which is rational thinking, both inductive and deductive. System thinking is done by analyzing how sub-factors interact with each other; resulting in the overall picture. Critical thinking and decision making is analysis and evaluation of evidence data and reliability, comparing, synthesizing and links between information and arguments as well as problem-solving thinking by using various forms of training to solve unfamiliar problems in both general accepted approaches and strange approaches that have not been accepted to reach a better solution. (2) Communication and collaboration. These are the progress in digital technology and communication technology causing the 21st century world to require extensive and profound skills in communication and collaboration, such as clear communication that is easy to understand in speaking, writing and listening effectively so as to convey effectively communication that can achieve a work related goal and skills in cooperation with others, while being flexible and helping others to achieve the common goal, and (3) Creativity and innovation is a part of the imagination skills to build process steps based on knowledge theory, to lead to new discoveries, to be innovative and then to be a manufacturer and an operator. This skill is creative thinking, which creates understanding, how to work with others creatively, with an open mind and respond to new perspectives, listen to comments and to participate in the evaluation of work through teamwork to improve and develop, to work with new ideas or new methods and to understand the restriction of the world in accepting new perspectives and to see failure as a learning opportunity, including applying innovation with concrete

creativity (Ministry of Education; Office of the Basic Education Commission, n.d.; Wichan Panit, 2012).

The second main skill is Life and career skill, which is learning to adapt well in the conditions of change. Therefore, development in (1) Flexibility and adaptability are skills for learning and working in the 21st century so as to achieve goals with limited resources, time and with competition using crisis as an opportunity. Adapting to change, managing positively, using compliments, reacting positively to complaints and errors, having the ability to understand various opinions and beliefs and still be able to accomplish outcomes as work. (2) Initiative and self direction is an important skill in working and living in the 21st century by setting up targets with specific criteria, concrete and abstract achievements, defining the work, monitoring the work and prioritizing the work, practicing requisite skills so as to be able to learn by oneself and review past experiences for future development. (3) Social and cross-cultural skill are skills that allow people to work and live in a diverse environment successfully by respecting cultural differences, to raise social and cultural differences, to create new concepts, new work methods, to improve quality of work. (4) Productivity and accountability by defining steps and process of work with principles, knowledge theory that require skills, expertise and project management skill under limitations by prioritizing, planning and management, and (5) Leadership and responsibility are skills of leadership and responsibilities for themselves, teamwork and the partner network to reach the mutual goal, which requires human relationship skill development and problem-solving skills plus the ability to motivate others to see mutual goals and influence others to work to achieve success together by inspiring others to use their highest potential or ability and hold public interest as a principle (Ministry of Education; Office of the Basic Education Commission, n.d.; Wichan Panit, 2012)

The third main skill is Information, media, and technology skill, which consists of (1) Information literacy: using skill to access wide ranges of information with speed and precision, assess trustworthiness of the data, and use the information with creativity (2) Media literacy: a skill to analyze content, reference, and objective of the media. Sometimes we have to look through the media to see its real intention and influence on its target. Does it create a confliction to moral or the law? and (3)

Information, communication and technology literacy: from the world of technology race to building a sale strategy for groups of consumers, a skill of technology is required. It can be used to create new jobs or new ways of learning with network communication and proper usage of social network based on moral and laws of accessing information and technology (Ministry of Education; Office of the Basic Education Commission, n.d.; Wichan Panit, 2012).

2.4.3 Personality Characteristic

Office of Civil Service Commission (2010) has given a definition of personality characteristic as trait, attitude, and motivation, while Cronbach (1963) and Duangduen Satraphat (2003) have defined it widely as readiness, expertise, interest, and intellect. With these facts, personality characteristic will mean in overall intellect, readiness, ability, expertise, interest, trait, attitude, and motivation of a person that affects his/her living. These personality characteristics focused on identifying the inherent qualities and characteristics possessed by individual.

Considering definitions of Cronbach (1963) and Duangduen Satraphat (2003), besides the inherent qualities and characteristics which usually are viewed as innate and basically fixed of personality characteristics, there also are some characteristics or abilities that can be learned and developed. Therefore, personality characteristic contains two different attributes. The attributes are what individuals can accomplish, and attributes are who individuals are (i.e., their inherent characteristics).

When consider it with human capital of 21st Century, it means a special skill of each individual, in which consist of 10 characteristics as critical thinking, problem solving, creativity, collaboration, information literacy, self-learning, communication, global awareness, civic literacy and, economic literacy (Ministry of Education; Office of the Basic Education Commission, n.d.; Wichan Panit, 2012).

From the definition and fact, definition of personality characteristic is mostly overlapped with definition of knowledge and skill. These similarities might cause problem for building measuring scale and discriminant validity, in which this study always keep these problems in mind throughout the research session.

2.5 Aging Preparedness

Everyone live their life with a goal of having good quality lifestyle, which is different in each person and context, but they have the same basic living requirements. Preparation for an unexpected journey of life becomes an important aspect for people who want to have a good quality of life in every ranges of age.

Aging preparedness can reduce a risk and prepare us for changes that we have to face in near future. Because elders have the most physical and mental regression more than the others and they have to face different changes in their life, having aging preparedness is required.

Aging preparedness is an advance plan of life with goals in the future; to be old with a good life and happiness (Banlu Siripanich, 2010). College of Population Studies (2010) has divided aging preparedness into 3 levels: individual, social, and nation. Individual aging preparedness with goals is the best plan for being independent in a long term (Banlu Siripanich, 2007). But from the elderly survey of Thailand in 2011 (Foundation of Thai Gerontology Research and Development Institute, 2014), it found that some elders didn't realize the importance of aging preparedness, sometimes they had it but didn't act, and when they thought they are prepared, they didn't cover all of aspects as in Figure 2.14

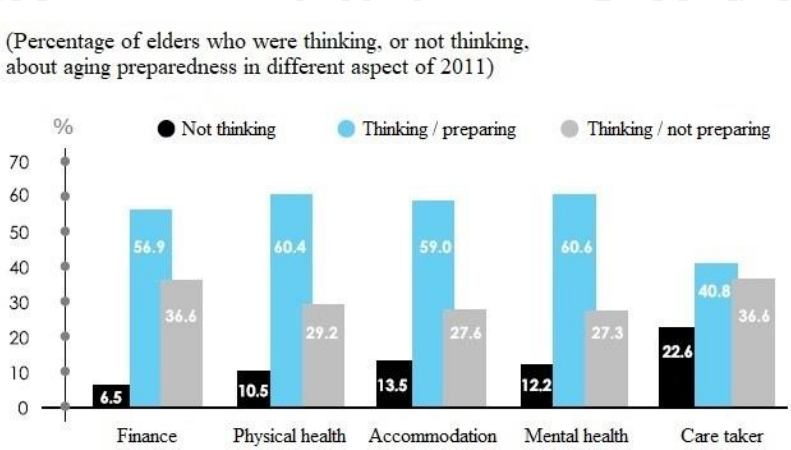

Figure 2.14 Percentage of Elders who were Thinking, or not Thinking, about Aging Preparedness in Different Aspect of 2011

Source: Foundation of Thai Gerontology Research and Development Institute (2014)

Atchley (1994) propose that aging preparedness is consisted of financial ,free time usage, health, mental, and attitude preparedness, which consistent with the concept from Banlu Siripanich (2010) talked about aging preparedness that if individuals spend enough time for aging preparedness, more than 10 years, persons can be old with a good life. He also purposed about preparation in 7 aspects, which are physical health, mental health, finance, accommodation, care takers, activities after retirement, and information about pension of elders.

From the concept of aging preparedness from different studies, this study has considered a context and problems of the population and processed aging preparedness into 5 aspects: Economy, Physical health, Mental health, Accommodation, and Free time usage.

2.5.1 Economy Preparedness

Sriruen Kaewkungwan (2002) told that retiring people should have prepared their financial readiness since when they were middle-aged. When becoming an elder, jobs with high salary are hard to find, and depending on young family members in this economy situation is quite harsh. Financial readiness helps elders retire with happiness readied for them in the future.

From the survey of Thailand financial Literacy in 2016 by Bank of Thailand and National Statistical Office Thailand (Thaireform, 2018, August 26) 48.6 percent of Thais have low financial literacy. Some people have improper income-expense ledger, and some people have a loan that not suitable for their earnings.

Office of Welfare Promotion; Protection and Empowerment of Vulnerable Groups (2013) has suggested checklist that elders should do with their personal financial planning: income-expense ledger, emergency cash saving, health insurance and elderly financial planning, money investment and saving by learning about money market and financial instruments, managing the risks, and learning about financial law and rights of elderly.

In this study, aging preparedness in economy means a person who planned their financial strategy in advance for using in elderly or an emergency situation; with enough to spend money without affecting their stability in life.

2.5.2 Physical Health Preparedness

Health problem has mostly found in elders because of the body regression. From 2004 physical examination health survey found the diseases commonly found in the elderly are in the Non-Communicable Diseases (NCDs) group, including arthritis/ osteoarthritis, hypertension, diabetes and obesity caused by the lack of maintaining awareness of the importance of taking care of one's health, before entering into elderly age, compounded by a lack of knowledge about suitable/ necessary good health-behaviours (Foundation of Thai Gerontology Research and Development Institute, 2014; Ministry of Public Health; Department of Health; Bureau of Health Promotion, 2013).

These health problems have effects in different dimensions, from individual to nation. People need to be prepared before turning old to reduce medical expenses in the future, increase planning potential in economy, health, and social before the elderly and move forward with good quality of life.

Office of Welfare Promotion; Protection and Empowerment of Vulnerable Groups (2013) suggested that physical health preparedness is crucial for elders and their health. Elders should see a doctor when they get sick, control their diet, and exercise with proper pacing.

In this study, aging preparedness in physical health means knowing the importance of health and self-caring knowledge, seeing the doctor when they get sick, having good nutritious diet and personality, and exercise habitually.

2.5.3 Mental Health Preparedness

Mental preparedness is connected and affects other readiness in everyone's live. Some elders can adapt to their new lifestyle and be happy with the new life, but some people cannot, causing mental health.

Office of Welfare Promotion; Protection and Empowerment of Vulnerable Groups (2013) talked about elders that they are a group of people whom mental energy has been reduced because of different types of regression they faced in life: sickness, role in others life, earnings, and changes of their social. They turned to be more sensitive. Therefore, people should study about proper aging transition, learn

and accept the changes, learn to live with uncertainty, learn to control their emotion and stress, respect others opinion, and do good deeds for family and people nearby.

Mental preparedness can be done in different ways. Bunthueng Phocharoen (2008) has suggested the training of positive looking, accepting reality, living with the present, and accepting changes of your surroundings by put your faith in Dhamma; clearing stress and emotion in mind. Persons can also learn about aging preparedness by talking with acquainted person, elders, or attending interesting social activity.

This study has summarized aging preparedness in mental health that having comprehension in natural changes of our body, mind, and surrounded situations, then accept the changes and adapt, to become elders who live with joy and happiness.

2.5.4 Accommodation Preparedness

This is an important issue for elder society, especially the sufficiency of quality and quantity of elders' accommodation in the future. House modification to live safety as an elder is crucial because good accommodation environment is related to having a good health, both body and mind (Verderber & Song, 2005).

'Accommodation' means a chosen place to live as an elder; it can be a house, a room, or a rented room. Therefore, people who'll become elders should realize the importance and learn new information about housing preparation, considering distance between communities and convenience of travelling to a hospital to accommodate elders' live.

The location should accommodate your relatives or grandchildren by having health center, hospital, or convenience store nearby. The accommodation should be suitably set up for elders' safety; reducing danger and accidents. For example, a one-story house or having bedroom on the first floor, slippery-proof flooring, sitting toilet with steel bar to hold, proper lightning, emergency electrical cut system, a small yard for activities such as gardening or playing with a pet, or a walkable distance between a front door and fences (Office of Welfare Promotion; Protection and Empowerment of Vulnerable Groups, 2013).

The other important issue is a caretaker. Because becoming elder will naturally reduce their strength more than the other ages, having the caretaker nearby (full-time or part-time) to closely look after an elder is necessary. Learning about

caretakers and their contact in advance is needed to be ready for both elders and caretakers.

In conclusion, accommodation preparedness means planning a proper house condition and caretakers for elders; for them to live as an elder with safety and comfort.

2.5.5 Free Time Usage Preparedness

Living in an elderly community, elders should not live only in solitude, but have chance to enjoy activities with family, friends, or community to lift up their moods, and also find out what their favorited hobbies are.

Office of Welfare Promotion; Protection and Empowerment of Vulnerable Groups (2013) told that elders have been mostly limited to their house, sometimes in a room because of their disability. They didn't have a chance to breathe a fresh air or doing activities with other people. Their friends, husbands/wives, and neighbours also gradually gone, therefore, creating lack of interaction with people. Sometimes their family have jobs, letting the elders live in the house alone. All of these dampen their moods. Elders should have activities that they are appreciated with, such as attending social activity or doing hobbies as a replacement of their former jobs.

These are consistent with Activity theory of Kossuth and Bengtson (1988), which has been developed for encouraging people to learn, and prioritizing social activity as a core of person's life. It has different activities as a tool for increasing social interaction between people; person's adaptation is highly related to the activities he/she do. More activities create more adaptations and they encourage people to form a relationship with others, creating self-appreciation. Therefore, elders who did activities regularly will have more appreciation and adaptation in life more than elders who didn't. Activities also lift up the mood, urge people to do different things, create positive attitude in their life, develop good decision-making and feel that they have values in society. All of these came from social activities and interactions with the others.

This study lead to summarize that aging preparedness in free time usage means learning new information, prior planning about interactions or activities with

other for elder life, and also how to spend free time on a hobby or an interested activity.

2.6 Social Support

Social support is a part of function of a social network which is a basic social requirement for people living together. Considering social network concept of Boissevain (1974) defines that social relation of each individual who communicate and exchange benefits with each other. Boissevain's concept has a perspective that there are interactions or network ties, on the base of exchange, inside social network. This is consistent with the concept of Phramaha Suthit Apakaro (2004), who looked social network as a relation inside human society: between persons, a person with a group, groups, and a group with a network. It is a description of behaviours and relations of other things, such as activities, communications, participations, dependences, and learning exchange which is a relation with different forms and structures.

It is different from the concept of Brandt and Weinert (1981) who have the concept of social network as relations between people or a group of persons, cover from people inside a family to people outside a family who can lend a help when facing with problems or situations. Thus, Brandt and Weinert have a perspective that social network has interactions or network ties based on social support, which is consistent with a concept of Wanthanee Wasikasin, Kittiphat Nonthapatthamadul, and Surangrat Wasinarom (2004); it means the entire social relations of the society whom a person has lived, from family members, relatives, colleagues, and neighbours. These relations of people in the society are a social support of people.

Therefore, social network in this study means social interaction between people, group, and organization; in a form of exchange for other types of social supports.

From the former concept of social network, it leads to social support, in a form of social network function, which emphasizes helping people in different ways and can be describe by social support theory.

Cobb (1976) describes social support as when a person has received love, attention, value, and praise; to the extent that makes a person feel like he/she is a part of social network. This concept is consistent with Thoits (1982) that social support is interaction of people in the social network, in terms of helping with objects, information, emotion, or society, and those supports help people face or react with stress or sickness faster. This concept is also similar with social support concept of Peter and Meredith (1991); it is a source that helps people when facing with crisis and helps them adjust to their life.

Ganellen and Blaney (1984) also have the same perspective, that social support is receiving help from people related to work, such as superior, colleagues, subordinates, family, and society. This is similar to the concept of Cook and Hunsaker (2001), that good relations between a person and family, friends, superiors, and colleagues can cause assistance, happiness, reducing stress, and preventing bad effects from stress.

From these concepts, it can be summarized that social support means interaction of people in a social network, in terms of assistance when facing a crisis.

2.6.1 Types of Social Support

From the concept of Kaplan, Freedman, and Sadock (1980), they categorized social support into 2 types: 1) Tangible Support, which provides help directly to a person, such as objects, money, or workforce. 2) Intangible Support, which provides help in forms of love, warmth, encouragement, advice, news, or information.

Thoits (1982) has further explain the concept of Kaplan et al. that it is levels of basic social needs of people, which happen from interactions with other people in the social group. He divided 5 types of support due to different types of basic social needs: 1) emotional support 2) acceptance and value support 3) being-a-part-of-society support 4) information support and 5) tangible support. This is similar to concept of House (1981) who has a concept that social support is a relation between people whom participate in these activities: 1) emotional support 2) instrumental support 3) informative support and 4) appraisal support. These concepts are also consistent with Jacobson and Behavior (1986), which divide social support into 3 categories: 1) emotional support 2) cognitive support and 3) resource support.

From these concepts, it can be assumed that social support means interactions of people inside social network, in forms of material and psychological assistance that a person has received from surrounding people who have close relationship; to help a person facing his/her problem or adapting to changes.

2.6.2 Source of Social Support

The concept of Ganster, Fusilier, and Mayes (1986) has divided 3 personal sources of social support: 1) family and close friend 2) colleagues and 3) superior. This is consistent with the concept of Jariyawat Khomphayak (1988), which divided 2 kinds of social support: 1) Primary group, a social group which has close relation, such as family members and relatives and 2) Secondary group, a social group which live together with discipline and determined pattern, such as superior, colleague, or other social groups. These concepts are also in the same direction with Ivancevich and Matteson (2002), who divided social support into 2 groups: 1) support outside a workplace, such as family members and 2) support inside a workplace, such as superior, subordinate, customer, and colleague.

Therefore, this study will be divided social support into 4 groups: 1) family support 2) superior support 3) colleague support and 4) companion support.

2.6.3 Benefits of Social Support

The concept of Linn, Hunter, and Perry (1979) has explained about benefits that a person will be received from social support: 1) social support is a buffer that helps reducing pressure causing stress, and damages caused by stress and 2) social support is one way of dealing with stress when facing a problem or a situation that will create stress. That person will be helped solving that problem closely. This concept also consistent with Kobasa and Puccetti (1983) who explained how social support can help dealing with stress: 1) provide assistant when facing with problem causing stress and have better control of other problems 2) provide advice which benefit stress-causing-problem solving and 3) reduce bad feeling towards stress from work.

From abovementioned literature review, social support concept in this study has been explained through the concept of social network, types of social support,

sources of social support, and benefits of social support. It can be summarized that social support means interactions of people inside a social network, in forms of both object and service assistance which a person has been received from other persons with close relationship; to help that person facing or adapting with problems. These can be categorized into 4 groups: 1) family support 2) superior support 3) colleague support and 4) companion support.

2.7 Related Researches

Researches which have human capital as a determine factor towards aging preparedness and influences of social support towards these relations are scarce. Thus, this study will consider the results which have similar targets, factors, or direction; aging preparedness may consider these related keywords, such as retirement planning, having a good quality of life, or being a successful elder.

Human capital accumulated in a person, through learning and experience, has values of increasing potential for both oneself and society. There is a trend that a person who accumulates high level of knowledge and skill will have more chance to prepare for become an elder than a person who has low human capital level, and it effects aging preparedness in every aspect, such as physical health, mental health, finance, accommodation, and caretaker (Supaporn Kumruangrit, 2014).

Considering aspects of human capital through the concept of OECD (1998) which is knowledge, skill, ability and personal characteristic, knowledge is related to retirement preparation. In female baby boomer, the one who has more knowledge will has better retirement preparation than the one who has less (Womack, 2015).

Learning behaviour, which is a process of increasing knowledge in a person, is related to retirement preparation in baby boomer working population; the one who has more learning behaviour will receive more news and beneficial information, creating more retirement preparation (Henning, 2012). Receiving beneficial information also increases aging preparation in every aspect, such as economy, physical health, mental health, free time usage, and accommodation (Tayanut Chuanchaisitt, Phattharaphon Yutthaphonphinit, & Phonanong Toyaem, 2012). Especially financial news, it

increases financial knowledge that can be used for aging preparedness in terms of economy and lead to better retirement preparedness (Righter, 2017).

Learning and problem-solving skill development is also important with being a successful elder with a good quality of life (Maloney, 2011). When consider these with a context of 21st century which is a century of knowledge, skill, and new technology, technology is surely a part of human capital in 21st century that shouldn't be overlooked. It may be related to preparation readiness of elders in the future who will be living in digital technology society when it was founded that mobile phone usage skill of elders in Japan is related with elders' digital-cultural lifestyle development in the future (Hachiya, 2010).

Humans are living as a society by supporting each other for survival. Besides human capital, social support towards people may influence their concept and behaviour, when it was founded that social support is related with self-caring of a person in 3 aspects: 1) help adjust feelings and behaviours of a person 2) help increasing value in life and 3) help creating healthy behaviour, such as eating, exercise, and reducing drug abuse (Callaghan & Morrissey, 1993).

Having social network can lead to supportive behaviour and positively affects living adaptation (Scheier et al., 1989) because strong relationship from family and friends can increase physical health, mental health, and health behaviours of that person (Uchino, 2004; Umberson & Karas, 2010). Thus, having life balances in purpose, competence, love, hope, commitment, and care before becoming elders can lead to health development and become a successful elder (Erikson, Erikson, & Kivnick, 1986). With all of these relevant researches, the social support is expecting to affect relationship between the human capital and the aging preparedness.

According to earlier discussions, we can deduce that the human capital has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. Also, the social support has a significantly positive moderating effect on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. Based on the above paragraph, we hereby propose these below hypotheses:

H1: The human capital has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

In the light of this hypothesis, three other related hypotheses were formed.

H1.1: The knowledge has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

H1.2: The skill has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

H1.3: The personality characteristic has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

H2: The social support has a significantly positive moderating effect on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

In the light of this hypothesis, three other related hypotheses were formed.

H2.1: The social support has a significantly positive moderating effect on the relationship between knowledge and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

H2.2: The social support has a significantly positive moderating effect on the relationship between skill and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

H2.3: The social support has a significantly positive moderating effect on the relationship between personality characteristic and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

Based on our research objectives, reviewed literatures and formed hypotheses, the conceptual framework has been developed as shown in Figure 2.15.

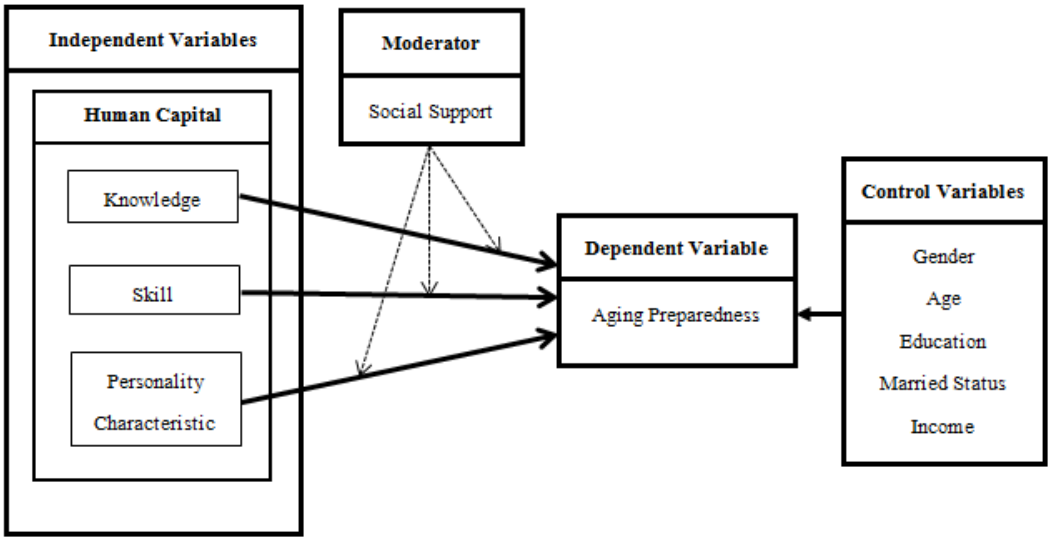

Figure 2.15 Conceptual Framework

2.8 Operational Definition

2.8.1 Elderly

Elderly in this study refers to a person who is 60 years old and/or older and has Thai nationality, including both men and women by counting age according to international calendar.

2.8.2 Million Birth Cohort

A person who was born from 1963 to 1983 and whose ages ranged from 35 to 55 years (at that time of collecting data).

2.8.3 Society in the 21st Century

Society in the 21st Century which is the current society from 2001 to 2100 in which people in society have a way of life different from the past by relying on technology in working and in daily life, in increasingly interacting through

technology, and in accessing to information technology, media and communication in a digital world, which is fast and convenient.

2.8.4 Human Capital

Human capital in this study means knowledge, skill and personality characteristic that is accumulated in a person from study, experience or other learning process. By considering human capital with the context of the way of life of people in the 21st century, human capital can be divided in three sectors which are knowledge, skill and personality characteristic, as follow:

2.8.4.1 Knowledge

Knowledge (in term of human capital) consists of 5 areas: 1) Global awareness, which means knowledge and understanding of a person's coexistence in human in society, and the understanding of a global society that is different in race, religions, languages, cultures and age, leading to the coexistence of people in society appropriately. 2) Financial, economic, business and entrepreneurial literacy, which means individual's knowledge and understanding about how economics and finance plays a role in a society and the ways of life of people in the 21st century, including the knowledge of how to do business and how to be a small entrepreneur so as to increase income or to increase opportunity and choice for self and for locals. 3) Civil literacy means knowledge and understanding of the role of good citizenship in society through respecting other's right and opinions, considering the benefits of public before self, understanding the process of how to handle conflict in a peaceful way and play a part in political appropriately. 4) Health literacy means knowledge and understanding about information that is useful in looking after self-health by using knowledge to get necessary nutrition for the body in different stages, being aware of various diseases and illnesses and how to strengthen the body's immunity. 5) Environmental literacy means knowledge and understanding of people through recognizing the importance of the natural environment that affects humans and society to participate in helping to conserve resources and prevent environmental problems.

2.8.4.2 Skill

Skill (in term of human capital) means expertise, the ability to perform any mission correctly and proficiently, which is skill related to social conditions in the 21st century skills for people to have greater potential for living. These skills consist of 3 main skills: 1) Learning and innovation skill means the ability to think and understand logically in both inductive and deductive, to think critically, to solve problems correctly and expertly, to communicate effectively and listen to others' opinion, and to coordinate and create cooperation in working with others, including being a person who gives an opportunity to learn new things, be creative and interested in various innovations. 2) Life and career skill means the ability to adapt to changes or limitations in the job, be flexible and supervise oneself in their responsibilities to achieve their goals, have social and cross-cultural social skill, be a creator and be able to evaluate one owns creation, as well as having leadership and responsibility in group work. 3) Information, media and technology skill means the ability to think critically, by using information, media, and technology with literacy, having credibility check afterwards, and use it a creative way.

2.8.4.3 Personality Characteristic

Personality characteristic (in term of human capital) in this study was considered with human capital of 21st Century, it means a special skill of each individual, in which consist of 10 characteristics as critical thinking, problem solving, creativity, collaboration, information literacy, self-learning, communication, global awareness, civic literacy and, economic literacy

2.8.5 Aging Preparedness

Aging preparedness means planning for life before entering the elderly, in order to be ready for living in old age with good quality of life and happiness through current behaviours or actions that have been thought or prepared in each area, in which everything is needed in the elderly. In this study has considered a context and problems of the population and processed aging preparedness into 5 aspects: Economy, Physical Health, Mental health, Accommodation, and Free time usage.

2.8.5.1 Economy

Economy (in term of aging preparedness) means a person who planned their financial strategy in advance for using in elderly or an emergency situation; with enough to spend money without affecting their stability in life.

2.8.5.2 Physical Health

Physical health (in term of aging preparedness) means knowing the importance of health and self-caring knowledge, seeing the doctor when they get sick, having good nutritious diet and personality, and exercise habitually.

2.8.5.3 Mental Health

Mental health (in term of aging preparedness) means having comprehension in natural changes of our body, mind, and surrounded situations, then accept the changes and adapt, to become elders who live with joy and happiness.

2.8.5.4 Accommodation Preparedness

Accommodation preparedness (in term of aging preparedness) means planning a proper house condition and caretakers for elders; for them to live as an elder with safety and comfort.

2.8.5.5 Free Time Usage

Free time usage (in term of aging preparedness) means learning new information, prior planning about interactions or activities with other for elder life, and also how to spend free time on a hobby or an interested activity.

2.8.6 Social Support

Social support means interactions of people inside a social network, in forms of both object and service assistance which a person has been received from other persons with close relationship; to help that person facing or adapting with problems. These can be categorized into 4 groups: 1) family support 2) superior support 3) colleague support and 4) companion support.

CHAPTER 3

RESEARCH METHOD

3.1 Postpositivist Research Approach

According to Creswell (2009), the research approach involves the interconnection of philosophy, research designs, and methods. Postpositivist approach has been selected based on the nature of the research problem addressed in chapter 1. Postpositivist approach attempts to examine causes those influence outcomes or relationship among constructs. Postpositivist is also reductionistic, namely, the ideas have been reduced into constructs or variables those compose research questions, hypotheses, and models. The knowledge that develops through postpositivist perspective is based on empirical observation and measurement. Consequently, developing measurement and studying the behaviour within society become the main goal for a postpositivist. In addition, postpositivist attempts to verify and refine theory. Hence, the research approach accepted by postpositivists begins with hypothesis, data collecting, hypothesis testing, model modification, and additional-test conducting.

> Note that the post-positivism is called "*because it represents the thinking after positivism, challenging the traditional notion of the absolute truth of knowledge and recognizing that we cannot be positive about our claims of knowledge when studying the behaviour and actions of humans*" (Creswell, 2009, pp. 6-7).

3.2 Research Design

Following Abbasi (2011)'s work, research design should present the purpose of the study, type of investigation, extent of researcher interference with study, study setting, unit of analysis, and time horizon.

3.2.1 Purpose of the Study: Hypothesis Testing

According to Abbasi (2011, p. 159), the present study was based on a postpositivist approach in which data was collected through the survey method to examine moderating effect of social support on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. Therefore, hypothesis testing, as suggested by Sekaran (2003), would be appropriated to achieve the purpose of the research.

3.2.2 Type of Investigation: Correlational Study

In line with Abbasi (2011, pp. 159-160), the studies to test hypothetical relationships from the viewpoint of investigation are usually characterized into two groups i.e., causal and correlational (Sekaran, 2003). The purpose of correlational study is to establish the important relations associated with certain research problems (Bordens & Abbott, 2007; Sekaran, 2003). Because, the present study aimed to examine moderating effect of social support on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. Therefore, the correlational study had been chosen as type of investigation.

3.2.3 Extent of Researcher Interference with Study: Minimal Interference

In accordance with Abbasi (2011, p. 160), the extent to which the researcher can be a part of the context plays the role affecting the appropriate research approach (Choudrie & Dwivedi, 2005). The extent of researcher interference also has an impact on the type of investigation selected e.g., causal or correlational (Sekaran, 2003). In present study, the postpositivist approach was adopted to avoid the researcher's bias over research subjects. Therefore, the data collected in present study was based on not directly intervention by the researcher with respondents.

3.2.4 Study Settings: Non-contrived

In agreement with Abbasi (2011, p. 160), Sekaran (2003) has suggested that generally all studies employing the causal studies (i.e., lab experiments) are conducted in contrived settings, whereas the correlational type of investigation (i.e., field studies) are conducted in non-contrived settings. As mentioned previously, the type of investigation in present study was correlational study; therefore, the study setting would be non-contrived.

3.2.5 Unit of Analysis: Individuals

Consistent with Abbasi (2011, pp. 160-161), Sekaran (2003) has defined "*the unit of analysis as the level of aggregation of data collection during the subsequent data analysis stage*" (Sekaran, 2003, p. 132). Unit of analysis is an essential point which should be thought carefully at the time of formulating the problem statement or posing the research question Abbasi (2011, pp. 160-161). For present study, the research objective aimed to examine the relationship between human capital and aging preparedness of an individual's perceptions (i.e., the perceptions of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1) with moderation of social support and with control variables of demographic factors. Therefore, the research question of this present study requested the individuals to be the unit of analysis.

3.2.6 Time Horizon: Cross-sectional

In accordance with Abbasi (2011, p. 161), Sekaran (2003) has defined cross-sectional (one-shot study) as *"a study can be done in which data are gathered just once, perhaps over a period of days or weeks or months, in order to answer a research question"* (Sekaran, 2003, p. 135). For present study, a cross-sectional design was selected.

3.3 Measurement of Constructs

The constructs for present study could be divided into three major parts, respectively human capital, social support, and aging preparedness. Thus, the contents of questionnaire were mainly based on these three major parts, including two parts: the screening question and respondents' basic demographic factors, therefore totally five parts.

The constructs of human capital and social support were measured with multi-items and six-point Likert scales were used. The construct of aging preparedness was measured with multi-items and Dichotomous scales (true or false) were used. For each dimension, scales were developed based on their conceptual definitions. Within present study, the human capital was defined with the combination between knowledge, skill and personality characteristic.

Knowledge consisted of 5 composites; 1) Global awareness, 2) Financial, economic, business and entrepreneurial literacy, 3) Civil literacy, 4) Health literacy, and 5) Environmental literacy. The six-point Likert scales were adapted to measure these five areas of knowledge; Global awareness (5 items), Financial, Economic, business and entrepreneurial literacy (13 items), Civil literacy (5 items), Health literacy (5 items), and Environmental literacy (5 items).

Skill consisted of 3 composites; 1) Learning and innovation skill, 2) Life and career skill, and 3) Information, media and technology skill. The six-point Likert scales were used to measure three sub-areas of Learning and innovation skill; critical thinking and problem solving (6 items), communication and collaboration (5 items), and creativity and innovation (4 items). To measure Life and career skill, the six-point Likert scales were adapted to measure five sub-areas; flexibility and adaptability (4 items), initiative and self-direction (4 items), social and cross-cultural skill (4 items), productivity and accountability (4 items), and leadership and responsibility (4 items). The six-point Likert scales were adapted to measure Information, media and technology skill (3 items).

Personality characteristic consisted of 1 composite that was attributes. The six-point Likert scales were used to measure attributes (10 items).

Social support consisted of 1 composite that was social support itself. The six-point Likert scales were adapted to measure 4 sub-areas of social support; family support (5 items), superior support (4 items), colleague support (4 items), and companion support (4 items).

Aging preparedness consisted of 5 composites: 1) Economy, 2) Physical health, 3) Mental health, 4) Accommodation, and 5) Free time usage. The true or false scales were used to measure these five areas of aging preparedness; economy (7 items), physical health (8 items), mental health (6 items), accommodation (7 items), and free time usage (6 items).

3.4 Scale Validity and Reliability: Pre-test

Content Validity: *"The index of item-objective congruence (IOC) is a procedure used in test development for evaluating content validity at the item development stage"* (Turner & Carlson, 2003, p. 163).

> *"An evaluation using the index of item-objective congruence is a process by which content experts rate individual items based on the degree to which they measure specific objectives listed by the test developer. More specifically, a content expert will evaluate each item by giving the item a rating of +1 (congruent), -1 (incongruent), or 0 (questionable or unclear) for each objective"* (Turner & Carlson, 2003, p. 164).

The drafted questionnaire was evaluated by four content experts in the field of the primary education and academic research (see in Appendix A). The score of item should be at least .75 or higher to retain an item. In contrast, if the score of item was lower than 0.75 the item should be revised (Turner & Carlson, 2003). The result showed that all items in the tested questionnaire have scores falling in the range of 0.9 to 1.0.

Table 3.1 Cronbach's Coefficient Alphas for *N* = 61: Pre-test

N = 61

Constructs	Composite level 1	Alpha 1	Composite level 2	Alpha 2	Items
Knowledge (KLD)	Global awareness (KLD1)	0.942			5
	Financial, economic, business and entrepreneurial literacy (KLD2)	0.937			13
	Civil literacy (KLD3)	0.699			5
	Health literacy (KLD4)	0.856			5
	Environmental literacy (KLD5)	0.880			5
Skill (SKL)	Learning and innovation skill (SKL1)		Critical thinking and problem solving (SKL1_1)	0.937	6
			Communication and collaboration (SKL1_2)	0.926	5
			Creativity and innovation (SKL1_3)	0.894	4
	Life and career skill (SKL2)	0.891	Flexibility and adaptability (SKL2_1)	0.899	4
			Initiative and self-direction (SKL2_2)	0.909	4
			Social and cross-cultural skill (SKL2_3)	0.906	4
			Productivity and accountability (SKL2_4)	0.916	4
			Leadership and responsibility (SKL2_5)	0.944	4
	Information, media and technology skill (SKL3)	0.865			3
Personality Characteristic (CHAR)	Attributes (ATT)	0.960			10
Social Support (SSp)	Social support (SS)	0.920	Family support (SS1)	0.957	5
			Superior support (SS2)	0.888	4
			Colleague support (SS3)	0.964	4
			Companion support (SS4)	0.960	4
Aging Preparedness (PRE)	Economy (PRE1)	0.779			7
	Physical health (PRE2)	0.832			8
	Mental health (PRE3)	0.875			6
	Accommodation (PRE4)	0.884			7
	Free time usage (PRE5)	0.908			6

Internal Consistency Reliability: *"Cronbach's coefficient alpha indicates the internal consistency of a multiple item scale. Alpha is typically used when researchers have several Likert-type items that are summed to make a composite score or summated scale"* (Morgan, Leech, Gloeckner, & Barrett, 2013, p. 111).

For dichotomous items, e.g. scored as 0 or 1, internal consistency reliability can be estimated by Cronbach's alphas witch like KR_20 (see at https://www.ibm.com).

> *"By convention, a lenient cut-off of .60 is common in exploratory research; alpha should be at least .70 or higher to retain an item in an adequate scale; and many researchers require a cut-off of .80 for a good scale"* (Garson, 2009: para. 17).

According to the pre-test (N = 61), Cronbach's coefficient alphas of each dimension were as shown in Table 3.1.

3.5 Population and Sampling

To calculate sample size, the G*power 3.1 software (Faul, Erdfelder, Buchner, & Lang, 2009) was used with the setting as follows: minimum R^2 = 0.10 then calculate f^2 the result is 0.1111111, α = 0.05, number of predictors = 12, and the power = 80% (Gefen, Rigdon, & Straub, 2011). The sample size required to test this model was 167.

As of academic year 2018, the population in this study was the million birth cohort teachers in primary-school affiliated with Sukhothai Primary Educational Service Area Office 1, those was born between 1963-1983 and whose ages ranged from 35 to 55 years (at that time of collecting data). There were 135 schools comprised of 751 teachers. Within this study, all schools were selected as clusters, and then the four teachers of the million birth cohort were selected as respondents for each cluster/school. There were totally 540 questionnaires sent out with 487 questionnaires received and the receipt percentage was rated at 90.19 percent.

3.6 Data Analysis

According to Kock, Chatelain-Jardon, and Carmona (2008), the control variables should be assessed their impact on the dependent variable in order to exclude possible effects unrelated the hypothesized relationship. Usually, demographic variables are good variables that can be used as the control variables.

For this study, gender, age, education, marital status and income were selected as control variables. In model analysis, the control variables are treated as independent variables together with other latent variables (i.e., knowledge, skill, personality characteristic, and social support).

In agreement with Ramayah, Yeap, Ahmad, Halim, and Rahman (2017), as suggested by Hair, Thomas, Hult, Ringle, and Sarstedt (2017), the researcher assessed the multivariate skewness and kurtosis using the SPSS macro developed by Dr. Lawrence T. DeCarlo available at: https://webpower.psychstat.org . The results showed that the data collected was not multivariate normal distribution, Mardia's multivariate skewness ($\beta = 43.470$, $p < 0.01$) and Mardia's multivariate kurtosis ($\beta = 498.093$, $p < 0.01$) as shown in Appendix D. Thus this study proceeded to use WarpPLS 6.0 (Kock, 2018) which is a non-parametric analysis software.

Then, the researcher assessed the common method bias and multicollinearity. The concern of common method bias is that when the same method (i.e., single-source, self-report, cross-sectional design) is used to measure multiple constructs. This same method may consequence in spurious method-specific variance that can bias relationships between the measured constructs (Podsakoff, MacKenzie, & Podsakoff, 2012; Schaller, Patil, & Malhotra, 2015). Full collinearity variance inflation factors (VIFs) can be used for common method bias and multicollinearity tests. Kock (2015) suggests that full collinearity VIFs of 3.3 or lower suggest the existence of no common method bias and no multicollinearity in the model. Kock and Lynn (2012) note that a VIF of 5 could be employed when algorithms that incorporate measurement error are used.

To analyze the conceptual model, this study used the Partial Least Squares (PLS) technique using the WarpPLS 6.0 software. This software provide the factor-based PLS algorithms for SEM. Factor-based PLS algorithms generate estimates of both true composites and factors, fully accounting for measurement error (Kock, 2017). Factor-based PLS algorithms are equivalent to covariance-based SEM algorithms.

In line with Ramayah et al. (2017), following the recommended two-stage analytical procedures by Anderson and Gerbing (1988), this study tested the measurement model (validity and reliability of the measurement model) followed by

an examination of the structural model (testing the hypothesized relationship) (Hair et al., 2017; Kock, 2018).

Consistent with Ramayah et al. (2017), to assess the reflective measurement model, two types of validity and one type of reliability were examined, first the convergent validity, second the internal consistency reliability and then the discriminant validity. The convergent validity of the measurement is usually determined by examining the outer loadings, indicator reliability, and also average variance extracted (AVE). The outer loadings should be higher than or at least 0.708 and indicator reliability (or communality) should be higher than or at least 0.50 and the AVE of all constructs should be higher than 0.50. The internal consistency reliability is evaluated by examining Dijkstra's rho (or rho A), Cronbach's Alpha, the composite reliability (CR). The rho A, Cronbach's Alpha and CR should be higher than 0.70 (Hair et al., 2017; Kock, 2018).

> Along with Ab Hamid, Sami, and Sidek (2017, p. 2), *"discriminant validity is referring to the extent in which the construct is actually differing from one another empirically. It also measures the degree of differences between the overlapping construct. The discriminant validity can be evaluated by using cross-loading of indicator, Fornell and Larcker (1981), and heterotrait-monotrait (HTMT)* ratio of correlation (Henseler, Ringle, & Sarstedt, 2015).

The cross-loadings are typical the first approach to assess the discriminant validity of the indicators. According to Hair et al. (2017), an indicator's outer loadings on the associated construct should be greater than any of its cross-loadings, in the other words, the loadings of the construct must be high on itself and low on other constructs (Vinzi, Chin, Henseler, & Wang, 2010). Fornell and Larcker (1981) compares the square root of the average variance extracted (AVE) with the correlation of latent constructs. The square root of each construct's AVE should have a greater value than the correlations with other latent constructs then there is not a problem of discriminant validity.

> "*The other measure for discriminant validity is heterotrait-monotrait (HTMT) ratio of correlation. Using the HTMT as a criterion involves comparing it to a predefined threshold. If the value of the HTMT is higher than this threshold, researchers can conclude that there is a lack of discriminant validity. Some authors suggest a threshold of 0.85 (Kline, 2011). In addition, Henseler et al. (2015) suggest a threshold value of 0.90 (Hair et al., 2017)" (Ab Hamid et al., 2017, p. 3).*

According to Hair et al. (2017, pp. 255-256), assessing reflective measurement models, the moderator variable must achieve all related criteria in terms of convergent validity, internal consistency reliability, and discriminant validity. However, the interaction term does not have to be assessed in the measurement model evaluation step.

In agreement with Ramayah et al. (2017), to assess the structural model for hypothesis testing, Hair et al. (2017) have suggested to consider at the path coefficient or beta (β), t-value, p-value, effect size (f^2), coefficient of determination (R^2), as well as predictive relevance (Q^2). The path coefficient or beta (β) evaluates the hypothesized relationship between the constructs. The t-value and p-value measure the level of significance. The effect size evaluates the substantive significance. As affirmed by Sullivan and Feinn (2012, p. 279), *"while a p-value can inform the reader whether an effect exists, the p-value will not reveal the size of the effect"*. Guideline for assessing effect size (f^2) suggests that value of 0.02, 0.15, and 0.35, respectively, represent small, medium, and large effect size (Cohen, 1988). Effect size value of less than 0.02 indicates that there is no effect (Hair et al., 2017, p. 201). In reporting and interpreting study, both the statistical significance (p-value) and substantive significance (effect size) are the needed results to be reported. Hahn and Ang (2017) have recommended that reporting results of quantitative studies should include the use of effect size estimations and confidence intervals. In addition, (Kock, 2016, p. 6) has suggested that *"employing confidence intervals and p-values are likely to lead to very similar outcomes in terms of acceptance or rejection of hypotheses"*. As suggested, the present study had included p-value and effect size as part of reporting. The coefficient of determination (R^2) used to measure predictive power of the model. R^2

values of 0.75, 0.50, or 0.25 for endogenous latent variables can, as a rule of thumb, be respectively described as substantial, moderate, or weak. Additionally, the Stone–Geisser's Q^2 value considered the predictive accuracy of the model, when the model was out-of-sample predictive power. *"Q^2 value larger than 0 suggested that the model had predictive relevance for a certain endogenous construct. In contrast, values of 0 and below indicated a lack of predictive relevance"* (Hair et al., 2017, p. 207)

Following Hair et al. (2017, pp. 255-256), for structural model assessment in the context of moderation, the specific consideration should be paid attention to the effect size (f^2) of the interaction effect (or moderating effect). In case of the interaction effect, the effect size (f^2) indicates how much the interaction term contributes to the explanation of endogenous latent variable. Typically, general guideline for assessing effect size (f^2) has suggested that value of 0.02, 0.15, and 0.35 represent small, medium, and large effect size, respectively (Cohen, 1988). However, in the context of moderation, Kenny (2016) has shown that the effect size in test of moderating effect is 0.005, 0.01, and 0.025 for small, medium, and large effect size, respectively (Hair et al., 2017, pp. 255-256).

In addition, when model changed due to model modification e.g., a specified exogenous variable is excluded from the model, the change in the R^2 value (ΔR^2) can be used to evaluate whether the excluded variable has a substantive impact on the endogenous variable. This measure is referred to as the effect size (f^2). Note that this type of effect size (f^2) differs from the effect size (f^2) mentioned in previous paragraph (Hair et al., 2017, pp. 210-212).

The effect size (f^2) for R-square change (ΔR^2) can be calculated as:

$$f^2 = \frac{R^2 included - R^2 excluded}{1 - R^2 included}$$

In present study, *"the R^2inculded and R^2excluded were the R^2 values of the endogenous latent variable, when the interaction term of the moderator model was included in or excluded from the PLS path model"* (Hair et al., 2017, p. 256)

Besides, according to WarpPLS 6.0 software, factor-based PLS type CFM3 as outer model analysis algorithm, linear as inner model analysis algorithm, and Stable3 as resampling method were used to assess both the reflective measurement model and the structural model.

To test the hypotheses, the six PLS path models were conducted. In the first model, the control variables (gender, age, education, marital status and income) were entered into the model. In the second model, the predictor variables (knowledge, skill and personality characteristic) were entered into model. In the third model, the moderator variable (social support) was entered into the model. In the fourth model, the first interaction term (skill*social support) was entered into the model. In the fifth model, the second interaction term (knowledge*social support) was entered into the model. In the final model, the third interaction term (personality characteristic*social support) was entered into the model.

Table 3.2 The Recommendations for Model Fit and Quality Indices

Measures	Recommendations
Average path coefficient (APC)	Significant at the $p < 0.05$
Average adjusted R^2 (AARS)	Significant at the $p < 0.05$
Average block VIF (AVIF)	Acceptable if ≤ 5, ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	Acceptable if ≤ 5, ideally ≤ 3.3
Tenenhaus' goodness of fit (GoF)	Small ≥ 0.1, medium ≥ 0.25, large ≥ 0.36
Simpson's paradox ratio (SPR)	Acceptable if ≥ 0.7, ideally = 1
Standardized root mean squared residual (SRMR)	Acceptable if ≤ 0.10, ideally ≤ 0.08

Source: Kock (2018)

In addition, the researcher has tested model fit and quality indices by using WarpPLS 6.0 model fit and quality indices. First is average path coefficient (APC), significant at the $p < 0.05$ indicates that the model is good fit. Second is average adjusted R^2 (AARS), significant at the $p < 0.05$ indicates that the model is good fit. Third is average block VIF (AVIF), (Kock, 2015) suggests that AVIF of 3.3 or lower indicate that the model is good fit. Kock and Lynn (2012) note that a VIF of 5 could be employed when algorithms that incorporate measurement error are used. Fourth is average full collinearity VIF (AFVIF) is recommended (ideally) that AFVIF be equal to or lower than 3.3. *"A more relaxed (acceptable) criterion is that AFVIF be equal to or lower than 5"* (Kock, 2018, p. 63). Fifth is Tenenhaus' goodness of fit (GoF), the

following thresholds are recommended for the GoF: small if equal to or greater than 0.1, medium if equal to or greater than 0.25, and large if equal to or greater than 0.36 (Wetzels, Odekerken-Schröder, & Van Oppen, 2009) Sixth is Simpson's paradox ratio (SPR) is a measure of the extent to which a model is free from Simpson's paradox instances.

> *"An instance of Simpson's paradox occurs when a path coefficient and a correlation associated with a pair of linked variables have different signs…Ideally the SPR should equal 1, meaning that there are no instances of Simpson's paradox in a model; acceptable values of SPR are equal to or greater than 0.7, meaning that at least 70 percent of the paths in a model are free from Simpson's paradox"* (Kock, 2018, p. 64)

Seventh is standardized root mean squared residual (SRMR), generally, SRMR value lower than 0.10 indicate acceptable fit (Kock, 2018, p. 26). However, (Hu & Bentler, 1998, p. 26) proposed that the values less than 0.08 are considered a good fit.

3.7 Ethical Consideration

The questionnaire distributed was accompanied by messages explaining the purpose of the research, importance of voluntary participation and confidentiality. Moreover, the collected data was kept in a secure place and would be not shared or used with any other person/researchers.

CHAPTER 4

DATA ANALYSIS

4.1 Descriptive Statistic of Respondents

These descriptive statistics gave insight into the demographic profiles of respondents. Based on the analysis, there was totally 540 questionnaires sent out with 487 questionnaires received and the response rate was 90.19 percent.

Table 4.1 Respondents' Demographic Information

N = 487

Demographic	Frequency	Percent
Gender		
Female	269	55.20
Male	218	44.80
Total	487	100.00
Age		
Below 41	169	34.70
41 – 50	162	33.30
Above 50	156	32.00
Total	487	100.00
Education		
College/Secondary	4	0.80
Bachelor's degree	311	63.90
Master's degree	165	33.90
PhD degree	7	1.40
Total	487	100.00
Marital Status		
Single	134	27.50
Married	327	67.10
Divorced	26	5.30
Total	487	100.00
Income		
less than 20,001 Baht	37	7.60
20,001-40,000 Baht	242	49.70
40,001-60,000 Baht	175	35.90
60,001-80,000 Baht	31	6.40
more than 80,000 Baht	2	0.40
Total	487	100.00

Among these respondents, 55.20% were females and 44.80% were males. In terms of age, 34.70% aged below 41 years old, 33.30% aged between 41 to 50 years old, and the rest 32.00% aged above 50 years old. In respect of education, the majority of the respondents (63.90%) had a Bachelor's degree, 33.90% had a Master's degree, 1.40% had PhD degree, and the rest 0.80% had college or secondary education. Regarding marital status, the majority of the respondents (67.10%) were married, 27.50% were singles, and the rest 5.30% had divorced. Concerning income, 49.70% earned income were between 20,001 Bath to 40,000 Bath, 35.90% earned income were between 40,001 Bath to 60,000 Bath, 7.60% earned income were less than 20,001 Bath, 6.40% earned income were between 60,001 Bath to 80,000 Bath, and the rest 0.40% earned income were more than 80,000 Bath.

4.2 Internal Consistency Reliability

Along with the size of sample (N = 487), Cronbach's coefficient alphas of each dimension were as shown in Table 4.2

Table 4.2 Cronbach's Coefficient Alphas for *N* = 487: Sample

N = 487

Constructs	Composite level 1	Alpha 1	Composite level 2	Alpha 2	Items
Knowledge (KLD)	Global awareness (KLD1)	0.948			5
	Financial, economic, business and entrepreneurial literacy (KLD2)	0.945			13
	Civil literacy (KLD3)	0.801			5
	Health literacy (KLD4)	0.886			5
	Environmental literacy (KLD5)	0.914			5
Skill (SKL)	Learning and innovation skill (SKL1)	0.903	Critical thinking and problem solving (SKL1_1)	0.963	6
			Communication and collaboration (SKL1_2)	0.948	5
			Creativity and innovation (SKL1_3)	0.941	4
	Life and career skill (SKL2)	0.960	Flexibility and adaptability (SKL2_1)	0.948	4
			Initiative and self-direction (SKL2_2)	0.935	4
			Social and cross-cultural skill (SKL2_3)	0.929	4
			Productivity and accountability (SKL2_4)	0.943	4
			Leadership and responsibility (SKL2_5)	0.940	4
	Information, media and technology skill (SKL3)	0.879			3
Personality Characteristic (CHAR)	Attributes (ATT)	0.973			10
Social Support (SSp)	Social support (SS)	0.921	Family support (SS1)	0.969	5
			Superior support (SS2)	0.920	4
			Colleague support (SS3)	0.975	4
			Companion support (SS4)	0.970	4
Aging Preparedness (PRE)	Economy (PRE1)	0.808			7
	Physical health (PRE2)	0.822			8
	Mental health (PRE3)	0.847			6
	Accommodation (PRE4)	0.906			7
	Free time usage (PRE5)	0.906			6

4.3 Descriptive Statistic of Instrument

Using the statistical software SPSS version 15.0, the mean, standard deviation, minimum value and maximum value of each indicator were examined. Table 4.3 presented the descriptive statistics for all indicators.

Table 4.3 Descriptive Statistics for Indicators

N = 487

Construct	Indicator	*N*	Min	Max	*M*	*SD*
Knowledge (KLD)						
	KLD_1	487	1.00	6.00	3.555	1.214
	KLD_2	487	1.00	6.00	3.311	0.912
	KLD_3	487	1.00	6.00	3.875	0.923
	KLD_4	487	1.00	6.00	4.135	0.872
	KLD_5	487	1.00	6.00	4.038	0.934
Skill (SKL)						
	SKL_1	487	1.00	6.00	4.094	0.840
	SKL_2	487	1.00	6.00	4.142	0.821
	SKL_3	487	1.00	6.00	4.145	0.885
Personality Characteristic (CHAR)						
	ATT	487	1.00	6.00	4.223	0.887
Aging Preparedness (PRE)						
	PRE_1	487	0.00	1.00	.683	0.312
	PRE_2	487	0.00	1.00	.717	0.300
	PRE_3	487	0.00	1.00	.730	0.333
	PRE_4	487	0.00	1.00	.669	0.376
	PRE_5	487	0.00	1.00	.650	0.393
Social Support (SSp)						
	SS	487	1.29	6.00	4.382	0.912

4.4 Control Variables

Assessing the impact of control variables on the dependent variable is important in order to exclude other possible effects that are unrelated to the hypothesized relationships (Kock et al., 2008). Usually, demographic variables are good variables that can be used as the control variables. For this study, gender, age, education, marital status and income were selected as control variables. In model analysis, the control variables were treated as independent variables together with other latent variables (i.e., knowledge, skill, personality characteristic, and social support).

4.5 Multivariate Normality

According to Ramayah et al. (2017), the researcher assessed the multivariate skewness and kurtosis using the SPSS macro developed by Dr. Lawrence T. DeCarlo available at: https://webpower.psychstat.org. The results had showed that the data collected was not multivariate normal distribution, Mardia's multivariate skewness ($\beta = 43.470$, $p < 0.01$) and Mardia's multivariate kurtosis ($\beta = 498.093$, $p < 0.01$) as shown in Appendix D Thus this study proceeded to use WarpPLS 6.0 (Kock, 2018) which is a non-parametric analysis software.

4.6 Common Method Bias and Multicollinearity Assessment

As mentioned in Chapter 3, the concern of common method bias is that when the same method (i.e., single-source, self-report, cross-sectional design) is used to measure multiple constructs. This may result in spurious method-specific variance that can bias observed relationships between the measured constructs (Podsakoff et al., 2012; Schaller et al., 2015). Full collinearity variance inflation factors (VIFs) can be used for common method bias and multicollinearity tests. (Kock, 2015) suggests that full collinearity VIFs of 3.3 or lower suggest the existence of no common method bias and no multicollinearity in the model. Kock and Lynn (2012) note that a VIF of 5 could be employed when algorithms that incorporate measurement error are used.

Based on basic model with moderator (Figure 4.1), the table 4.4 showed that the data collected was the existences of no common method bias and no multicollinearity in the model. Specifically, full collinearity VIF of each variable was lower than 5 and average full collinearity VIF (AFVIF) = 2.071, acceptable if AFVIF <= 5, ideally AFVIF <= 3.3 (Kock & Lynn, 2012).

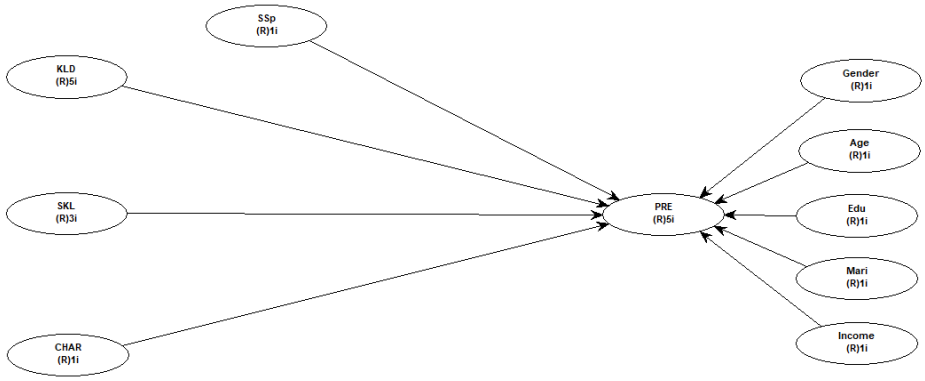

Figure 4.1 Basic Model with Moderator: Model 3

Note: (R) = refer to the reflective measurement model, i = the number of indicators of a latent variable.

Table 4.4 Full Collinearity Variance Inflation Factor

N = 487

AFVIF	KLD	SKL	CHAR	PRE	SSp	Gender	Age	Edu	Mari	Income
2.071	2.675	4.350	3.227	1.254	2.144	1.103	1.898	1.129	1.248	1.677

4.7 Correlation among Indicators

Tables 4.5 presented the means, standard deviations, correlations and item-level Cronbach's alphas for the indicators of latent variables (knowledge, skill, personality characteristic, aging preparedness and social support) used for this study.

Table 4.5 Indicators: Means, Standard Deviation, Correlation and Item-level Cronbach's Alphas

N = 487

	M	*SD*	KLD1	KLD2	KLD3	KLD4	KLD5	SKL1	SKL2	SKL3	ATT	PRE1	PRE2	PRE3	PRE4	PRE5	SS
KLD1	3.555	1.214	*0.948*														
KLD2	3.311	0.912	0.568**	*0.945*													
KLD3	3.875	0.923	0.658**	0.556**	*0.801*												
KLD4	4.135	0.872	0.435**	0.396**	0.652**	*0.886*											
KLD5	4.038	0.934	0.542**	0.450**	0.733**	0.779**	*0.914*										
SKL1	4.094	0.840	0.460**	0.402**	0.683**	0.719**	0.729**	*0.903*									
SKL2	4.142	0.821	0.452**	0.360**	0.628**	0.669**	0.682**	0.882**	*0.960*								
SKL3	4.145	0.885	0.433**	0.367**	0.600**	0.634**	0.618**	0.784**	0.887**	*0.879*							
ATT	4.223	0.887	0.421**	0.367**	0.578**	0.627**	0.587**	0.761**	0.794**	0.813**	*0.973*						
PRE1	0.683	0.312	0.168**	0.109*	0.169**	0.190**	0.165**	0.198**	0.248**	0.220**	0.180**	*0.808*					
PRE2	0.717	0.300	0.176**	0.060	0.134**	0.258**	0.227**	0.202**	0.235**	0.196**	0.203**	0.639**	*0.822*				
PRE3	0.730	0.333	0.156**	0.093*	0.171**	0.228**	0.198**	0.225**	0.269**	0.237**	0.227**	0.520**	0.682**	*0.847*			
PRE4	0.669	0.376	0.117**	0.116*	0.154**	0.168**	0.167**	0.228**	0.269**	0.232**	0.212**	0.506**	0.615**	0.727**	*0.906*		
PRE5	0.650	0.393	0.123**	0.127**	0.166**	0.164**	0.155**	0.238**	0.268**	0.212**	0.195**	0.488**	0.573**	0.647**	0.746**	*0.906*	
SS	4.382	0.912	0.356**	0.144**	0.440**	0.549**	0.504**	0.600**	0.656**	0.621**	0.640**	0.200**	0.247**	0.279**	0.232**	0.227**	*0.921*

* Correlation is statistically significant at the 0.05 level (2-tailed).

** Correlation is statistically significant at the 0.01 level (2-tailed).

Item-level **Cronbach's alpha** is reported on the diagonal.

The Table 4.5 showed that almost all pairs of correlation coefficients were statistically significant at the 0.01 level (2-tailed), excluding the correlation between KLD2 and PRE1, the correlation between KLD2 and PRE3, and the correlation between KLD2 and PRE4 were statistically significant at the 0.05 level (2-tailed). Besides, the correlation between KLD2 and PRE2 was not statistically significant at the 0.05 level (2-tailed). The Cronbach's alpha coefficients of all indicators are above 0.70.

4.8 Reflective Measurement Model Assessment

4.8.1 Convergent Validity and Internal Consistency Reliability

As mentioned in Chapter 3, the validity of the reflective measurement model for this study was evaluated using the following analyses: convergent validity, internal consistency reliability and discriminant validity. This part presented the convergent validity and the internal consistency reliability. The convergent validity was assessed by examining the outer loadings, indicator reliability, average variance extracted (AVE). The outer loadings should be higher than or at least 0.708 and indicator reliability (communality) should be higher than or at least 0.50 and the AVE of all constructs should be higher than 0.50. The internal consistency reliability was assessed by examining the Dijkstra's rho (or rho A), Cronbach's Alpha, and also the composite reliability (CR). The rho A, Cronbach's Alpha and CR should be higher than 0.70. (Hair et al., 2017; Kock, 2018).

Table 4.6 Convergent Validity and Internal Consistency Reliability

N = 487

		Convergent Validity				Internal Consistency Reliability			Full
Constructs	Indicators	Outer Loading	Indicator Reliability [a]	*SE*	AVE[b]	Dijkstra's rho A[c]	Cronbach's Alpha	CR[d] (rho C)	Collinearity VIF
KLD					0.584	0.902	0.872	0.870	2.675
	KLD1	0.699**	0.489	0.042					
	KLD2	0.465**	0.216	0.043					
	KLD3	0.743**	0.552	0.041					
	KLD4	0.958**	0.918	0.040					
	KLD5	0.865**	0.748	0.041					
SKL					0.840	0.955	0.945	0.940	4.350
	SKL1	0.868**	0.753	0.041					
	SKL2	1.000**	1.000	0.040					
	SKL3	0.875**	0.766	0.041					
CHAR					1.000	1.000	1.000	1.000	3.227
	ATT	1.000**	1.000	0.040					
PRE					0.616	0.893	0.888	0.889	1.254
	PRE1	0.740**	0.548	0.041					
	PRE2	0.864**	0.746	0.041					
	PRE3	0.841**	0.707	0.041					
	PRE4	0.768**	0.590	0.041					
	PRE5	0.699**	0.489	0.042					
SSp					1.000	1.000	1.000	1.000	2.144
	SS	1.000**	1.000	0.040					

Note: ** $p < 0.01$ (2-tailed), [a]Indicator Reliability (Communalities = Loading^2), *SE* = Standard Errors, [b]AVE = average variance extracted, [c]rho A = the reliability measure for PLSc (Dijkstra & Henseler, 2015), [d]CR = composite reliability.

Based on basic model with moderator (Figure 4.1), Table 4.6 presented the convergent validity and the internal consistency reliability for assessing the reflective measurement model. The convergent validity of the reflective measurement model was measured by examining the item outer loadings, indicator reliability and AVE. Based on the analysis, almost all indicators, excepting KLD1, KLD2 and PRE5, in the measurement model showed outer loadings exceeding 0.708; ranging from a lower bound of 0.740 to an upper bound of 1.000. With respect to the knowledge construct, KLD1 and KLD2 indicators were not loaded properly, KLD1 with a loading of 0.699 and KLD2 with a loading of 0.465. However, as previously mentioned in Chapter 2, KLD1 and KLD2 are the important composites that encompass the concept of

knowledge. Therefore the indicators KLD1 and KLD2 were retained for the purpose of their contribution to the content validity (Hair et al., 2017). Similarly, with respect to the preparedness construct, PRE5 indicator was not loaded properly, PRE5 with a loading of 0.699. However, as previously mentioned in Chapter 2, PRE5 is the important composite that encompass the concept of preparedness. Therefore, the indicator PRE5 was retained for the purpose of their contribution to the content validity.

Consistent with outer loadings, the indicator reliability (or communality) of almost all indicators, excepting KLD1, KLD2 and PRE5, were higher than 0.50 ranging from a lower bound of 0.548 to an upper bound of 1.000. Regarding to the knowledge construct, the indicator reliabilities of KLD1 and KLD2 indicators were lower than 0.50, those were 0.489 and 0.216 respectively. As mentioned earlier, the indicators KLD1 and KLD2 were, however, kept on the basis of their contribution to the content validity. Similarly, regarding to the preparedness construct, the indicator reliability of PRE5 was lower than 0.50, these was 0.489. As mentioned earlier, the indicators PRE5 was, however, kept on the basis of their contribution to the content validity. In addition, the AVE of all constructs were also higher than 0.5 and the rho A, Cronbach's alpha, and CR were all higher than 0.70.

According to these results (i.e., outer loading, indicator reliability, AVE, and internal consistency reliability), the convergent validity and the internal consistency reliability of all reflective measurement models were acceptable.

4.8.2 Discriminant Validity

As mentioned in Chapter 3, discriminant validity is referring to the extent in which the construct is actually differing from one another empirically. It also measures the degree of differences between the overlapping construct. The discriminant validity can be evaluated by using cross-loading of indicator, Fornell and Larcker (1981) criterion and heterotrait-monotrait (HTMT) ratio of correlation (Henseler et al., 2015). The cross-loadings can be used to assess the discriminant validity of the indicators by considering an indicator' s outer loadings on the associated construct should be greater than any of its cross-loadings (Hair et al.,

2017), in the other words, the loadings of the construct must be high on itself and low on other constructs (Vinzi et al., 2010).

Fornell and Larcker (1981) criterion can be used to assess the discriminant validity of latent constructs by comparing the square root of the average variance extracted (AVE) with the correlation of latent constructs. The square root of each construct's AVE should have a greater value than the correlations with other latent constructs. The heterotrait-monotrait (HTMT) ratio of correlation can be used to assess the discriminant validity, if the value of the HTMT is lower than the threshold of 0.90, researchers can conclude that there is discriminant validity (Hair et al., 2017; Henseler et al., 2015).

As results shown in Table 4.7, the outer loading of each indicator on the same construct was greater than any of its cross-loading. In addition, almost all of square root of AVEs had the greater value than the correlations of latent constructs, excluding the square root of KLD's AVE (0.764) had the lower value than the correlation between KLD and SKL (0.776), as shown in Table 4.8. However, the values of all HTMT were lower than the threshold of 0.90, as shown in Table 4.9. Therefore, we can conclude that the discriminant validity of all reflective measurement models was acceptable.

Table 4.7 Discriminant Validity: Structure Loadings and Cross-loadings

N = 487

	KLD	SKL	CHAR	PRE	SSp
KLD1	0.699	0.472	0.421	0.179	0.356
KLD2	0.465	0.395	0.367	0.119	0.144
KLD3	0.743	0.670	0.578	0.190	0.440
KLD4	0.958	0.709	0.627	0.245	0.549
KLD5	0.865	0.712	0.587	0.221	0.504
SKL1	0.759	0.868	0.761	0.261	0.600
SKL2	0.708	1.000	0.794	0.309	0.656
SKL3	0.670	0.875	0.813	0.263	0.621
ATT	0.651	0.831	1.000	0.245	0.640
PRE1	0.201	0.235	0.180	0.740	0.200
PRE2	0.226	0.223	0.203	0.864	0.247
PRE3	0.217	0.258	0.227	0.841	0.279
PRE4	0.181	0.257	0.212	0.768	0.232
PRE5	0.182	0.253	0.195	0.699	0.227
SS	0.521	0.660	0.640	0.286	1.000

Note: Loadings and cross-loadings were unrotated.

Table 4.8 Discriminant Validity: Fornell-Larcker

N = 487

	KLD	SKL	CHAR	PRE	SSp
KLD	*0.764*				
SKL	0.776**	*0.916*			
CHAR	0.693**	0.809**	*1.000*		
PRE	0.273**	0.331**	0.264**	*0.785*	
SSp	0.567**	0.671**	0.640**	0.297**	*1.000*

Note: Correlations among latent variables with square roots of AVEs; the square roots of AVE were reported on the diagonal;
** $p < 0.01$ (2-tailed)

Table 4.9 Discriminant Validity: Heterotrait-Monotrait Ratio of Correlations (HTMT)

N = 487

HTMT	KLD	SKL	CHAR	PRE	SSp
KLD					
SKL	0.803				
CHAR	0.679	0.856			
PRE	0.266	0.321	0.260		
SSp	0.525	0.678	0.640	0.302	

Note: Henseler et al. (2015) suggest a threshold value of 0.90.

4.9 Structural Model Assessment

4.9.1 Hypothesis Testing

As mentioned in Chapter 3, to assess the structural model for hypothesis testing, the path coefficient or beta (β), t-value, p-value, effect size (f^2), coefficient of determination (R^2), as well as predictive relevance (Q^2) were used to assess the relationships among the constructs defined in the conceptual model. The path coefficient or beta (β) was used to describe the hypothesized relationship between the constructs. The t-value and the p-value were used to assess the significance level (whether an effect exists). The effect size (f^2) was used to evaluate the substantive significance (the size of the effect). The coefficient of determination (R^2) was used to measure predictive power of the model. Furthermore, the predictive relevance (Q^2) was used to consider the predictive accuracy of the model, when the model was out-of-sample predictive power (Hair et al., 2017). Moreover, according to WarpPLS 6.0 software, the factor-based PLS type CFM3 as outer model analysis algorithm, linear as inner model analysis algorithm, and Stable3 as resampling method were set to assess the structural model for hypothesis testing.

4.9.1.1 Direct Effect of Human Capital on Aging Preparedness

As shown in Table 4.10, Model 1, the control variables including gender, age, education, marital status as well as income were tested to examine the predictive power for the aging preparedness (PRE). The coefficient of determination (R^2) of the Model 1 was 0.112, meaning that the control variables could explain the 11.2% of variance of endogenous latent variable (PRE).

According to Model 2 in Table 4.10, when all control variables (gender, age, education, marital status, and income) and all human capital variables (KLD, SKL, and CHAR) were considered simultaneously to predict the aging preparedness (PRE). In terms of direct effects, the path coefficient (β) between the knowledge (KLD) and the aging preparedness (PRE), was found to be positive and significant ($\beta = 0.088$, $p < 0.05$), with small effect size ($f^2 = 0.024$) (Cohen, 1988). Therefore, there was sufficient evidence to conclude that the knowledge had a positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This

supported the hypothesis 1.1. In addition, the path coefficient (β) between the skill (SKL) and the aging preparedness (PRE), indicated that the relationship was positive and significant (β = 0.213, $p < 0.01$), with a small effect size ($f^2 = 0.070$) (Cohen, 1988). Therefore, there was sufficient evidence to conclude that the skill had a positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported the hypothesis 1.2. However, the path coefficient (β) between the personality characteristic (CHAR) and the aging preparedness (PRE), was found to be positive and not significant (β = 0.023, $p > 0.05$), and there was no effect size ($f^2 = 0.006$) (Cohen, 1988). Therefore, there was insufficient evidence to conclude that the personality characteristic had a positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This did not support the hypothesis 1.3

The coefficient of determination (R^2) of the Model 2 was 0.197, indicated that the Model 2 had the weak predictive power for endogenous latent variable (PRE). The Stone–Geisser Q-squared coefficients (Q^2) were 0.205, which larger than 0, indicated that the Model 2 had the predictive relevance for endogenous latent variable (PRE).

4.9.1.2 Moderating Effect of Social Support on the Relationship between Human Capital and Aging Preparedness

According to Table 4.8, when each pair of constructs, between construct of human capital (KLD, SKL, and CHAR) and construct of aging preparedness (PRE), was being considered one pair at a time. The correlation between latent variable KLD and latent variable PRE ($r = 0.273$, $p < 0.01$), the correlation between latent variable SKL and latent variable PRE ($r = 0.331$, $p < 0.01$), and the correlation between latent variable CHAR and latent variable PRE ($r = 0.264$, $p < 0.01$), were statistically significant. When the pair of constructs of social support (SSp) and construct of aging preparedness (PRE) was being considered, the correlation between latent variable SSp and latent variable PRE ($r = 0.297$, $p < 0.01$) was statistically significant. Thus, there were the association between latent variable KLD and latent variable PRE, the association between latent variable SKL and latent variable PRE, the association between latent variable CHAR and latent variable PRE, and the association between latent variable SSp and latent variable PRE. The

relationship between SSp and PRE was significant, which indicated the existence of a quasi-moderator.

According to Model 3 in Table 4.10, when all control variables (gender, age, education, marital status, and income), all human capital variables (KLD, SKL, and CHAR), and social support (SSp) as moderator were considered simultaneously to predict the aging preparedness (PRE).

Table 4.10 Structural Model: Model 1 – 6

Relationship	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	β	f^2	*t* value	β	f^2	*t* value	β	f^2	*t* value	β	f^2	*t* value	β	f^2	*t* value	β	f^2	*t* value
Control variables																		
Gender -> PRE	-0.111**	0.009	-2.478	-0.078*	0.006	-1.736	-0.067	0.005	-1.484	-0.064	0.005	-1.433	-0.094*	0.011	-2.096	-0.089*	0.010	-1.995
Age -> PRE	0.274**	0.078	6.245	0.282**	0.079	6.441	0.278**	0.077	6.347	0.277**	0.077	6.323	0.259**	0.063	5.892	0.257**	0.061	5.853
Education (Edu) -> PRE	0.122**	0.017	2.725	0.077*	0.011	1.719	0.073	0.010	1.628	0.080*	0.012	1.776	0.079*	0.010	1.767	0.078*	0.009	1.746
Marital status (Mari) -> PRE	0.059	0.011	1.322	0.040	0.007	0.897	0.031	0.006	0.684	0.031	0.006	0.683	0.023	0.004	0.514	0.019	0.003	0.421
Income -> PRE	-0.021	0.003	-0.462	-0.038	0.006	-0.847	-0.031	0.005	-0.681	-0.024	0.004	-0.540	-0.029	0.004	-0.641	-0.021	0.003	-0.475
Human capital variables																		
Knowledge (KLD) -> PRE				0.088*	0.024	1.960	0.076*	0.021	1.698	0.065	0.018	1.442	0.022	0.006	0.484	0.009	0.003	0.207
Skill (SKL) -> PRE				0.213**	0.070	4.831	0.175**	0.058	3.954	0.186**	0.062	4.191	0.241**	0.079	5.489	0.184**	0.063	4.157
Personality Characteristic (CHAR) -> PRE				0.023	0.006	0.505	0.010	0.003	0.215	0.002	0.001	0.050	-0.027	0.006	-0.605	0.015	0.003	0.325
Moderator variable																		
Social Support (SSp) -> PRE							0.091*	0.027	2.029	0.089*	0.026	1.987	0.075*	0.020	1.666	0.087*	0.022	1.929
Moderating effects																		
SSp*SKL -> PRE										0.084*	0.008	1.882	0.085*	0.012	1.904	0.125**	0.018	2.811
SSp*KLD -> PRE													0.257**	0.066	5.849	0.224**	0.057	5.085
SSp*CHAR -> PRE																-0.039	0.004	-0.871
R^2	0.112			0.197			0.203			0.210			0.260			0.243		
R^2adj.	0.103			0.184			0.187			0.194			0.243			0.224		
Q^2	0.118			0.205			0.214			0.221			0.224			0.230		
ΔR^2				0.085			0.006			0.007			0.050			-0.017		
f^2 for ΔR^2				0.106			0.008			0.009			0.068			-0.023		

Note: Dependent variable = Aging preparedness (PRE); β = path coefficient; f^2= effect size; Q^2 = predictive relevance;

f^2 for ΔR^2 can be calculated as ((R^2included – R^2excluded) / (1-R^2included))

* $p < 0.05$,** $p < 0.01$ (1-tailed, critical t = 1.645 and 2.326, respectively).

$$f^2 = \frac{R^2included - R^2excluded}{1 - R^2included}$$

In terms of direct effects, the path coefficient (β) between the knowledge (KLD) and the aging preparedness (PRE), was found to be positive and significant (β = 0.076, $p < 0.05$), with small effect size ($f^2 = 0.021$) (Cohen, 1988). In addition, the path coefficient (β) between the skill (SKL) and the aging preparedness (PRE), indicated that the relationship was positive and significant (β = 0.175, $p < 0.01$), with a small effect size ($f^2 = 0.058$) (Cohen, 1988). However, the path coefficient (β) between the personality characteristic (CHAR) and the aging preparedness (PRE), was found to be positive and not significant (β = 0.010, $p > 0.05$), and there was no effect size ($f^2 = 0.003$) (Cohen, 1988). Besides, the path coefficient (β) between the social support (SSp) and the aging preparedness (PRE), was found to be positive and significant (β = 0.091, $p < 0.05$), with small effect size ($f^2 = 0.027$) (Cohen, 1988).

The coefficient of determination (R^2) of the Model 3 was 0.203, indicated that the Model 3 had the weak predictive power for endogenous latent variable (PRE). The Stone–Geisser Q-squared coefficients (Q^2) were 0.214, which larger than 0, indicated that the Model 3 had the predictive relevance for endogenous latent variable (PRE).

The Model 3 showed that the constructs of the knowledge (KLD), the skill (SKL), and the social support (SSp) had the positive direct effects on the aging preparedness (PRE), as well as the model in general (R^2) had the weak predictive power. Therefore, the social support (SSp) might have a moderating effect on the relationship between the knowledge (KLD) and the aging preparedness (PRE) of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. Also, the social support (SSp) might have a moderating effect on the relationship between the skill (SKL) and the aging preparedness (PRE) of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

Although, the path coefficient between the personality characteristic (CHAR) and the aging preparedness (PRE), was found to be not significant, and there was no effect size. Therefore, the social support (SSp) might have not a moderating effect on the relationship between the personality characteristic (CHAR) and the aging preparedness (PRE), in other words the interaction term (SSp*CHAR) between the social support (SSp) and the personality characteristic (CHAR) might have not an

effect on the relationship between the personality characteristic (CHAR) and the aging preparedness (PRE).

However, as conceptual framework mentioned in Chapter 2, the interaction term (SSp*CHAR) between the social support (SSp) and the personality characteristic (CHAR) were kept for the purpose of testing the hypothesis 2.3 that the social support has a positive moderating effect on the relationship between the personality characteristic and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

The main purpose of Model 4, Model 5, and Model 6 was trying to test whether the social support has a positive moderating effect on the relationship between the human capital and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.

According to Model 4 in Table 4.10, when all control variables (gender, age, education, marital status, and income), all human capital variables (KLD, SKL, and CHAR), the social support (SSp) as moderator, and the interaction term (SSp*SKL) between the social support (SSp) and the skill (SKL) were considered simultaneously to predict the aging preparedness (PRE).

Based on the strength of the path coefficient between the skill (SKL) and the aging preparedness (PRE), the interaction term (SSp*SKL) between the social support (SSp) and the skill (SKL) had been enter into the model first. In the context of moderating effect, except for the interaction term (SSp*SKL) between the social support (SSp) and the skill (SKL), all constructs (gender, age, education, marital status, income, KLD, SKL, CHAR, and SSp) had been treated like the control variables. The relationship between the skill (SKL) and the aging preparedness (PRE) was moderated through the social support (SSp*SKL) significantly ($\beta = 0.084$, $p < 0.05$), with a small effect size ($f^2 = 0.008$) (Kenny, 2016). The coefficient of determination (R^2) of the Model 4 was 0.210, indicated that the Model 4 had the weak predictive power for endogenous latent variable (PRE). The Stone–Geisser Q-squared coefficients (Q^2) were 0.221, which larger than 0, indicated that the Model 4 had the predictive relevance for endogenous latent variable (PRE). Moreover, the R square change (ΔR^2) was 0.007 with a small effect size (f^2 for $\Delta R^2 = 0.009$) (Kenny, 2016).

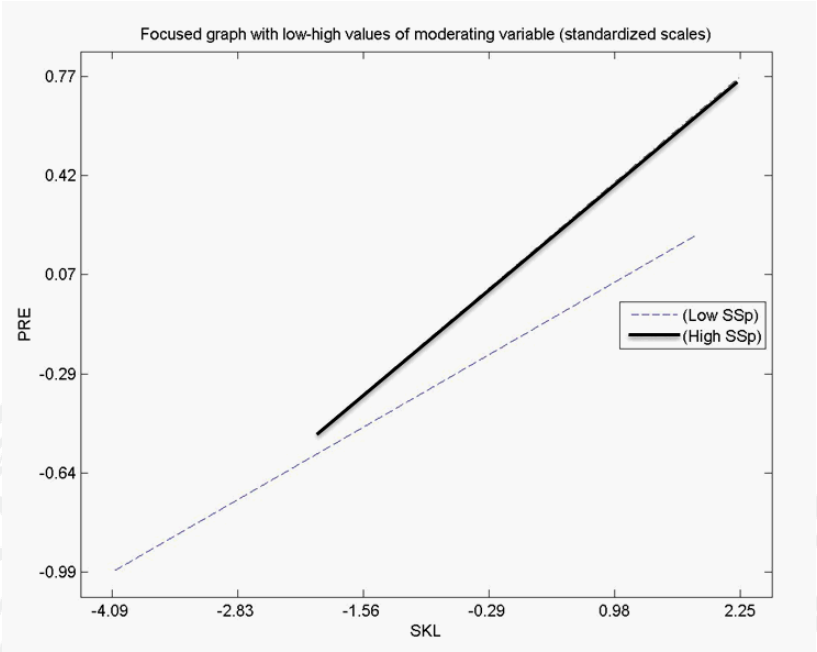

Figure 4.2 The Effect of Skill (SKL) on Aging Preparedness (PRE) with Low-High Values of Social Support (SSp) (Standardized Scale)

Figure 4.2 displayed the plot of interaction effects, showing how the social support (SSp) moderated the effects of the skill (SKL) on the aging preparedness (PRE). The results had shown that the aging preparedness (PRE) tended to increase when the skill (SKL) increased in the both high and low social support (SSp) groups. This suggested that there was a positive relationship between the skill (SKL) and the aging preparedness (PRE). Moreover, the plot suggested that the effect of the skill (SKL) on the aging preparedness (PRE) of the higher social support (SSp) group was stronger than the effect of the skill (SKL) on the aging preparedness (PRE) of the lower social support (SSp) group, because the slope of the higher social support (SSp) group was the steeper upward. This suggested that the social support (SSp) had a positive moderating effect on the relationship between the skill (SKL) and the aging preparedness (PRE).

Based on the result of the relationship between the skill (SKL) and the aging preparedness (PRE) was moderated through the social support (SSp*SKL) significantly, with a small effect size. The coefficient of determination (R^2) had indicated the weak predictive power, and the Stone–Geisser Q-squared coefficients

(Q^2) had indicated the existing of predictive relevance. The R square change had a small effect size. As well as, the plot of interaction effects with the low-high values of social support (SSp) had been displayed by Figure 4.2.

Therefore, there was sufficient evidence to conclude that the social support had a positive moderating effect on the relationship between the skill and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported hypothesis 2.2.

According to Model 5 in Table 4.10 and 4.13, when all control variables (gender, age, education, marital status, and income), all human capital variables (KLD, SKL, and CHAR), the social support (SSp) as moderator, the interaction term (SSp*SKL) between the social support (SSp) and the skill (SKL), and the interaction term (SSp*KLD) between the social support (SSp) and the knowledge (KLD) were considered simultaneously to predict the aging preparedness (PRE).

In the context of moderating effect, except for the interaction term (SSp*KLD) between the social support (SSp) and the knowledge (KLD), all constructs (gender, age, education, marital status, income, KLD, SKL, CHAR, SSp, and SSp*SKL) had been treated like the control variables. The relationship between the knowledge (KLD) and the aging preparedness (PRE) was moderated through the social support (SSp*KLD) significantly ($\beta = 0.257$, $p < 0.01$), with a large effect size ($f^2 = 0.066$) (Kenny, 2016). The coefficient of determination (R^2) of the Model 5 was 0.260, indicated that the Model 5 had the weak predictive power for endogenous latent variable (PRE). The Stone–Geisser Q-squared coefficients (Q^2) were 0.224, which larger than 0, indicated that the Model 5 had the predictive relevance for endogenous latent variable (PRE). Moreover, the R square change (ΔR^2) was 0.050 with a large effect size (f^2 for $\Delta R^2 = 0.068$) (Kenny, 2016).

Figure 4.3 displayed the plot of interaction effects, showing how the social support (SSp) moderated the effects of the knowledge (KLD) on the aging preparedness (PRE). The results had shown that the aging preparedness (PRE) tended to increase when the knowledge (KLD) increased in the both high and low social support (SSp) groups. This suggested that there was a positive relationship between the knowledge (KLD) and the aging preparedness (PRE). Moreover, the plot suggested that the effect of the knowledge (KLD) on the aging preparedness (PRE) of

the higher social support (SSp) group was stronger than the effect of the knowledge (KLD) on the aging preparedness (PRE) of the lower social support (SSp) group, because the slope of the higher social support (SSp) group was the steeper upward. This suggested that the social support (SSp) had a positive moderating effect on the relationship between the knowledge (KLD) and the aging preparedness (PRE).

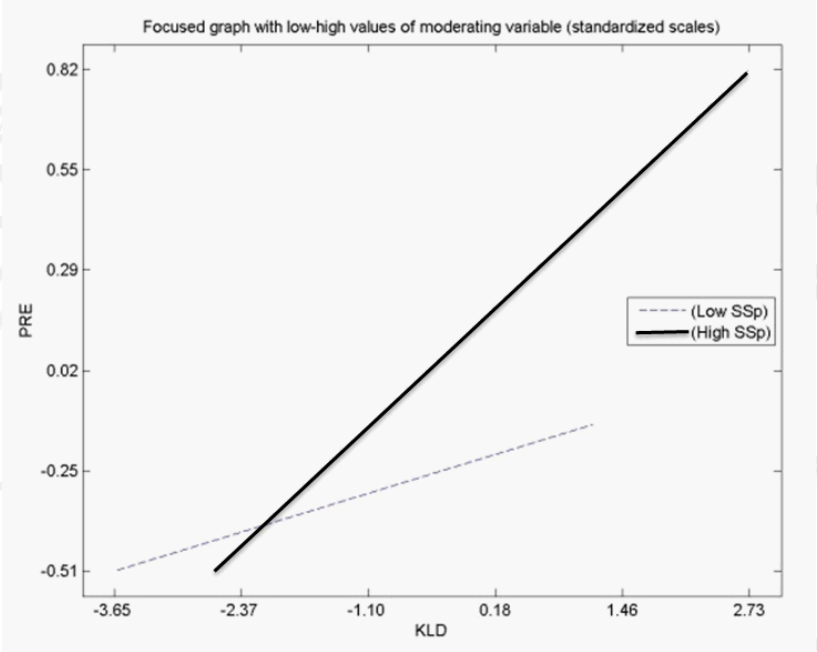

Figure 4.3 The Effect of Knowledge (KLD) on Aging Preparedness (PRE) with Low-High Values of Social Support (SSp) (Standardized Scale)

Based on the result of the relationship between the knowledge (KLD) and the aging preparedness (PRE) was moderated through the social support (SSp*KLD) significantly, with a large effect size. The coefficient of determination (R^2) had indicated the weak predictive power, and the Stone–Geisser Q-squared coefficients (Q^2) had indicated the existing of predictive relevance. The R square change had a large effect size. As well as, the plot of interaction effects with the low-high values of social support (SSp) had been displayed by Figure 4.3. Therefore, there was sufficient evidence to conclude that the social support had a positive moderating effect on the relationship between the knowledge and the aging preparedness of million birth

cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported hypothesis 2.1.

According to Model 6 in Table 4.10 and 4.12, when all control variables (gender, age, education, marital status, and income), all human capital variables (KLD, SKL, and CHAR), the social support (SSp) as moderator, the interaction term (SSp*SKL) between the social support (SSp) and the skill (SKL), the interaction term (SSp*KLD) between the social support (SSp) and the knowledge (KLD), and the interaction term (SSp*CHAR) between the social support (SSp) and the personality characteristic (CHAR) were considered simultaneously to predict the aging preparedness (PRE).

In the context of moderating effect, except for the interaction term (SSp*CHAR) between the social support (SSp) and the personality characteristic (CHAR), all constructs (gender, age, education, marital status, income, KLD, SKL, CHAR, SSp, SSp*SKL, and SSp*KLD) had been treated like the control variables. The relationship between the personality characteristic (CHAR) and the aging preparedness (PRE) was not moderated through the social support (SSp*CHAR) significantly ($\beta = -0.039$, $p > 0.05$), and there was no effect size ($f^2 = 0.004$) (Kenny, 2016). The coefficient of determination (R^2) of the Model 6 was 0.243, indicated that the Model 6 had the weak predictive power for endogenous latent variable (PRE). The Stone–Geisser Q-squared coefficients (Q^2) were 0.230, which larger than 0, indicated that the Model 6 had the predictive relevance for endogenous latent variable (PRE). Moreover, the R square change (ΔR^2) was -0.017 with a negative medium effect size (f^2 for $\Delta R^2 = -0.023$) (Kenny, 2016). The negative sign of R square change and the negative effect size had indicated that the situation of Simpson's paradox occurred (See Table 4.12). Therefore, there was insufficient evidence to conclude that the social support had a positive moderating effect on the relationship between the personality characteristic and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This did not support hypothesis 2.3.

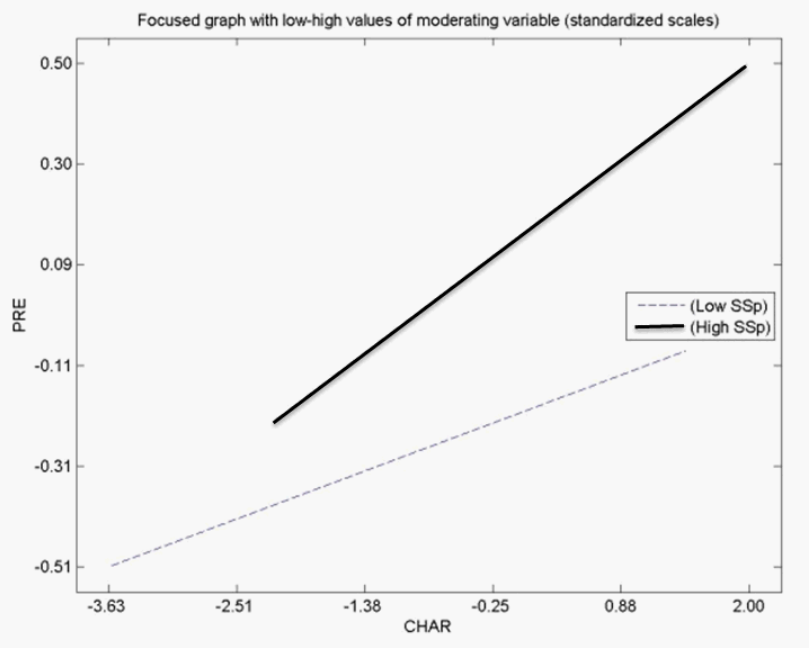

Figure 4.4 The Effect of Personal Characteristic (CHAR) on Aging Preparedness (PRE) with Low-High Values of Social Support (SSp) (Standardized Scale)

Table 4.11 Hypothesis Testing

Main Hypothesis	Related Hypotheses	Result
H1: The human capital has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.		Partial Support
	H1.1: The knowledge has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1	Support
	H1.2: The skill has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1	Support
	H1.3: The personality characteristic has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.	Not Support
H2: The social support has a significantly positive moderating effect on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.		Partial Support
	H2.1: The social support has a significantly positive moderating effect on the relationship between knowledge and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.	Support
	H2.2: The social support has a significantly positive moderating effect on the relationship between skill and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.	Support
	H2.3: The social support has a significantly positive moderating effect on the relationship between personality characteristic and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1.	Not Support

4.9.2 Model Fit and Quality Indices

As mentioned in Chapter 3, the researcher tested model fit and quality indices by using WarpPLS 6.0 model fit and quality indices. The model fit and quality indices are tested by using seven model-fitting parameters: first is average path coefficient (APC), second is average adjusted R^2 (AARS), third is average block VIF (AVIF), fourth is average full collinearity VIF (AFVIF), fifth is Tenenhaus' goodness of fit

(GoF), sixth is Simpson's paradox ratio (SPR), and seventh is standardized root mean squared residual (SRMR).

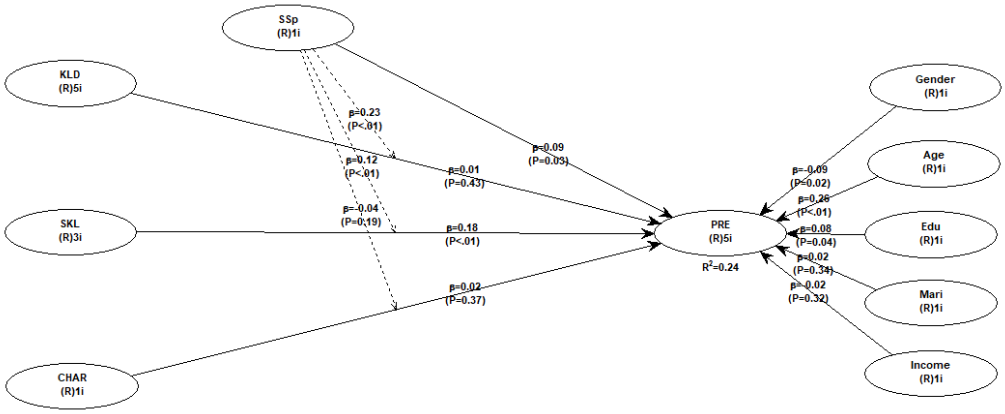

Figure 4.5 Hypothesized Structural Model for Hypothesis Testing: Model 6

Table 4.12 Structural Model: Model 6

N = 487

Relationship	β	Model 6 f^2	*t* value	Block VIF	Simpson's Paradox [a]	R^2 contribution
Control variables						
Gender -> PRE	-0.089*	0.010	-1.995	1.103	1	0.010
Age -> PRE	0.257**	0.061	5.853	1.822	1	0.061
Education (Edu) -> PRE	0.078*	0.009	1.746	1.128	1	0.009
Marital status (Mari) -> PRE	0.019	0.003	0.421	1.248	1	0.003
Income -> PRE	-0.021	0.003	-0.475	1.687	-1	-0.003
Human capital variables						
Knowledge (KLD) -> PRE	0.009	0.003	0.207	2.877	1	0.003
Skill (SKL) -> PRE	0.184**	0.063	4.157	4.180	1	0.063
Personality Characteristic (CHAR) -> PRE	0.015	0.003	0.325	3.319	1	0.003
Moderator variable						
Social Support (SSp) -> PRE	0.087*	0.022	1.929	2.173	1	0.022
Moderating effects						
SSp*SKL -> PRE	0.125**	0.018	2.811	3.185	1	0.018
SSp*KLD -> PRE	0.224**	0.057	5.085	1.293	1	0.057
SSp*CHAR -> PRE	-0.039	0.004	-0.871	3.154	-1	-0.004
R^2	0.243					
R^2adj.	0.224					
Q^2	0.230					
ΔR^2	-0.017					
f^2 for ΔR^2	-0.023					

Note: Dependent variable = Aging preparedness (PRE); β = path coefficient; f^2= effect size; Q^2 = predictive relevance;

f^2 for ΔR^2 can be calculated as ((R^2included – R^2excluded) / (1-R^2included));

* $p < 0.05$,** $p < 0.01$ (1-tailed, critical t = 1.645 and 2.326, respectively);

a = Simpson's paradox = negative sign (i.e., -1).

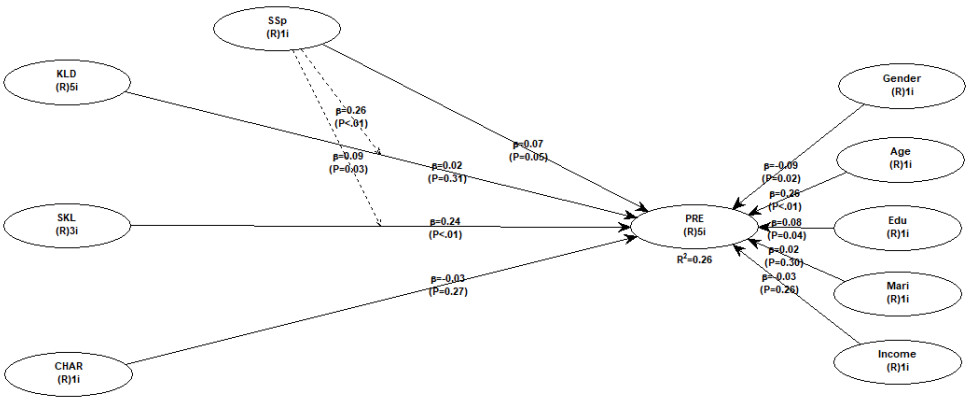

Figure 4.6 Modified Structural Model: Model 5

Table 4.13 Structural Model: Model 5

N = 487

Relationship	β	Model 5 f^2	*t* value	Block VIF	Simpson's Paradox [a]	R^2 contribution
Control variables						
Gender -> PRE	-0.094*	0.011	-2.096	1.103	1	0.011
Age -> PRE	0.259**	0.063	5.892	1.808	1	0.063
Education (Edu) -> PRE	0.079*	0.010	1.767	1.126	1	0.010
Marital status (Mari) -> PRE	0.023	0.004	0.514	1.247	1	0.004
Income -> PRE	-0.029	0.004	-0.641	1.685	-1	-0.004
Human capital variables						
Knowledge (KLD) -> PRE	0.022	0.006	0.484	2.735	1	0.006
Skill (SKL) -> PRE	0.241**	0.079	5.489	4.343	1	0.079
Personality Characteristic (CHAR) -> PRE	-0.027	0.006	-0.605	3.244	-1	-0.006
Moderator variable						
Social Support (SSp) -> PRE	0.075*	0.020	1.666	2.156	1	0.020
Moderating effects						
SSp*SKL -> PRE	0.085*	0.012	1.904	1.051	1	0.012
SSp*KLD -> PRE	0.257**	0.066	5.849	1.066	1	0.066
SSp*CHAR -> PRE						
R^2	0.260					
R^2adj.	0.243					
Q^2	0.224					
ΔR^2	0.050					
f^2 for ΔR^2	0.068					

Note: Dependent variable = Aging preparedness (PRE); β = path coefficient; f^2= effect size; Q^2 = predictive relevance;

f^2 for ΔR^2 can be calculated as ((R^2included – R^2excluded) / (1-R^2included));

* $p < 0.05$,** $p < 0.01$ (1-tailed, critical t = 1.645 and 2.326, respectively);

a = Simpson's paradox = negative sign (i.e., -1).

Table 4.14 The Comparative Model Fit and Quality Indices

Measures	Model Fit Indices Model 5	Model Fit Indices Model 6	Recommendation [a]
Average path coefficient (APC)	0.108**	0.096**	Significant at the $p < 0.05$
Average adjusted R^2 (AARS)	0.243**	0.224**	Significant at the $p < 0.05$
Average block VIF (AVIF)	1.960	2.264	Acceptable if ≤ 5, ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	1.935	2.210	Acceptable if ≤ 5, ideally ≤ 3.3
Tenenhaus' goodness of fit (GoF)	0.457	0.445	Small ≥ 0.1, medium ≥ 0.25, large ≥ 0.36
Simpson's paradox ratio (SPR)	0.818	0.833	Acceptable if ≥ 0.7, ideally = 1
Standardized root mean squared residual (SRMR)	0.060	0.061	Acceptable if ≤ 0.10, ideally ≤ 0.08

Note: ** $p < 0.01$ (1-tailed, critical $t = 2.326$)

a Recommendation: Kock (2018)

The model fit indices of Model 5 and Model 6 had been shown in Table 4.14. All seven indices indicated the acceptability of Model 5 and Model 6 while considering the listed thresholds. Therefore, the model fit indices confirmed the acceptability of the model of the present study.

According to Model 6 in Table 4.10 and 4.12 as the hypothesized structural model, the relationship between the personality characteristic (CHAR) and the aging preparedness (PRE) was not moderated through the social support (SSp*CHAR) significantly, and there was no effect size. The coefficient of determination (R^2) of the Model 6 was 0.243, indicated that the Model 6 had the predictive power for endogenous latent variable (PRE). Moreover, the R square change (ΔR^2) of Model 6 was -0.017 with a negative medium effect size (f^2 for ΔR^2 = -0.023) (Kenny, 2016). The negative sign of R square change and the negative effect size had indicated that the situation of Simpson's paradox occurred.

Whereas, Model 5 in Table 4.10 and 4.13 as the modified structural model, the coefficient of determination (R^2) of the Model 5 was 0.260, indicated that the Model 5 had more the predictive power for endogenous latent variable (PRE) than Model 6. Moreover, the R square change (ΔR^2) of Model 5 was 0.050 with a large effect size (f^2 for ΔR^2 = 0.068) (Kenny, 2016).

Furthermore, when comparing the model fit indices between Model 6 and Model 5 (see Table 4.14), the model fit indices of Model 5 was better fit than Model 6. Therefore, Model 5 was the good-fitting model.

CHAPTER 5

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

This chapter is about presenting conclusion, discussion, and recommendations. The conclusion will be summarized according to research objectives no. 1.2.1 and no. 1.2.2, while the discussion will discuss the results based on hypothesis testing results. And recommendations will be based on policy and practical way, in response to research objectives no. 1.2.3, as well as academic recommendations.

5.1 Conclusion

5.1.1 Direct Effect of Human Capital on Aging Preparedness

According to Model 2 in Table 4.10, there was sufficient evidence to conclude that the knowledge had a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported the hypothesis 1.1. Meanwhile, there was sufficient evidence to conclude that the skill had a significant positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported the hypothesis 1.2. However, there was insufficient evidence to conclude that the personality characteristic had a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This did not support the hypothesis 1.3. Therefore, we can conclude that the hypothesis 1, the human capital has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1, was partial supported (see Table 4.11).

5.1.2 Moderating Effect of Social Support on the Relationship between Human Capital and Aging Preparedness

According to Model 4 in Table 4.10, there was sufficient evidence to conclude that the social support had a significantly positive moderating effect on the relationship between the skill and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported hypothesis 2.2. Meanwhile, according to Model 5 in Table 4.10, there was sufficient evidence to conclude that the social support had a significantly positive moderating effect on the relationship between the knowledge and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This supported hypothesis 2.1. However, according to Model 6 in Table 4.10, there was insufficient evidence to conclude that the social support had a significantly positive moderating effect on the relationship between the personality characteristic and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. This did not support hypothesis 2.3. Therefore, we can conclude that the hypothesis 2, the social support has a significantly positive moderating effect on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1, was partial supported (see Table 4.11).

5.2 Discussion

From the conclusion in section 5.1, it can be discussed based on the hypothesis test, which consists of 2 main hypotheses and 6 related hypotheses (see Table 4.11), which are:

5.2.1 Discussion for Relationship between Human Capital and Aging Preparedness

From the hypothesis 1, the human capital has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1, was partial supported (see Table 4.11) as follow;

5.2.1.1 Relationship between Knowledge and Aging Preparedness

Considering relationship between human capital in terms of knowledge and aging preparedness, it was found that the knowledge (as a part of human capital) had a positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 (Hypothesis 1.1). The issue that should be discussed is why knowledge affects aging preparedness.

The first issue in consideration should be the scope of knowledge and the scope of aging preparedness in this study. The scope of knowledge in this study consists of 5 components, which are Global awareness (KLD1), Financial, economic, business and entrepreneurial literacy (KLD2), Civil literacy (KLD3), Health literacy (KLD4), and Environmental literacy (KLD5). Meanwhile, the scope of aging preparedness in this study also consists of 5 components, which are Economy (PRE1), Physical health (PRE2), Mental health (PRE3), Accommodation (PRE4), and Free time usage (PRE5).

The next step is trying to describe why these 5 components of knowledge affect all 5 aspects of aging preparedness. From looking in overall, it can be described that knowledge's human got from reading, listening, visual, thinking, or direct experiences have the continuous effect on human's perception. New perceptions will be mixed with perceptions in the past, creating evaluation in our mind, then either acceptance or rejection will occur. The new perceptions will affect our attitude, creating either satisfied or unsatisfied behavioural trends. And if the new attitude is consistent with social value or social norm, it will affect our belief in a degree of intention information; cause of action. Therefore, the higher the level of intention, the more it will affect the expressed behaviour.

From the former concept, it can be discussed that when we receive knowledge about Global awareness (KLD1), (especially in the issue of living amongst diversity of nationalities, religions, languages, ages, and cultures), it will have consecutive effect towards perception that living amongst diversity is good for the society, creating acceptance that living with others amongst diversity has created benefits to society, attitude about living with the others amongst diversity which is also consistent with nowadays social values, affecting belief that social value is the

right thing to do, creating intention to behave, and aging preparedness; especially in Mental health (PRE3), Accommodation (PRE4), and Free time usage (PRE5)

Next, after receiving knowledge about Financial, economic, business and entrepreneurial literacy (KLD2), which contain topics of economy systems, online transaction, being a small entrepreneur in 21st century, running business in a context of a small business in the local area, and Investing in funds, government bonds, debt instruments, etc, it creates perception about the changes of economy systems in present, acceptance about new economic system in 21th decades, attitudes about how to live in a changed society which is consistent with social values about priority in information technology, beliefs about the necessity of living with new financial technology which leads to open-minded intention, and behaviour about aging preparedness in Economy (PRE1).

Next, after receiving knowledge about Civil literacy (KLD3) in the issues of respect different opinions, public consciousness, political participation, violating others' rights, and pacifistic conflict management, it creates perception about citizen rights, political participation of people, and respecting others' opinion, acceptance about rights and freedom of speech, good attitudes about living with others by not violating others' rights, belief about equality in rights to express idea pacifistically, intention about behaving as a proper citizen, and behaviour about aging preparedness in Mental health (PRE3) and Free time usage (PRE5)

The knowledge about Health literacy (KLD4) are consist of self-health care, nutrition, exercising, and NCDs. These knowledge create perception of human body changes in different ranges of age, their effects, and methods of self-health care, acceptance in body changes, attitude in a proper health care which is consistent with social value and trend, beliefs about having a good health, intention of having healthier lifestyle, and behaviour about aging preparedness in Physical health (PRE2), Mental health (PRE3), and Accommodation (PRE4)

Finally, receiving knowledge about Environmental literacy (KLD5), in issues of effects of environmental problem towards health and society, taking part in reducing environmental problem, and methods of environmental preserving creates perception about side-effects of our action towards nature and a concept of environmental care, acceptance about nature care and effects of environment towards

oneself and others, good attitude towards environmental care participation, which is consistent with social value about global warming, beliefs about significance of the environment and behaviour about aging preparedness in Physical health (PRE2), and Accommodation (PRE4).

From the above discussion, it demonstrated a set of reasons to answer the question is why knowledge affects aging preparedness within the scope of this study. In short, it was an attempt to debate the result of testing the hypothesis 1.1, which is "The knowledge has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1."

5.2.1.2 Relationship between Skill and Aging Preparedness

Considering relationship between human capital in terms of skill and aging preparedness, it was found that the skill (as a part of human capital) had a positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 (hypothesis 1.2). The issue which should be discussed is why skill affects aging preparedness.

The consideration of the first issue is the scope of the skill. In this study, skill consists of three components, which are Learning and innovation skill (SKL1), Life and career skill (SKL2), and Information, media and technology skill (SKL3). And the scope of aging preparedness includes the former 5 aspects, which were discussed in 5.2.1.1

Next issue is trying to explain why the skill, which consists of the three aspects mentioned above, has affected the studying aging preparedness in these 5 aspects. When considered in overall, it can be explained that when human grants skill from training until becoming expert, he/she tends to keep doing it. Before having expertise or becoming an expert at something, we need to have good attitude towards that skill as a base, which demonstrates satisfied action as in behaviour trend. If that attitude is consistent with social value or social norms, then it will affect belief. The degree of belief will affect degree of intention formation to do something. Therefore, the higher the level of intention, the more will affect the behaviour that is expressed.

From the above concepts, it can be discussed that when the MBC teachers have trained in Learning and innovation skill (SKL1), especially about critical thinking and problem solving, communication and collaboration, and creativity and innovation, which promotes learning skill, systematic thinking development, communication, and understanding the state of problem on oneself and the others. These make the MBC teachers have expertise in planning, complex problem solving, communication, creativity, in which they create good attitudes toward skill development in thinking system, communication, and attitude towards others. That attitude leads to satisfaction of being a good learner and self-developer, which is consistent with the social value that appreciate both capability and friendliness. When people received good responses from the society, they'll believe that their action is a good thing, combined with the training until becoming expert, it make people more likely to try to do that again, creates intention to keep doing and hone that skill, lead to aging preparedness behaviour in Economy (PRE1), Mental health (PRE3), and Free time usage (PRE5).

Life and career skill (SKL2) are the next skill which focuses on training in flexibility and adaptability, initiative and self-direction, social and cross-cultural skill, productivity and accountability, and leadership and responsibility. They make the MBC teacher a good leader, has self-supervision skill, expert in working skill, living skill, and social skill. These skills create good attitude toward developing that skill, lead to satisfaction and trust in one owns ability. These skills are also consistent with social value which prioritize work efficiency and good lifestyle in the society, affecting belief that those skills are good for living and progressing through career. When people trained and achieve high work skill, they can work with people well and always prepared for changes, create behaviour trend to do it again in the future, intention to consistently develop skills, and aging preparedness behaviour in Economy (PRE1), Physical health (PRE2), Mental health (PRE3), Accommodation (PRE4) and Free time usage (PRE5).

The third skill is Information, media and technology skill (SKL3). It's about utilizing technology creatively and evaluating credibility from both media and granted information, allowing the MBC teachers to access good information about self-care, promoting learning and self-caring, able to examine credibility of

information sources for adapting into their lifestyle, creating good attitude towards information, media and technology by having good information checking skill, lead to satisfaction from utilizing information access which consistent with digital age of 21th century, the age which prioritize information media and technology with creativity within society changes. As basic information, the MBC teachers are mostly still working, and have to learn to use those skill in their lives, creating expertise in that field. This situation leads into belief that those skills benefit their lifestyle, create satisfaction from using those skills, leads to behaviour trend of trying to develop it further, create intention to utilize and develop those skills, and leads to aging preparedness behaviour in Economy (PRE1), Physical health (PRE2), Mental health (PRE3), Accommodation (PRE4) and Free time usage (PRE5).

5.2.1.3 Relationship between Personality Characteristic and Aging Preparedness

Considering relationship between human capital in terms of personality characteristic and aging preparedness, it was found that the personality characteristic (as a part of human capital) does not affect the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 (Hypothesis 1.3). The issue that should be discussed is why personality characteristic does not affect aging preparedness.

The first consideration of the issue is the scope of personality characteristic. This study includes 10 attributes (ATT), which are critical thinking, problem solving, creativity, collaboration, information literacy, self-learning, communication, global awareness, civic literacy, and economic literacy. And the scope of aging preparedness includes the former 5 aspects, which were discussed in 5.2.1.1

The next issue is trying to explain that is why personality characteristic which consisted of 10 attributes do not affect aging preparedness in 5 aspect. Considering in overall, it can be explained that personality characteristic is an individual aspect created from perception and direct experiences of each person. It creates self-acceptance, which leads to self-attitude that is not consistent with social value, creating self-belief, self-behaviour-intention, and it creates something called a self and lifestyle to response to their needs without having reasons or goals to support.

The above discussion demonstrated a set of reasons to answer the question is why personality characteristic which consisted of 10 attributes do not affect 5 aspects of aging preparedness in this study scope. In short, it was an attempt to debate the result of testing the hypothesis 1.3 that the personality characteristic has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1. The result of testing the hypothesis 1.3 showed that it's not supported

Cause and effect discussed in 5.2.1.1, 5.2.1.2, and 5.2.1.3 is to support the finding that the hypothesis 1, the human capital has a significantly positive effect on the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1, was partial supported (see Table 4.11). This finding is partially consistent with concepts and results of Righter (2017) and Womack (2015).

5.2.2 Discussion for Moderating Effect of Social Support on the Relationship between Human Capital and Aging Preparedness

5.2.2.1 Moderating Effect of Social Support on the Relationship between Knowledge and Aging Preparedness

Considering the social support as a moderator, it was found that the social support had a significantly positive moderating effect on the relationship between the knowledge and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 (Hypothesis 2.1). The issue that should be discussed is why social support affects the relationship between knowledge and aging preparedness.

Social support is a context that affects degree of motivation of each individual. This degree of motivation will reinforce the intensity (how hard a person tries), direction (effort directed toward, and consistent with, the goals), and persistence (how long a person can maintain effort) (Robbins & Judge, p. 202). Therefore, motivation affects behaviour of people.

For this reason, it can be discussed that people who are in the context of having higher social support will have higher degree of motivation, creating higher level of intensity, direction and persistence. Therefore, when people are motivated to self-develop, working hard, endure to failure, focus on the work, and always consider about the future goal, these will have a chain reaction to relationship between knowledge and aging preparedness. It can be said that higher degree of motivation leads to higher learning motivation, higher degree of perception, higher knowledge evaluation, higher knowledge acceptance, and having good learning attitude and information utilization. All of these affect belief and intention, creating higher aging preparedness behaviour than those who are in the lower context of social support.

5.2.2.2 Moderating Effect of Social Support on the Relationship between Skill and Aging Preparedness

Considering the social support as a moderator, it was found that the social support had a significantly positive moderating effect on the relationship between the skill and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 (Hypothesis 2.2). The issue that should be discussed is why social support affects the relationship between skill and aging preparedness.

For the same reason mentioned in 5.2.2.1 which social support is a context that affects degree of motivation of each individual. This motivation will reinforce intensity (how hard a person tries), direction (effort directed toward, and consistent with, the goals), persistence (how long a person can maintain effort) (Robbins & Judge, p. 202). Therefore, motivation affects behaviour of people.

For this reason, it can be discussed that people who are in the context of having higher social support will have higher degree of motivation, creating higher level of intensity, direction and persistence. Therefore, when people are motivated to self-develop, working hard, endure to failure, focus on the work, and always consider about the future goal, these will have a chain reaction to relationship between skill and aging preparedness. It can be said that higher degree of motivation leads to better attitude about trying to become an expert in certain skill. When we become an expert at anything, it’ll generate more satisfaction, which has chain reaction to belief and

intention, creating more aging preparedness behaviour than those who are in the lower context of social support.

5.2.2.3 Moderating Effect of Social Support on the Relationship between Personality Characteristic and Aging Preparedness

Considering the social support as a moderator, it was found that the social support had not a significantly positive moderating effect on the relationship between the personality characteristic and the aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1 (Hypothesis 2.3). The issue that should be discussed is why social support do not affect relationship between personality characteristic and aging preparedness.

As the reason in 5.2.1.3 that personality characteristic is an individual aspect created from perception and direct experiences of each person. It creates self-acceptance, which leads to self-attitude that is not consistent with social value, creating self-belief, self-behaviour-intention, and it creates something called a self and lifestyle to response to their needs without having reasons or goals to support. This self and life style is like a barrier between each individual and the environment. For example, a context, in which social support is also a kind of context. Therefore, when consider privacy or identity, a context like social support can’t influence the identity of each individual.

Cause and effect discussed in 5.2.1.1, 5.2.1.2, and 5.2.1.3 is to support the finding that the hypothesis 2, the social support has a significantly positive moderating effect on the relationship between human capital and aging preparedness of million birth cohort teachers in primary school affiliated with Sukhothai Primary Educational Service Area Office 1, was partial supported (see Table 4.11). Hence, this finding is partially consistent with concepts and results of Callaghan and Morrissey (1993); (Erikson et al., 1986; Scheier et al., 1989; Uchino, 2004; Umberson & Karas, 2010).

5.3 Recommendations

5.3.1 Practical Suggestions in Personal Level.

The MBC teachers should start planning about aging preparedness by themselves in advance, which can be chose from these guidelines to your preference.

5.3.1.1 Strive for knowledge or learn something new to increase our knowledge stock and master skills required in 21th century that can adapt into our work and lifestyle; learn about self-caring and get ready to enter the elderly with quality.

5.3.1.2 Realize the value social support by forming good relationships between people around you, especially family, friend, and colleague. They will reinforce us to work and live with motivation, change our behaviour in a good way, and promote aging preparedness behaviour.

5.3.2 Policy Suggestions for Aging Preparedness

Related organization should support and prioritize social reinforcement, such as…

5.3.2.1 Social which strive to learn, promote learning, and develop necessary skills in 21th century that can adapt into our work and lifestyle.

5.3.2.2 Social which reinforce social context, and this context should have social support, such as promoting good relationships between family, working society, and friends.

5.3.3 Suggestions for Next Research.

5.3.3.1 In the next research, it should improve the measurement of human capital, aging preparedness and social support to be more at Generalization level, to have more Construct Validity and Reliability.

5.3.3.2 There should be the study in the same population again in the next 3-5 years as a study with Longitudinal Design, which include a time factor. It should be a test of Validity, Reliability, and Generalization of theoretical model or context model through time and changes of environment.

5.3.3.3 The theoretical model and context model should get a replicated test in personal level, in different schools and contexts, such as schools in Bangkok, private school, public school, and schools in different education service area, to test the Cross Validity.

5.3.3.4 The theoretical model and context model should have a replicated test in the sample group which is not people in schools, such as other departments, state enterprises, private organizations, or other social organizations to test the Cross Validity.

5.3.3.5 This study is about the study of aging preparedness in personal level. The next research should promote aging preparedness at further level, such as aging preparedness in organization level.

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APPENDIX A

List of the Four Content Experts

Content Validity: List of the Four Content Experts

พยอม วงษ์พูล ผู้อำนวยการสำนักงานเขตพื้นที่การศึกษาประถมศึกษาสุโขทัย เขต 1

Phayom Wongphun, Ph.D.: Director of Sukhothai Primary Educational Service Area Office 1.

กฤษณะ วุ่นอ่อน ผู้อำนวยการโรงเรียนอนุบาลกงไกรลาศ (บ้านกร่าง 2465) จ.สุโขทัย

Kritsana Woon-oon, Ph.D.: Director of Anubankongkailas (Bankrang2465), Sukhothai.

ผศ. พิพัฒน์ นนทนาธรณ์: คณะบริหารธุรกิจ มหาวิทยาลัยเกษตรศาสตร์

Asst. Prof. Phiphat Nonthanathorn, Ph.D.: Faculty of Business Administration, Kasetsart University

ผศ. พงษ์เทพ จันทสุวรรณ: คณะพัฒนาสังคมและสิ่งแวดล้อม สถาบันบัณฑิตพัฒนบริหารศาสตร์

Asst. Prof. Pongthep Chandasuwan, Ph.D.: Graduate School of Social and Environmental Development, National Institute of Development Administration

APPENDIX B

Questionnaire: Thai Version

IdL1_____

IdL2_____

แบบสอบถาม

คำชี้แจง: แบบสอบถามชุดนี้มีวัตถุประสงค์สำคัญ เพื่อต้องการทดสอบความสัมพันธ์ระหว่างแนวคิดทุนมนุษย์และแนวคิดการเตรียมความพร้อมเพื่อเข้าสู่วัยสูงอายุ มิได้มีจุดประสงค์เพื่อทำการประเมินความสามารถของตัวบุคคลหรือหน่วยงานแต่อย่างใด ดังนั้น การตอบคำถามอย่างถูกต้องตามความเป็นจริง จึงไม่ส่งผลใดๆ ต่อหน่วยงาน และการตอบคำถามในครั้งนี้ ถือว่า ไม่มีคำตอบที่ ถูก หรือผิด และไม่มีระดับว่า ดีหรือไม่ดี โดย **ผู้วิจัยขอรับรองว่าคำตอบของท่านจะถูกรักษาเป็นความลับ และไม่สามารถระบุตัวตนหรือหน่วยงานของท่านได้ และจะรายงานผลในภาพรวมเท่านั้น**

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ

คำถามคัดกรอง

ท่านมีอายุระหว่าง 35 - 55 ปี

☐ ใช่ ☐ **ไม่ใช่ (หยุดตอบแบบสอบถาม)**

ถ้าท่านตอบว่า **ไม่ใช่** ขอความกรุณามอบแบบสอบถามนี้ให้กับบุคคลใดในหน่วยงานของท่านที่มีอายุอยู่ระหว่าง 35 - 55 ปี เป็นผู้ตอบแบบสอบถามแทนท่าน **(ขอขอบพระคุณ)**

คำชี้แจง: แบบสอบถามนี้ แบ่งออกเป็น 5 ส่วน คือ

ส่วนที่ 1 ข้อมูลส่วนบุคคล

ส่วนที่ 2 ทุนมนุษย์

ส่วนที่ 3 การสนับสนุนทางสังคม

ส่วนที่ 4 การเตรียมความพร้อมเพื่อเข้าสู่วัยสูงอายุ

ส่วนที่ 5 ความคิดเห็นและข้อเสนอแนะ

ส่วนที่ 1: ข้อมูลส่วนบุคคล

1. เพศ

1. □ หญิง 2. □ ชาย

2. อายุ ประมาณ_____ ปี (จำนวนเต็ม)

3. ระดับการศึกษา

1. □ ต่ำกว่าปริญญาตรี 2. □ ปริญญาตรี 3. □ ปริญญาโท 4. □ ปริญญาเอก

4. สถานภาพสมรส

1. □ โสด 2. □ สมรส (ไม่มีบุตร) 3. □ สมรส (มีบุตร)
4. □ หม้าย (มีบุตร) 5. □ หม้าย (ไม่มีบุตร)

5. ระยะเวลาที่ประกอบอาชีพครู ประมาณ_____ ปี (จำนวนเต็ม)

6. แหล่งรายได้อื่นที่นอกเหนือจากเงินเดือน

1. □ มี 2. □ ไม่มี

7. รายได้ต่อเดือน (รวมเงินเดือนและรายได้อื่นๆ)

1. □ น้อยกว่าหรือเท่ากับ 20,000 บาท 2. □ 20,001-40,000 บาท
3. □ 40,001-60,000 บาท 4. □ 60,001-80,000 บาท
5. □ มากกว่า 80,000 บาท

ส่วนที่ 2: ทุนมนุษย์

คำชี้แจง: ขอให้ท่านพิจารณาข้อความดังต่อไปนี้ และ กรุณาทำเครื่องหมาย √ ใน □ ตามหมายเลขที่ท่านเลือกเพียงข้อเดียวเท่านั้น **และโปรดตอบคำถามทุกข้อ**

คำถาม: ขอความกรุณาให้ ท่าน**ประเมินตนเองว่า** ท่านมี **ความรู้ ทักษะ และคุณลักษณะ** ดังต่อไปนี้ ใน**ระดับคะแนน** เท่าใด โดย

1 = น้อยกว่า 50%, 2 = 51%-60%, 3 = 61%-70%,
4 = 71%-80%, 5 = 81%-90%, 6 = 91%-100%

ข้อ	ความรู้	1	2	3	4	5	6
1	การใช้ชีวิตร่วมกันท่ามกลางความแตกต่างด้านเชื้อชาติ						
2	การใช้ชีวิตร่วมกันท่ามกลางความแตกต่างด้านศาสนา						
3	การใช้ชีวิตร่วมกันท่ามกลางความแตกต่างด้านภาษา						
4	การใช้ชีวิตร่วมกันท่ามกลางความแตกต่างด้านอายุ						
5	การใช้ชีวิตร่วมกันท่ามกลางความแตกต่างด้านวัฒนธรรม						
6	ระบบเศรษฐกิจในศตวรรษ ที่ 21						
7	ระบบเศรษฐกิจพอเพียง						
8	ระบบเศรษฐกิจดิจิทัล (Digital Economy)						
9	ตัวแบบไทยแลนด์ 4.0						
10	ระบบการชำระเงินด้วย QR Code						
11	ธนาคารอิเล็กทรอนิกส์ (Electronic Banking)						
12	การชำระเงินผ่านทางอินเทอร์เน็ต						
13	การเลือกลงทุนในกองทุน/พันธบัตรรัฐบาล/ตราสารหนี้ ฯลฯ						
14	การประกอบการทางธุรกิจขนาดย่อมในศตวรรษที่ 21						
15	โอกาสทางการตลาดของธุรกิจขนาดย่อมในท้องถิ่นของท่าน						
16	พฤติกรรมผู้บริโภคในบริบทธุรกิจขนาดย่อมในท้องถิ่นของท่าน						
17	ช่องทางการจัดจำหน่ายในบริบทของธุรกิจขนาดย่อมในท้องถิ่น						
18	การแข่งขันทางธุรกิจในบริบทของธุรกิจขนาดย่อมในท้องถิ่น						

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ

ข้อ	ความรู้	1	2	3	4	5	6
19	การเคารพความเห็นที่แตกต่าง						
20	จิตสำนึกสาธารณะ						
21	การมีส่วนร่วมทางการเมือง						
22	การละเมิดสิทธิของผู้อื่น						
23	การจัดการความขัดแย้งแบบสันติวิธี						
24	การดูแลสุขภาพของแต่ละวัย						
25	การดูแลสุขภาพสำหรับตนเอง						
26	โภชนาการที่เหมาะสมกับวัยของตนเอง						
27	การออกกำลังกายที่เหมาะสมกับตนเอง						
28	โรคไม่ติดต่อเรื้อรัง ได้แก่ โรคความดันโลหิต โรคเบาหวาน ฯลฯ						
29	ผลกระทบของปัญหาสิ่งแวดล้อมต่อสังคม						
30	ผลกระทบของปัญหาสิ่งแวดล้อมต่อสุขภาพ						
31	การลดปัญหาสิ่งแวดล้อม						
32	การมีส่วนร่วมในการช่วยลดปัญหาสิ่งแวดล้อม						
33	วิธีการอนุรักษ์สิ่งแวดล้อม						
	ทักษะ						
34	การแก้ปัญหาเฉพาะหน้า						
35	การหาสาเหตุของปัญหา						
36	การวิเคราะห์ปัญหา						
37	การเข้าใจในสภาพปัญหา						
38	การรวบรวมข้อมูลต่างๆให้อยู่ในรูปแบบภาพรวมหรือข้อสรุป (จุดเล็กสู่ภาพรวม)						
39	การนำหลักการมาประยุกต์เพื่อใช้แก้ไขปัญหาได้ (ภาพรวมสู่จุดเล็ก)						

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ <u>กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ</u>

ข้อ	ทักษะ	1	2	3	4	5	6
40	การเล่าเรื่องให้ ผู้ฟังสามารถเข้าใจได้อย่างรวดเร็ว						
41	การจับประเด็นสำคัญได้อย่างรวดเร็ว						
42	การรับฟังความคิดเห็นของผู้อื่น						
43	การใช้วิธีประนีประนอม เมื่อเกิดความขัดแย้งระหว่างการทำงาน						
44	การประสานงานกับเพื่อนร่วมงาน						
45	การรับฟังความคิดเห็นที่หลากหลาย						
46	การสร้างมุมมองใหม่ๆ						
47	การสื่อสารมุมมองใหม่กับเพื่อนร่วมงาน						
48	การลงมือปฏิบัติตามมุมมองใหม่ตามที่ตกลงในกลุ่มงาน						
49	การปรับตัวให้เข้ากับลักษณะงานที่เปลี่ยนแปลง						
50	การปรับตัวให้เข้ากับกำหนดการที่เร่งรัดขึ้น						
51	การจัดการเชิงบวกต่อข้อผิดพลาด						
52	การทำงานให้ลุล่วงภายใต้ความคิดเห็นที่แตกต่าง						
53	การกำหนดเป้าหมายที่เป็นรูปธรรม สามารถวัดได้						
54	การสร้างความสมดุลระหว่างเป้าหมายระยะสั้นและระยะยาว						
55	การจัดลำดับความสำคัญของงาน						
56	การติดตาม/ตรวจสอบ/ประเมินผลงานด้วยตนเอง						
57	การปฏิสัมพันธ์เชิงบวกกับบุคคลที่แตกต่างด้านความเชื่อ						
58	การทำงานในทีมงานที่แตกต่างหลากหลายความคิด/วัฒนธรรม						
59	การตอบสนองความคิดเห็นที่แตกต่างอย่างใจกว้าง						
60	การเคารพในการแตกต่างด้านพฤติกรรมการทำงานของผู้อื่น						
61	การวางแผนงาน						

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ <u>กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ</u>

ข้อ	ทักษะ	1	2	3	4	5	6
62	การดำเนินงานที่ได้รับหมอบหมาย						
63	การชักนำทีมงานให้ทำงานเพื่อบรรลุเป้าหมาย						
64	การพร้อมรับผิดและรับชอบจากผลงาน						
65	การสร้างแรงบันดาลใจให้กับทีมงาน						
66	การกระตุ้น/ส่งเสริมให้ทีมงานเรียนรู้อยู่ตลอดเวลา						
67	การชักจูงทีมงานให้พร้อมรับมือกับการเปลี่ยนแปลง						
68	การแสดงตนให้แบบอย่างในการดำเนินงานอย่างมีจริยธรรม						
69	การประเมิน/ตรวจสอบความน่าเชื่อถือของข้อมูลข่าวสารที่ได้รับ						
70	การประเมิน/ตรวจสอบความน่าเชื่อถือของสื่อที่นำเสนอข่าวสาร						
71	การใช้เทคโนโลยีอย่างสร้างสรรค์/เกิดประโยชน์						
	คุณลักษณะ						
72	การคิดวิเคราะห์						
73	การแก้ปัญหา						
74	การสร้างสรรค์						
75	การให้ความร่วมมือ						
76	การรู้จักใช้ข้อมูล/ข่าวสาร						
77	การเรียนรู้ด้วยตนเอง						
78	ด้านการสื่อสาร						
79	การตระหนักรับรู้การเปลี่ยนแปลงของสังคมโลก						
80	การเป็นพลเมืองที่มีคุณค่า						
81	การติดตามความรู้ด้านเศรษฐกิจ						

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ <u>กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ</u>

ส่วนที่ 3: การสนับสนุนทางสังคม

<u>คำถาม:</u> ขอความกรุณาให้ ท่าน**<u>ประเมินตนเองว่า</u>** ในประเด็นต่อไปนี้ ท่านมี **<u>ระดับความเห็น</u>** เท่าใด **โดย**

1 = ไม่เห็นด้วยอย่างยิ่ง, 2 = ไม่เห็นด้วย, 3 = ค่อนข้างไม่เห็นด้วย,
4 = ค่อนข้างเห็นด้วย, 5 = เห็นด้วย, 6 = เห็นด้วยอย่างยิ่ง

ข้อ	การสนับสนุนทางสังคม	1	2	3	4	5	6
82	ภายในครอบครัวของท่านมีการรับฟังความคิดเห็นซึ่งกันและกัน						
83	ภายในครอบครัวของท่านมีการช่วยเหลือเกื้อกูลกันเป็นปกติ						
84	เมื่อประสบปัญหาในชีวิต ท่านสามารถปรึกษาครอบครัวได้						
85	เมื่อประสบปัญหาในชีวิต ครอบครัวจะคอยให้กำลังใจท่าน						
86	เมื่อท่านเจ็บป่วย สมาชิกในครอบครัวจะให้การช่วยเหลือดูแล						
87	ผู้บังคับบัญชาของท่าน เป็นบุคคลที่คอยช่วยเหลือเกื้อกูลท่านทางการงาน						
88	เมื่อประสบปัญหาในการงาน ท่านสามารถปรึกษาผู้บังคับบัญชาได้						
89	เมื่อประสบปัญหาในการงาน ผู้บังคับบัญชาจะคอยให้กำลังใจท่าน						
90	เมื่อท่านเจ็บป่วย ผู้บังคับบัญชาจะให้การช่วยเหลือดูแลตามสมควร						
91	เพื่อนร่วมงานของท่าน เป็นบุคคลที่คอยช่วยเหลือเกื้อกูลท่านทางการงาน						
92	เมื่อประสบปัญหาในการงาน ท่านสามารถปรึกษาเพื่อนร่วมงานได้						
93	เมื่อประสบปัญหาในการงาน เพื่อนร่วมงานจะคอยให้กำลังใจท่าน						
94	เมื่อท่านเจ็บป่วย เพื่อนร่วมงานจะให้การช่วยเหลือดูแลตามสมควร						
95	เพื่อนส่วนตัวของท่าน เป็นบุคคลที่คอยช่วยเหลือเกื้อกูลท่านยามที่ท่านต้องการ						
96	เมื่อประสบปัญหาชีวิต ท่านสามารถปรึกษาเพื่อนส่วนตัวได้						
97	เมื่อประสบปัญหาในชีวิต เพื่อนส่วนตัวจะคอยให้กำลังใจท่าน						
98	เมื่อท่านเจ็บป่วย เพื่อนส่วนตัวจะให้การช่วยเหลือดูแล						

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ <u>กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ</u>

ส่วนที่ 4: การเตรียมความพร้อมเพื่อเข้าสู่วัยสูงอายุ

<u>คำถาม:</u> ขอความกรุณาให้ ท่าน**<u>ประเมินตนเองว่า</u>** ในประเด็นต่อไปนี้ ท่านมี **<u>ระดับความเห็น</u>** เท่าใด **โดย**

ไม่จริง, จริง

ข้อ	การเตรียมความพร้อมเพื่อเข้าสู่วัยสูงอายุ	ไม่จริง	จริง
99	ปัจจุบัน ท่านมีการสะสมเงินออม		
100	ปัจจุบัน ท่านมีการสะสมสินทรัพย์ ที่ไม่อยู่ในรูปของตัวเงิน เช่น ที่ดิน ฯลฯ		
101	ปัจจุบัน ท่านมีการทำประกันชีวิต		
102	ปัจจุบัน ท่านมีเงินสำรองสำหรับค่าใช้จ่ายฉุกเฉิน		
103	ปัจจุบัน ท่านมีงานสำรองบางอย่าง เพื่อให้มีรายได้เสริม		
104	ปัจจุบัน ท่านมีการวางแผนรายรับ/รายจ่าย ในวัยสูงอายุล่วงหน้า		
105	ปัจจุบัน ท่านได้ศึกษากฎหมายที่เกี่ยวข้องกับสิทธิอันพึงมีของผู้อยู่ในวัยสูงอายุ		
106	ปัจจุบัน ท่านเลือกรับประทานอาหารตามหลักโภชนาการที่เหมาะสมกับวัย		
107	ปัจจุบัน ท่านออกกำลังกาย/บริหารร่างกายเป็นประจำ		
108	ปัจจุบัน ท่านเข้ารับการตรวจสุขภาพเป็นประจำ		
109	ปัจจุบัน ท่านได้นอนหลับพักผ่อนอย่างเพียงพอ		
110	ปัจจุบัน ท่านพยายามควบคุมน้ำหนักให้อยู่ในเกณฑ์มาตรฐาน		
111	เมื่อท่านพบว่ามีความผิดปกติในร่างกาย ท่านจะไปพบแพทย์ทันที		
112	ปัจจุบัน ท่านได้ศึกษาข้อมูลเกี่ยวกับการเปลี่ยนแปลงของร่างกายที่อยู่ในวัยสูงอายุ		
113	ปัจจุบัน ท่านดูแลตัวเองตามแนวทางการเสื่อมถอยของร่างกายในวัยสูงอายุ		
114	ปัจจุบัน ท่านได้หาความรู้เกี่ยวกับการเปลี่ยนแปลงด้านจิตใจ/อารมณ์ของผู้ที่อยู่ในวัยสูงอายุ		

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ <u>กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ</u>

ข้อ	การเตรียมความพร้อมเพื่อเข้าสู่วัยสูงอายุ	ไม่จริง	จริง
115	ปัจจุบัน ท่านได้ศึกษาด้านศาสนา เพื่อความพร้อมด้านจิตใจในวัยสูงอายุ		
116	ปัจจุบัน ท่านได้ฝึกควบคุมอารมณ์ของท่านให้มีความสงบ		
117	ปัจจุบัน ท่านได้ศึกษาแนวทางในการจัดการความเครียดของตนเอง		
118	ปัจจุบัน ท่านปฏิบัติตัวตามแนวทางในการจัดการความเครียดของตนเอง		
119	ปัจจุบัน ท่านได้พูดคุยกับคนสนิทเกี่ยวกับการเตรียมใช้ชีวิตในวัยสูงอายุ		
120	ปัจจุบัน ท่านได้หาความรู้เกี่ยวกับที่อยู่อาศัยที่เหมาะสมกับบุคคลในวัยสูงอายุ		
121	ปัจจุบัน ท่านเริ่มจัดสภาพภายในบ้านให้ปลอดภัยสำหรับบุคคลในวัยสูงอายุ		
122	ปัจจุบัน ท่านเตรียมการด้านที่พักอาศัยที่เหมาะสมกับท่านในวัยสูงอายุ		
123	ปัจจุบัน ท่านได้เลือกสถานที่ที่เดินทางสะดวก สำหรับอาศัยในวัยสูงอายุ		
124	ปัจจุบัน ท่านได้เลือกสถานที่ที่อยู่ใกล้แหล่งชุมชน สำหรับอาศัยในวัยสูงอายุ		
125	ปัจจุบัน ท่านได้เลือกสถานที่ที่สามารถเดินทางไปสถานพยาบาล โดยใช้เวลาไม่นาน สำหรับอาศัยในวัยสูงอายุ		
126	ปัจจุบัน ท่านได้เตรียมการด้านผู้ดูแลท่าน เมื่อท่านอยู่ในวัยสูงอายุ		
127	ปัจจุบัน ท่านได้เข้าร่วมกิจกรรมหรือชมรมต่างๆทางสังคม		
128	ปัจจุบัน ท่านทราบแล้วว่าจะร่วมกิจกรรมทางสังคมใด ในวัยสูงอายุ		
129	ปัจจุบัน ท่านเตรียมการด้านการใช้เวลาว่างในวัยสูงอายุ		
130	ปัจจุบัน ท่านมีงานอดิเรกที่ทำอยู่แล้ว และคาดว่าจะทำต่อไปในวัยสูงอายุ		
131	ปัจจุบัน ท่านได้หาข้อมูลเกี่ยวกับงานอดิเรกที่สนใจจะทำในวัยสูงอายุ		
132	ปัจจุบัน ท่านมีเพื่อนในวัยเดียวกันที่สนใจงานอดิเรกเหมือนกัน		

ขอความกรุณาอ่านคำถามแต่ละข้อให้ชัดเจน และ <u>กรุณาตอบแบบสอบถามทุกส่วน / ทุกข้อ</u>

ส่วนที่ 5: ความคิดเห็นและข้อเสนอแนะ ด้านการเตรียมความพร้อมเพื่อเข้าสู่วัยสูงอายุ

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<u>โปรดตรวจสอบก่อนส่งคืนว่าท่านได้ตอบคำถามครบทุกข้อแล้ว</u>

ขอขอบพระคุณเป็นอย่างสูง

APPENDIX C

Questionnaire and Coding: English Version

IdL1_____

IdL2_____

Questionnaire

Explanation: This questionnaire has the objective to examine the relationship between concepts of human capital and aging preparedness. Noted that this questionnaire is not for skill evaluating of any person or an organization, please answer the question with truth and correction. Every answer is neither right nor wrong; good nor bad. **Your answer will be kept in secrecy, as same as your identity or your organization. The end result will show as the overall result only.**

Please read each question carefully, and answer everything in every section / question

Screening question

You aged between 35 – 55 years old.

□ Yes □ **No (Stop doing the questionnaire)**

If your answer is no, please pass this questionnaire to other people in your organization who aged between 35 – 55 years old. **(Thank you)**

Explanation: This questionnaire consists of 5 sections, as follow:

Section 1	Personal Information
Section 2	Human Capital
Section 3	Social Support
Section 4	Aging Preparedness
Section 5	Opinions and suggestions

Please read each question carefully and answer everything in every section / question

Section 1: Personal Information

1. Gender gender

1. □ Female 2. □ Male

2. Age approximately_____ years old (full number) age

3. Education Level edu

1. □ below Bachelor's Degree 2. □ Bachelor's degree
3. □ Master's Degree 4. □ Doctoral Degree

4. Marital Status marital

1. □ Single 2. □ Married (no child or children)
3. □ Married (with child or children) 4. □ Divorced (with child or children)
5. □ Divorced (no child or children)

5. Duration of being a teacher approximately _____ years (full number) time

6. Earning outside your salary income1

1. □ Yes 2. □ No, I haven't

7. Earnings per month (combined with the other income) income2

1. □ less than or equal to 20,000 Baht 2. □ 20,001-40,000 Baht
3. □ 40,001-60,000 Baht 4. □ 60,001-80,000 Baht
5. □ more than 80,000 Baht

Please read each question carefully and <u>answer everything in every section / question</u>

Section 2: Human Capital

Explanation: Read and consider these messages, and write √ in □ of your chosen number only, **and please answer every question.**

Question: Please **evaluate yourself**: What is your **score level** of these **knowledge, skill, and characteristic**, in which

1 = below 50% **2 = 51% - 60%,** **3 = 61% - 70%**

4 = 71% - 80%, **5 = 81% - 90%** **6 = 91% - 100%**

No.	Knowledge (as Human Capital)	KLD	
1	Living amongst diversity of nationalities.	KLD1_1	KLD1
2	Living amongst diversity of religions.	KLD1_2	
3	Living amongst diversity of languages.	KLD1_3	
4	Living amongst diversity of ages.	KLD1_4	
5	Living amongst diversity of cultures.	KLD1_5	
6	The 21st century economy.	KLD2_1	KLD2
7	Sufficient economy.	KLD2_2	
8	Digital economy.	KLD2_3	
9	Thailand 4.0 model.	KLD2_4	
10	QR code payment.	KLD2_5	
11	Electronic banking.	KLD2_6	
12	Internet payment.	KLD2_7	
13	Investing in funds, government bonds, debt instruments, etc.	KLD2_8	
14	Being a small entrepreneur in 21st century.	KLD2_9	
15	Marketing opportunity of a small business in your local area.	KLD2_10	
16	Consumer behaviour in a context of a small business in your local area.	KLD2_11	
17	Methods of distribution in in a context of a small business in your local area.	KLD2_12	
18	Business competition in a context of a small business in your local area.	KLD2_13	

Please read each question carefully and answer everything in every section / question

No.	Knowledge (as Human Capital)	KLD	
19	Respect different opinions.	KLD3_1	KLD3
20	Public consciousness.	KLD3_2	
21	Political participation.	KLD3_3	
22	Violate others' right**.**	KLD3_4	
23	Pacifistic conflict management.	KLD3_5	
24	Health care in ranges of age.	KLD4_1	KLD4
25	Health care for oneself.	KLD4_2	
26	Proper nutrition for your age.	KLD4_3	
27	Exercise for your age.	KLD4_4	
28	Non-Communicable Diseases: NCDs	KLD4_5	
29	Effects of environmental problem towards society.	KLD5_1	KLD5
30	Effects of environmental problem towards health.	KLD5_2	
31	Reducing environmental problem.	KLD5_3	
32	Taking part in reducing environmental problem.	KLD5_4	
33	Methods of environmental preserving.	KLD5_5	
	Skill (as Human Capital)	**SKL**	
34	Immediate problem solving,	SKL1_1_1	SKL1_1 / SKL1
35	Finding the source of a problem.	SKL1_1_2	
36	Problem analysis.	SKL1_1_3	
37	Reading natures of a problem.	SKL1_1_4	
38	Compress information into an overall picture or a conclusion. (from small points to a big picture)	SKL1_1_5	
39	Adapting principles into problem solving. (from an overall picture to a small point)	SKL1_1_6	
40	Comprehensive storytelling.	SKL1_2_1	SKL1_2
41	Capturing key points.	SKL1_2_2	
42	Good listener.	SKL1_2_3	

Please read each question carefully and <u>answer everything in every section / question</u>

No.	Skill (as Human Capital)	SKL		
43	Compromising conflicts in your worktime.	SKL1_2_4	SKL1_2	SKL1
44	Cooperating with other colleagues.	SKL1_2_5		
45	Open minded for different opinions.	SKL1_3_1	SKL1_3	
46	Creating new viewpoints.	SKL1_3_2		
47	Sharing your viewpoint with colleagues.	SKL1_3_3		
48	Operating with new viewpoint.	SKL1_3_4		
49	Adapting yourself to new ways of working.	SKL2_1_1	SKL2_1	SKL2
50	Adapting to the tighten schedule.	SKL2_1_2		
51	Positive management towards mistakes.	SKL2_1_3		
52	Finishing the work under confliction of opinions.	SKL2_1_4		
53	Setting a substantial and measurable goal.	SKL2_2_1	SKL2_2	
54	Balancing short-term and long-term goal.	SKL2_2_2		
55	Managing work priority.	SKL2_2_3		
56	Self-performance tracking/ inspecting/ evaluating.	SKL2_2_4		
57	Positive interaction towards people with different belief.	SKL2_3_1	SKL2_3	
58	Working in a team with diversity of ideas/ cultures.	SKL2_3_2		
59	Open-mindedly respond to different opinions.	SKL2_3_3		
60	Respecting others' work behaviour.	SKL2_3_4		
61	Work planning.	SKL2_4_1	SKL2_4	
62	Operating your work responsibilities.	SKL2_4_2		
63	Leading your crew to complete the goal.	SKL2_4_3		
64	Willing to accept both good and bad consequences from your work.	SKL2_4_4		
65	Inspiring your crew.	SKL2_5_1	SKL2_5	
66	Encouraging your crew to learn new things.	SKL2_5_2		
67	Convincing your crew to embrace changes.	SKL2_5_3		

Please read each question carefully and <u>answer everything in every section / question</u>

No.	Skill (as Human Capital)	SKL		
68	Being an example of ethical working.	SKL2_5_4	SKL2_5	SKL2
69	Evaluating/ Inspecting trustworthiness of the information.	SKL3_1_1		SKL3
70	Evaluating/ inspecting trustworthiness of the media.	SKL3_1_2		
71	Utilizing technology in creative/ productive ways.	SKL3_1_3		
Personality Characteristics (as Human Capital)		**CHAR**		
72	Critical Thinking.	ATT1		ATT
73	Problem Solving.	ATT2		
74	Creativity	ATT3		
75	Collaboration	ATT4		
76	Information Literacy	ATT5		
77	Self-learning	ATT6		
78	Communication	ATT7		
79	Global Awareness	ATT8		
80	Civic Literacy	ATT9		
81	Economic literacy	ATT10		

Section 3 Social Support

Questions: Please **evaluate yourself**: What is your **opinion level** with this issue:

1 = Disagree Strongly, 2 = Disagree, 3 = Slightly Disagree,
4 = Slightly Agree, 5 = Agree, 6 = Agree Strongly

No.	Social Support	SSp		
82	Your family are open minded each other.	SS1_1	SS1	SS
83	Your family are normally help each other.	SS1_2		
84	When you have a crisis in life, you can consult with your family.	SS1_3		

Please read each question carefully and answer everything in every section / question

No.	Social Support	SSp		
85	When you have a crisis in life, your family will encourage you.	SS1_4	SS2	SS
86	When you are sick, your family will take care of you.	SS1_5		
87	Your superior is a person who always support your work.	SS2_1		
88	When you have a work crisis, you can consult with your superior.	SS2_2		
89	When you have a work crisis, your superior will encourage you.	SS2_3		
90	When you are sick, your superior will appropriately help you.	SS2_4		
91	Your colleague is a person who always support your work.	SS3_1	SS3	
92	When you have a work crisis, you can consult with your colleague.	SS3_2		
93	When you have a work crisis, your colleague will encourage you.	SS3_3		
94	When you are sick, your colleague will appropriately help you.	SS3_4		
95	Your friend is a person who always support you.	SS4_1	SS4	
96	When you have a crisis in life, you can consult with your friend.	SS4_2		
97	When you have a crisis in life, your friend will encourage you.	SS4_3		
98	When you are sick, your friend will take care of you.	SS4_4		

Section 4: Aging Preparedness

Questions: Please **evaluate yourself**: What is your **opinion** with this issue:

False or True

No.	Aging Preparedness	PRE	
99	Now you have savings.	PRE1_1	PRE1
100	Now you own some non-monetary assets, such as a land, etc.	PRE1_2	
101	Now you have life insurance.	PRE1_3	

Please read each question carefully and answer everything in every section / question

No.	Aging Preparedness	PRE	
102	Now you have saved some money for emergencies.	PRE1_4	PRE1
103	Now you have a secondary job for extra earning.	PRE1_5	
104	Now you have planned income/expense ledger in advance before becoming old.	PRE1_6	
105	Now you have studied law related to rights of a senior citizen.	PRE1_7	
106	Now you have chosen to eat nutritiously with your age.	PRE2_1	PRE2
107	Now you have exercised regularly.	PRE2_2	
108	Now you regularly have a health check.	PRE2_3	
109	Now you have slept properly.	PRE2_4	
110	Now you are trying to control your weight to the standard.	PRE2_5	
111	When you find an abnormality in your body, you go to the doctor immediately.	PRE2_6	
112	Now you have studied information about body changes in elders.	PRE2_7	
113	Now you have taken care of yourself according to the way of body's regression in elders.	PRE2_8	
114	Now you have started learning knowledge about changes of mind and emotion in elders.	PRE3_1	PRE3
115	Now you have started learning ways of religion; for mental readiness when becoming an elder.	PRE3_2	
116	Now you have been practiced calming your emotion.	PRE3_3	
117	Now you have studied ways of dealing with stress.	PRE3_4	
118	Now you have applied the way of stress dealing to yourself.	PRE3_5	
119	Now you have talked to an acquainted person about preparing to live as an elder.	PRE3_6	
120	Now you have knowledge about a proper accommodation for elders.	PRE4_1	PRE4
121	Now you have started to arrange your house to be safe for elders.	PRE4_2	
122	Now you have prepared a proper accommodation for yourself when being an elder.	PRE4_3	

Please read each question carefully and <u>answer everything in every section / question</u>

No.	Aging Preparedness	PRE	
123	Now you have chosen a place where the transportation is friendly enough to live as an elder.	PRE4_4	PRE4
124	Now you have chosen a place with community; for living as an elder.	PRE4_5	
125	Now you have chosen a place where going to the hospital is fast and easy for yourself to live as an elder.	PRE4_6	
126	Now you have prepared a caretaker to look after yourself when being an elder.	PRE4_7	
127	Now you have participated in social activity or a social club.	PRE5_1	PRE5
128	Now you have known about activities you will attend to when being an elder.	PRE5_2	
129	Now you have prepared how to spend your free time as an elder.	PRE5_3	
130	Now you already have a hobby, and you will continue to do it in elderly.	PRE5_4	
131	Now you have known about interesting hobbies for elders.	PRE5_5	
132	Now you have friends who have the same age and the same hobby.	PRE5_6	

Section 5: Opinions and suggestions of aging preparedness.

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<u>Please check that all questions have been answered.</u>

Thank you very much.

APPENDIX D

Multivariate Normality

Multivariate Normality

```
INCLUDE file = 'C:\mardia.sps'.
  12  preserve.
  13  set printback=none.
  14  * Mardia's multivariate skew (b1p) and multivariate kurtosis (b2p)
  15  * Author: Lawrence T. DeCarlo, 11/97
  16  * Email: decarlo@exchange.tc.columbia.edu
  17  *
  18  * Multivariate skew is provided in a separate macro because it
  19  * is more computationally intense, particularly for large datasets
  20  *
  21  * Note: increase mxloops if n>50000.
 139  restore.
 140
 142  * End of INSERT and INCLUDE nesting level 01.
mardia vars = KLD1 KLD2 KLD3 KLD4 KLD5 SKL1 SKL2 SKL3 ATT PRE1 PRE2 PRE3 PRE4 PR
   E5 SS gender age edu marital income2/.


Run MATRIX procedure:

Number of observations:
   487

Number of variables:
    20

Univariate Skewness
Columns   1 -   7
   KLD1      KLD2      KLD3      KLD4      KLD5      SKL1      SKL2
 -.1154    -.1255    -.0650    -.1585    -.1096    -.1087    -.2310
Columns   8 -  14
   SKL3       ATT      PRE1      PRE2      PRE3      PRE4      PRE5
 -.0599    -.2344    -.7052    -.8194    -.9881    -.6440    -.5718
Columns  15 -  21
     SS    gender     age       edu     marital   income2    Std.Err
 -.0518     .2113   .0155    .7101      -.3466     .3275      .1107
```

Univariate Kurtosis

Columns 1 - 7

KLD1	KLD2	KLD3	KLD4	KLD5	SKL1	SKL2
-.3082	.0118	.2883	.0036	-.0128	.1847	.0997

Columns 8 - 14

SKL3	ATT	PRE1	PRE2	PRE3	PRE4	PRE5
.0644	.2457	-.5738	-.4331	-.2934	-1.1235	-1.2714

Columns 15 - 21

SS	gender	age	edu	marital	income2	Std.Err
-.5405	-1.9635	-1.4656	-.3553	-.9787	.1512	.2209

Mardia's multivariate skew (small sample adjustment: Mardia 1974 Sankya)

b1p	Chi(b1p)	p-value	adj-Chi	p-value
43.4699	3528.3070	.0000	3552.1216	.0000

Mardia's multivariate kurtosis

b2p	N(b2p)	p-value
498.0931	21.6082	.0000

------ END MATRIX -----

APPENDIX E

Descriptive Statistics

Descriptive Statistics

	N	Mean	Std. Deviation
Global awareness (KLD1)	487	3.5552	1.21413
Entrepreneurial literacy (KLD2)	487	3.3113	.91177
Civil literacy (KLD3)	487	3.8752	.92324
Health literacy (KLD4)	487	4.1347	.87240
Environmental literacy (KLD5)	487	4.0382	.93356
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Learning and innovation skill (SKL1)	487	4.0940	.83980
Life and career skill (SKL2)	487	4.1423	.82062
Information, media and technology skill (SKL3)	487	4.1451	.88524
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Attributes (ATT)	487	4.2228	.88708
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Economy (PRE1)	487	.6829	.31182
Physical health (PRE2)	487	.7166	.30032
Mental health (PRE3)	487	.7300	.33254
Accommodation (PRE4)	487	.6688	.37583
Free time usage (PRE5)	487	.6496	.39334
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Social support (SS)	487	4.3816	.91184
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Living amongst diversity of nationalities (KLD1_1)	487	3.39	1.359
Living amongst diversity of religions (KLD1_2)	487	3.52	1.342
Living amongst diversity of languages (KLD1_3)	487	3.43	1.328
Living amongst diversity of ages (KLD1_4)	487	3.84	1.278
Living amongst diversity of cultures (KLD1_5)	487	3.59	1.357
Global awareness (KLD1)	487	3.5552	1.21413
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
The 21st century economy (KLD2_1)	487	3.63	1.050
Sufficient economy (KLD2_2)	487	4.02	1.096
Digital economy (KLD2_3)	487	3.55	1.095
Thailand 4.0 model (KLD2_4)	487	3.54	1.051
QR code payment (KLD2_5)	487	3.29	1.281
Electronic banking (KLD2_6)	487	3.36	1.252
Internet payment (KLD2_7)	487	3.33	1.315
Investing in funds, government bonds, debt instruments, etc. (KLD2_8)	487	2.99	1.228
Being a small entrepreneur in 21st century (KLD2_9)	487	2.99	1.196
Marketing opportunity of a small business in your local area (KLD2_10)	487	3.02	1.175
Consumer behaviour in a context of a small business in your local area (KLD2_11)	487	3.15	1.164
Methods of distribution in in a context of a small business in your local area (KLD2_12)	487	3.08	1.141
Business competition in a context of a small business in your local area (KLD2_13)	487	3.11	1.180
Financial, economic, business and entrepreneurial literacy (KLD2)	487	3.3113	.91177
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Respect different opinions (KLD3_1)	487	4.08	1.146
Public consciousness (KLD3_2)	487	4.35	1.125
Political participation (KLD3_3)	487	3.68	1.267
Violate others' right (KLD3_4)	487	3.51	1.415
Pacifistic conflict management (KLD3_5)	487	3.75	1.212
Civil literacy (KLD3)	487	3.8752	.92324
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have knowledge about a proper accommodation for elders (PRE4_1)	487	.68	.467
Now you have started to arrange your house to be safe for elders (PRE4_2)	487	.72	.451
Now you have prepared a proper accommodation for yourself when being an elder (PRE4_3)	487	.66	.473
Now you have chosen a place where the transportation is friendly enough to live as an elder (PRE4_4)	487	.68	.469
Now you have chosen a place with community; for living as an elder (PRE4_5)	487	.64	.481
Now you have chosen a place where going to the hospital is fast and easy for yourself to live as an elder (PRE4_6)	487	.68	.467
Now you have prepared a caretaker to look after yourself when being an elder (PRE4_7)	487	.63	.483
Accommodation (PRE4)	487	.6688	.37583
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have participated in social activity or a social club (PRE5_1)	487	.64	.480
Now you have known about activities you will attend to when being an elder (PRE5_2)	487	.62	.485
Now you have prepared how to spend your free time as an elder (PRE5_3)	487	.68	.465
Now you already have a hobby, and you will continue to do it in elderly (PRE5_4)	487	.64	.481
Now you have known about interesting hobbies for elders (PRE5_5)	487	.66	.474
Now you have friends who have the same age and the same hobby (PRE5_6)	487	.65	.478
Free time usage (PRE5)	487	.6496	.39334
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Critical thinking and problem solving (SKL1_1)	487	3.9873	.90861
Communication and collaboration (SKL1_2)	487	4.1544	.91524
Creativity and innovation (SKL1_3)	487	4.1401	.92851
Learning and innovation skill (SKL1)	487	4.0940	.83980
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Immediate problem solving (SKL1_1_1)	487	4.04	1.008
Finding the source of a problem (SKL1_1_2)	487	3.98	.983
Problem analysis (SKL1_1_3)	487	4.00	.971
Reading natures of a problem (SKL1_1_4)	487	4.06	.970
Compress information into an overall picture or a conclusion. (from small points to a big picture) (SKL1_1_5)	487	3.90	.990
Adapting principles into problem solving. (from an overall picture to a small point) (SKL1_1_6)	487	3.93	1.008
Critical thinking and problem solving (SKL1_1)	487	3.9873	.90861
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Comprehensive storytelling (SKL1_2_1)	487	4.03	.962
Capturing key points (SKL1_2_2)	487	4.00	.951
Good listener (SKL1_2_3)	487	4.26	1.062
Compromising conflicts in your worktime (SKL1_2_4)	487	4.22	1.014
Cooperating with other colleagues (SKL1_2_5)	487	4.26	1.037
Communication and collaboration (SKL1_2)	487	4.1544	.91524
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Open minded for different opinions (SKL1_3_1)	487	4.26	1.066
Creating new viewpoints (SKL1_3_2)	487	4.06	1.001
Sharing your viewpoint with colleagues (SKL1_3_3)	487	4.13	.986
Operating with new viewpoint (SKL1_3_4)	487	4.10	.975
Creativity and innovation (SKL1_3)	487	4.1401	.92851
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Flexibility and adaptability (SKL2_1)	487	4.1170	.88099
Initiative and self-direction (SKL2_2)	487	4.07649	.855674
Social and cross-cultural skill (SKL2_3)	487	4.1093	.88859
Productivity and accountability (SKL2_4)	487	4.2254	.91676
Leadership and responsibility (SKL2_5)	487	4.1833	.87322
Life and career skill (SKL2)	487	4.1423	.82062
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Adapting yourself to new ways of working (SKL2_1_1)	487	4.17	.958
Adapting to the tighten schedule (SKL2_1_2)	487	4.11	.936
Positive management towards mistakes (SKL2_1_3)	487	4.06	.961
Finishing the work under confliction of opinions (SKL2_1_4)	487	4.12	.933
Flexibility and adaptability (SKL2_1)	487	4.1170	.88099
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Setting a substantial and measurable goal (SKL2_2_1)	487	4.04	.911
Balancing short-term and long-term goal (SKL2_2_2)	487	3.99	.957
Managing work priority (SKL2_2_3)	487	4.18	.962
Self-performance tracking / inspecting / evaluating (SKL2_2_4)	487	4.09	.910
Initiative and self-direction (SKL2_2)	487	4.07649	.855674
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Positive interaction towards people with different belief (SKL2_3_1)	487	4.01	.962
Working in a team with diversity of ideas / cultures (SKL2_3_2)	487	4.01	.970
Open-mindedly respond to different opinions (SKL2_3_3)	487	4.17	.992
Respecting others' work behaviour (SKL2_3_4)	487	4.25	.991
Social and cross-cultural skill (SKL2_3)	487	4.1093	.88859
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Work planning (SKL2_4_1)	487	4.11	.973
Operating your work responsibilities (SKL2_4_2)	487	4.30	1.004
Leading your crew to complete the goal (SKL2_4_3)	487	4.21	.969
Willing to accept both good and bad consequences from your work (SKL2_4_4)	487	4.29	1.021
Productivity and accountability (SKL2_4)	487	4.2254	.91676
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Inspiring your crew (SKL2_5_1)	487	4.18	.940
Encouraging your crew to learn new things (SKL2_5_2)	487	4.18	.949
Convincing your crew to embrace changes (SKL2_5_3)	487	4.10	.942
Being an example of ethical working (SKL2_5_4)	487	4.26	.962
Leadership and responsibility (SKL2_5)	487	4.1833	.87322
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Evaluating / Inspecting trustworthiness of the information (SKL3_1)	487	4.12	.963
Evaluating/ inspecting trustworthiness of the media (SKL3_2)	487	4.14	.971
Utilizing technology in creative/ productive ways (SKL3_3)	487	4.18	1.026
Information, media and technology skill (SKL3)	487	4.1451	.88524
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Critical Thinking (ATT1)	487	4.05	.966
Problem Solving (ATT2)	487	4.16	.971
Creativity (ATT3)	487	4.15	.994
Collaboration (ATT4)	487	4.37	1.016
Information Literacy (ATT5)	487	4.23	.969
Self-learning (ATT6)	487	4.29	1.017
Communication (ATT7)	487	4.24	.964
Global Awareness (ATT8)	487	4.24	.992
Civic Literacy (ATT9)	487	4.34	.981
Economic literacy (ATT10)	487	4.16	1.021
Attributes (ATT)	487	4.2228	.88708
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have savings (PRE1_1)	487	.77	.424
Now you own some non-monetary assets, such as a land, etc. (PRE1_2)	487	.66	.474
Now you have life insurance (PRE1_3)	487	.80	.398
Now you have saved some money for emergencies (PRE1_4)	487	.73	.444
Now you have a secondary job for extra earning (PRE1_5)	487	.55	.498
Now you have planned income/expense ledger in advance before becoming old (PRE1_6)	487	.69	.461
Now you have studied law related to rights of a senior citizen (PRE1_7)	487	.58	.494
Economy (PRE1)	487	.6829	.31182
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have chosen to eat nutritiously with your age (PRE2_1)	487	.75	.435
Now you have exercised regularly (PRE2_2)	487	.64	.479
Now you regularly have a health check (PRE2_3)	487	.70	.460
Now you have slept properly (PRE2_4)	487	.73	.444
Now you are trying to control your weight to the standard (PRE2_5)	487	.71	.456
When you find an abnormality in your body, you go to the doctor immediately (PRE2_6)	487	.76	.425
Now you have studied information about body changes in elders (PRE2_7)	487	.70	.457
Now you have taken care of yourself according to the way of body's regression in elders (PRE2_8)	487	.74	.440
Physical health (PRE2)	487	.7166	.30032
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have started learning knowledge about changes of mind and emotion in elders (PRE3_1)	487	.69	.465
Now you have started learning ways of religion; for mental readiness when becoming an elder (PRE3_2)	487	.66	.475
Now you have been practiced calming your emotion (PRE3_3)	487	.77	.421
Now you have studied ways of dealing with stress (PRE3_4)	487	.78	.416
Now you have applied the way of stress dealing to yourself (PRE3_5)	487	.77	.424
Now you have talked to an acquainted person about preparing to live as an elder (PRE3_6)	487	.72	.448
Mental health (PRE3)	487	.7300	.33254
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have knowledge about a proper accommodation for elders (PRE4_1)	487	.68	.467
Now you have started to arrange your house to be safe for elders (PRE4_2)	487	.72	.451
Now you have prepared a proper accommodation for yourself when being an elder (PRE4_3)	487	.66	.473
Now you have chosen a place where the transportation is friendly enough to live as an elder (PRE4_4)	487	.68	.469
Now you have chosen a place with community; for living as an elder (PRE4_5)	487	.64	.481
Now you have chosen a place where going to the hospital is fast and easy for yourself to live as an elder (PRE4_6)	487	.68	.467
Now you have prepared a caretaker to look after yourself when being an elder (PRE4_7)	487	.63	.483
Accommodation (PRE4)	487	.6688	.37583
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Now you have participated in social activity or a social club (PRE5_1)	487	.64	.480
Now you have known about activities you will attend to when being an elder (PRE5_2)	487	.62	.485
Now you have prepared how to spend your free time as an elder (PRE5_3)	487	.68	.465
Now you already have a hobby, and you will continue to do it in elderly (PRE5_4)	487	.64	.481
Now you have known about interesting hobbies for elders (PRE5_5)	487	.66	.474
Now you have friends who have the same age and the same hobby (PRE5_6)	487	.65	.478
Free time usage (PRE5)	487	.6496	.39334
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Family support (SS1)	487	4.6554	1.00777
Superior support (SS2)	487	4.3480	.94812
Colleague support (SS3)	487	4.2705	1.04470
Companion support (SS4)	487	4.2526	1.05134
Social support (SS)	487	4.3816	.91184
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Your family are open minded each other (SS1_1)	487	4.51	1.042
Your family are normally help each other (SS1_2)	487	4.65	1.051
When you have a crisis in life, you can consult with your family (SS1_3)	487	4.65	1.090
When you have a crisis in life, your family will encourage you (SS1_4)	487	4.70	1.072
When you are sick, your family will take care of you (SS1_5)	487	4.77	1.090
Family support (SS1)	487	4.6554	1.00777
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Your superior is a person who always support your work (SS2_1)	487	4.55	1.005
When you have a work crisis, you can consult with your superior (SS2_2)	487	4.53	1.022
When you have a work crisis, your superior will encourage you (SS2_3)	487	4.19	1.113
When you are sick, your superior will appropriately help you (SS2_4)	487	4.13	1.079
Superior support (SS2)	487	4.3480	.94812
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Your colleague is a person who always support your work (SS3_1)	487	4.23	1.063
When you have a work crisis, you can consult with your colleague (SS3_2)	487	4.30	1.100
When you have a work crisis, your colleague will encourage you (SS3_3)	487	4.31	1.090
When you are sick, your colleague will appropriately help you (SS3_4)	487	4.23	1.082
Colleague support (SS3)	487	4.2705	1.04470
Valid N (listwise)	487		

Descriptive Statistics

	N	Mean	Std. Deviation
Your friend is a person who always support you (SS4_1)	487	4.24	1.080
When you have a crisis in life, you can consult with your friend (SS4_2)	487	4.23	1.106
When you have a crisis in life, your friend will encourage you (SS4_3)	487	4.29	1.078
When you are sick, your friend will take care of you (SS4_4)	487	4.25	1.126
Companion support (SS4)	487	4.2526	1.05134
Valid N (listwise)	487		

BIOGRAPHY

NAME	Ms. Kiratikan Sadakorn
ACADEMIC BACKGROUND	Bachelor's Degree with a major in Health Science from Thammasat University, Pathumthani Province, Thailand in 2003 Master's Degree in Social Development from Kasetsart University, Bangkok, Thailand in 2007
EXPERIENCES	2007 – 2010, International Affair Officer, International Affair Division, Kasetsart University, Bangkok, Thailand 2010 – 2020, Assistant Researcher, Center of Excellence for Jatropha, Kasetsart University, Bangkok, Thailand