

# The development of an educational support program to promote independence among the elderly

—The result of a Cross Tabulation Analysis of two questionnaires—

Momoko Yamazaki and Minako Inoue

## Abstract

This study was designed to aid in developing an educational support system for encouraging independent living among the elderly. Participants of this study are 25 elderly men and women, aged in the 60 s to 90 s, who live in a rural agricultural area in Yamanashi prefecture. Cross tabulation analysis has been completed, based on the results of two questionnaires: a self-assessment on their independence, health, quality of life (QOL), and self-actualization, and the participants' experience and perception regarding English learning.

The results reveal a positive relationship between the subjects' self-assessment of their degree of independence and previous English learning as well as between previous learning and participants' rating of their health.

However the research found that many participants who claimed that they were very or fairly healthy (especially physical) showed little interest in such learning, this suggests that it is necessary to consider a variety of activities which can reinforce mental domain in implementing a successful program for the elderly.

The ultimate goal of our study is to implement an elderly program which promotes not only physical health in its participants but also mental and social health. The findings of the present study suggest that having a positive image of one's own independence may be a key to participating in learning programs.

Key Words : educational support program

elderly persons

cross tabulation analysis

self assessment of independence, quality of life, and self-actualization

previous English learning

## I Introduction

Japan is entering a new era, that of a “super aging society” in which the nation faces a serious demographic change: a decreasing younger population and an increasing elderly population<sup>1)2)</sup>. Responding to these new demographics, Japan’s Ministry of Health, Labor and Welfare has reformed the long term care insurance system (*Kaigo hoken*)<sup>1)2)</sup>. Considering limited resources and the burden on younger generations for the medical expenditure for the elderly, it was necessary to accommodate long term care service with medical care insurance. The principle of this movement is that in this aging society, all individuals are responsible for the prevention against their aging and the maintenance of their own health<sup>3)</sup>.

The underlying philosophy here matches the promotion of independence and social participation in a universal society described in the International Classification of Functioning, Disability and Health (ICF) by the World Health Organization<sup>4)</sup>. The Ministry has introduced a new medical system for the elderly, aged over 75, in which recipients share the expense of medical care. At the same time, an increasing diversity among the elderly not observed in previous eras, has become prominent. Such differences include not only health but also financial matters such as income and assets, family environment, personal experience, and values. Therefore, the new long term care insurance system (*Kaigo hoken*) seeks to accommodate the social situation in Japan. Based on the principle that individuals are responsible for their own health management and promotion, the administration provides medical care to support self-sufficiency and to maintain and promote the quality of life for individuals<sup>5)6)</sup>. This system is believed to optimize and improve the efficacy of medical expenditure for the elderly and efficient delivery of medical care.

Building a regional rehabilitation system that promotes the health of the elderly is another government strategy. According to the Ministry of Health, Labor and Welfare, this comprehensive approach to disease management promotes a positive attitude a preventative approach in long-term care, and social participation by the elderly<sup>6)</sup>. Under such circumstances, various programs on physical health such as muscle training, oral hygiene, and healthy nutrition have been introduced nationwide<sup>7)</sup>. These preventive measures for physical health have not paid enough attention to participants’ mental, psychological, and social health, possibly due to the difficulty of measuring these domains<sup>8)</sup>. However, interviews and/or participants’ written self assessments can be appropriate techniques to measure the mental and social status of individuals including self-satisfaction or happiness<sup>8)9)</sup>. Therefore, using such measurements, the present study examines various factors which may influence participation in a program for the

elderly.

In Maslow's Hierarchy of Needs theory, the top level of human needs is associated with psychological needs, so individuals should be highly motivated to achieve such needs<sup>10)(11)</sup>. Running a successful support program for the elderly requires active participation. Thus, participants' motivation becomes a key for such active participation. Most programs available in this field pay little attention to mental and social health. However, the ultimate goal of the present study is to run such a successful program, one which promotes not only physical health but also the mental and social health of participants. The present Study addressed the following questions :

Q 1 : What kinds of traits are exhibited by individuals who show interest in a learning program ?

Q 2 : How does previous learning experience affect participation ? (Is previous learning an important factor for participation ? )

Q 3 : What are the necessary factors for participation in the program?

By examining the above questions, this study hopes to consider the effective and attractive programs for the elderly in which they are motivated to participate.

## II The research design

In this study, investigators examined two elderly salons in F city of Y prefecture from Fall 2004 to Spring 2006. The study was conducted under the support of The Council of Social Welfare of F city. The researchers implemented a program which encouraged participants to be involved in various activities designed by the researchers (See Note 1). As mentioned, the present study sought to implement a program which focused on participants' mental and social promotion. During this implementation process, the participants were asked to answer three questionnaires. Questionnaire I was a self-assessment, focusing on independence, health, quality of life (QOL) and self-actualization. The results of the study used the questionnaire II has been published recently.<sup>12)</sup> Thus the results of this questionnaire are not included in the present study. Questionnaire III deals with English learning. Finally, it was decided to use Questionnaire I and III in this research.

### (1) Participants

A total of 38 participants who attended two salons in F city responded to the questionnaire. Ages ranged from 61 to 92 including 10 males and 28 females. For questionnaire I, 38 responded and for questionnaire III, 32 responded. For the cross tabulation analysis, only those who responded, to both questionnaires (N=25) were used for this research. These included 6 males and 19 females. District welfare

commissioners, assistants, and volunteers were also included in this population. Unanswered responses were eliminated from data analysis beforehand.

## **(2) Measurement**

Questionnaire I : The questionnaire consisted of 9 questions categorized into four sections: degree of independence, health status, Quality of Life (QOL), and self-actualization. First, participants assessed their degree of independence in general as well as their mental, physical, and social independence. Then participants were asked their health status. They assessed their mental, physical, and social health status. Next, participants evaluated the quality of their lives. The last question asked them to assess their self-actualization. In these questionnaires, participants used a 5 point likert scale.

Questionnaire III: This questionnaire was designed to measure participants' experience of English as well as their interest in learning English. The questionnaire consisted of 9 questions. Participants were asked their previous learning experience of English and their experience with foreigners and foreign countries. Their interest in English learning was also questioned. Finally, participants were asked about their ability to read and write the alphabet. These were multiple choice questions in which participants marked appropriate answers for each question.

## **(3) Cross Tabulation Analysis**

Cross Tabulation Analysis was used to understand the various factors involved in this study as well as their interrelations. The relationship between the participants' previous English learning experience and their assessments of the degree of independence, health, quality of life (QOL), and self actualization were examined first. Then, the relationship between the participants' experience of traveling abroad and their assessments in the four categories were investigated. Finally, the relationship between participants' interest in English learning and their assessments in the four categories were examined. The significance of the relationship among the items was investigated throughout the analysis.

## **(4) Concept definition**

Definition of terms used in this study :

1. Self-actualization : having a varied life, having control of one's own life
2. External environmental condition : individuals' physical strategies in engaging in activities. In this case, going to foreign countries to learn foreign languages and cultures.
3. Internal condition : individuals' inner voluntary strategies to engage in the activities. In this case, motivation to learn English in order to understand English or a foreign culture.

## IV Result of the study

### (1) English learning experience and degree of independence

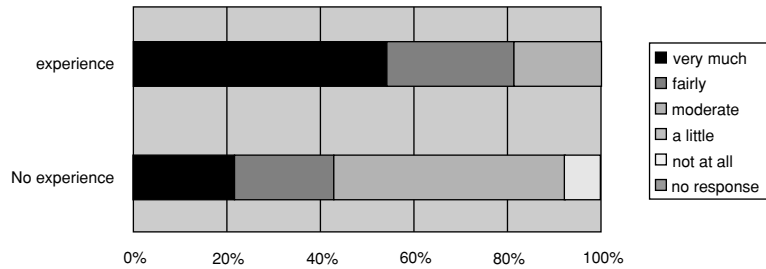


Figure 1 English learning experience and degree of independence in general

X axis indicates percentage of responses Y axis indicates experience of English learning. (X axis indicates the same percentage scale and Y axis changes to indicate ones depending upon each item of questionnaires in the following Figures)

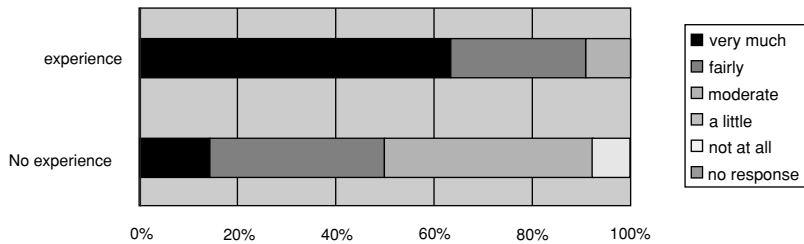


Figure 2 English learning experience and degree of mental independence

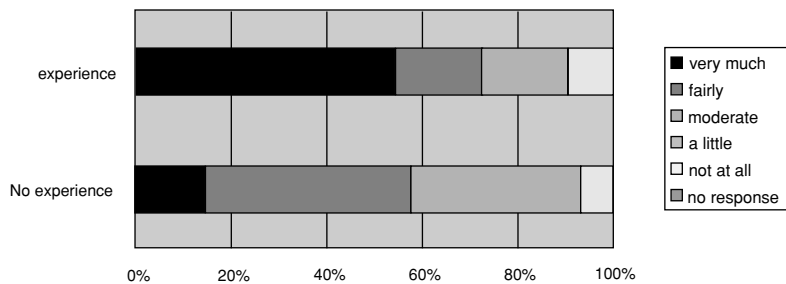


Figure 3 English learning experience and degree of physical independence

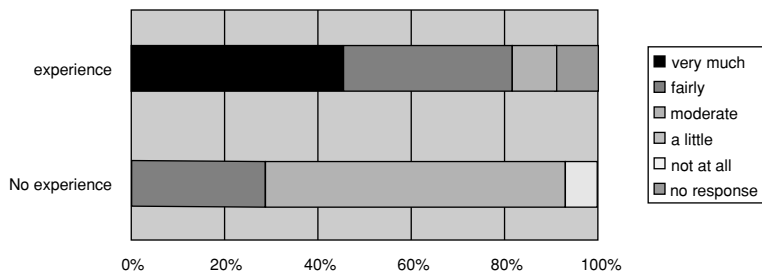


Figure 4 English learning experience and degree of social independence

First, cross tabulation analysis was conducted, focusing on participants' English learning experience and their self-assessment of the degree of independence in general as well as physical, mental and social independence (Figure 1, 2, 3, 4). There is a positive correlation between these variables. More participants who had English learning experience rated their degree of independence very or fairly high, compared to those who had never had such learning experience. For example, in Figure 2, among those who had previous learning experience, 63% responded that they were very independent and 27% responded they were fairly independent.

(2) English learning experience and health status

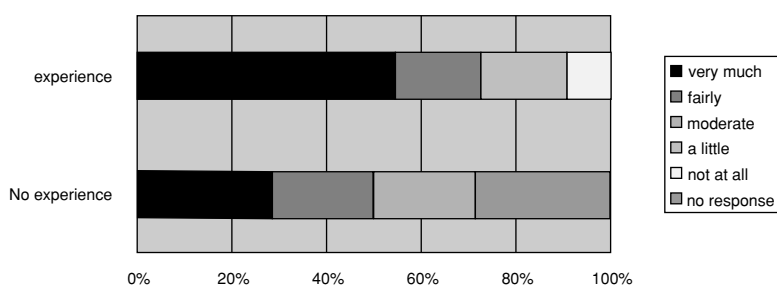


Figure 5 English learning experience and degree of physical health

Another two variables, English learning experience and health condition, also showed a positive correlation. It was found that those who had English learning experience rated their physical, mental, and social health very or fairly good. However, it should be noted that among those who did not have previous learning experience, half of them also rated their health status very or fairly good (Figure 5).

(3) English learning experience and QOL

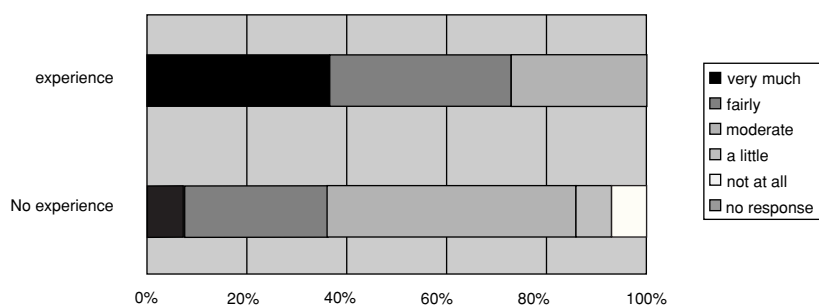


Figure 6 English learning experience and degree of quality of life (QOL)

More than 70% of participants who had English learning experience responded that they are leading either very or fairly comfortable lives (high quality of life). On the other hand, less than 30% of participants who did not have English learning experience responded they had either very or fairly comfortable lives (Figure 6).

(4) English learning experience and self-actualization

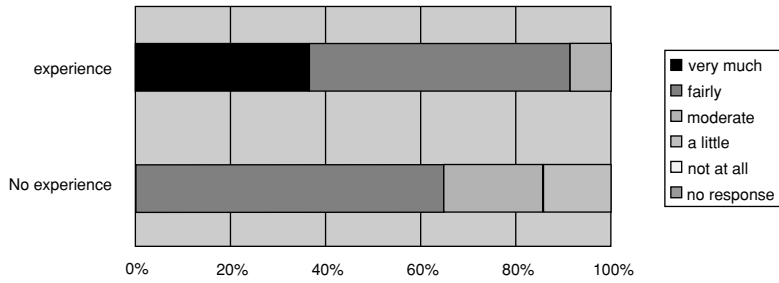


Figure 7 English learning experience and degree of self-actualization

More than 80% of participants who had English learning experience responded that they were achieving very or fairly high self-actualization, implying an active and varied lifestyle by the participants. Among those with no previous learning of English, none rated their self-actualization quite low. However, more than 60% responded that they achieved self-actualization to a fair degree. None claimed that their self-actualization was very high (Figure 7).

(5) External environmental conditions

Traveling abroad and degree of independence

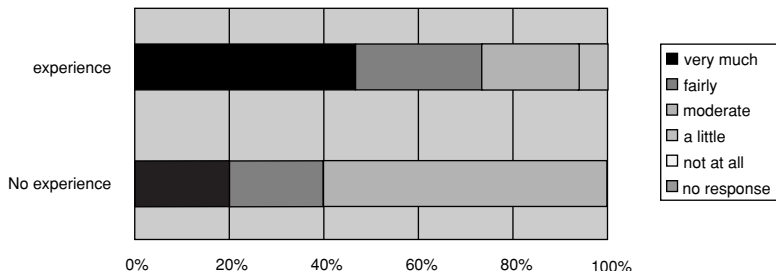


Figure 8 Experience of traveling overseas and degree of independence in general

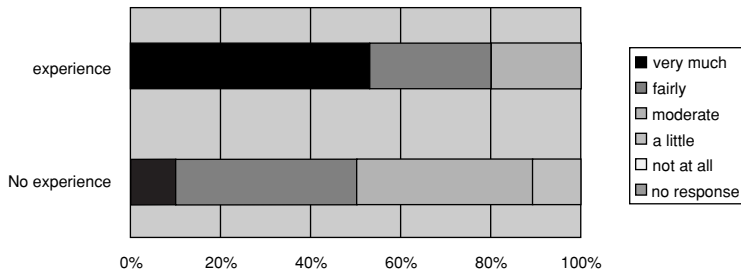


Figure 9 Experience of traveling overseas and degree of mental independence

As defined previously, traveling abroad an external condition. In Figure 9, more than half of those who have traveled abroad responded that they were very or fairly independent mentally. This correlated with the results in Figure 8 which show that

more than half of the participants who never traveled abroad rated their degree of independence as either moderate or little. It shows a weak correlation between the degree of independence and external conditions.

Traveling abroad and health status

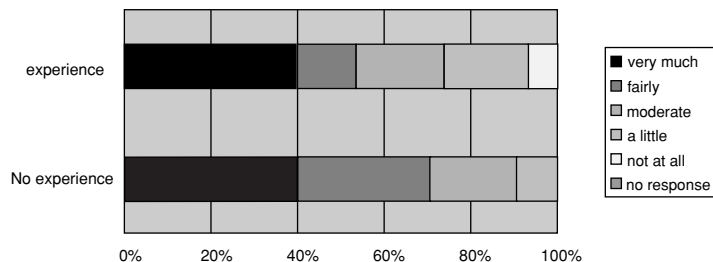


Figure 10 Experience of traveling overseas and degree of physical health

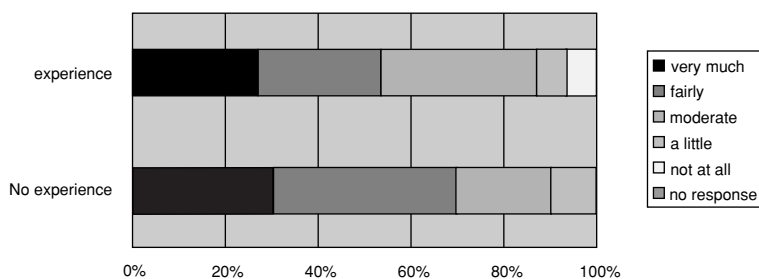


Figure 11 Experience of traveling overseas and degree of social health

As shown in Figure 10 and 11, there is no clear relation between these two variables.

(6) Internal condition

Interest in English learning and degree of independence

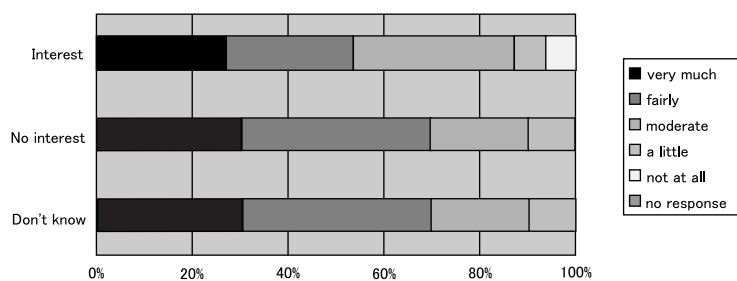


Figure 12 Interest in English learning experience and degree of independence in general



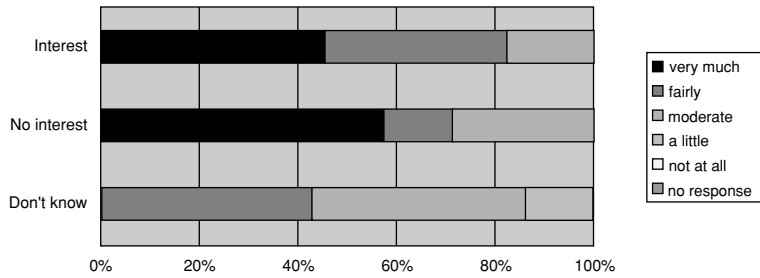


Figure 13 Interest in English learning experience and degree of mental independence

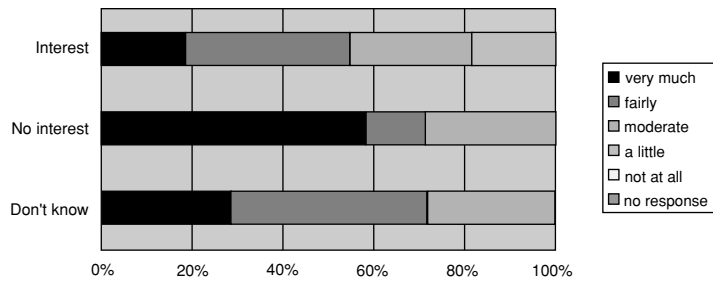


Figure 14 Interest in learning English degree of physical independence

According to our definition, interest in learning English is viewed as an internal conditions. More than 80% of respondents who showed interest in learning English said that they were very or fairly independent in general as well as mentally (Figures 12 and 13). On the contrary, among those who rated their physical independence very high, more than half of the respondents claimed that they have no interest in such learning (Figure 14).

#### Interest and health condition

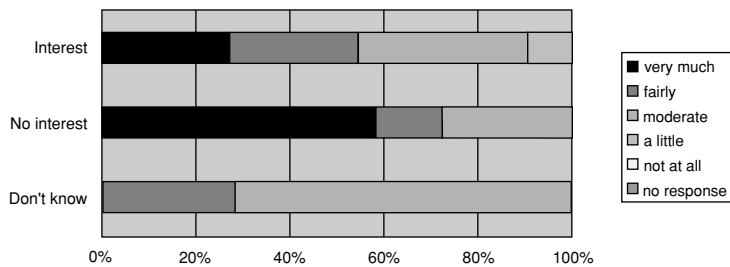


Figure 15 Interest in learning English and degree of mental health

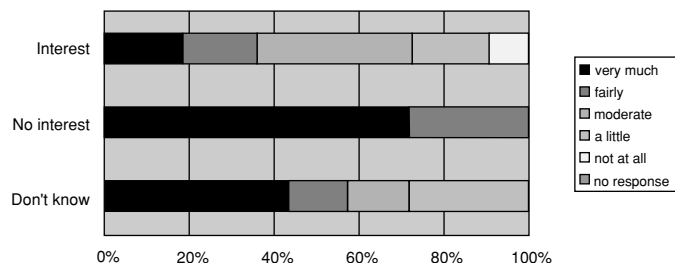


Figure 16 Interest in learning English and degree of physical health

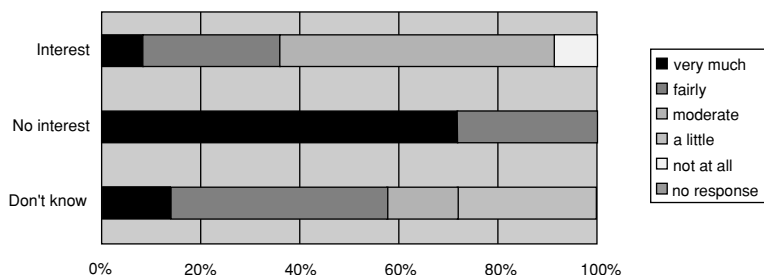


Figure 17 Interest in learning English and degree of social health

In general, more participants who rated their health status as very or fairly good showed no interest in learning English (Figures 15, 16, 17). This tendency was more apparent among the participants who claimed that they are very healthy physically, mentally, and socially. More than half of them responded that they were not interested in learning English. On the other hand, the health condition of those who showed an interest varied. Thus, there was a weak correlation between their health condition and interest in learning.

## V Discussion and Implications

As we mentioned before, within the system of ICF, which proposed a classification system of health and health-related status, disabilities should not be viewed in contrast to the general concept health, but rather on a continuum of health<sup>4)13)</sup>. Moreover, the holistic approach that ICF emphasizes highlights the interaction between individuals and the environment<sup>4)11)</sup>. ICF has used these parameters for functional status assessment, goal setting and treatment planning, on-going evaluation and monitoring, as well as outcome measurement in the present social welfare service. Thus, the concept of continuity and a holistic approach in relation to the surrounding environment has become essential to deal with the health of the elderly. It is essential to understand that health means functioning independently in the surrounding environment<sup>4)14)</sup>.

Japan's again introduced long term insurance system (*Re-Kaigo hoken*) aims to

respond to society's concern about successfully responding to the needs of the aged. It targets 75 percent of the vivid elderly aged 65 and older. But it provides services to the elderly, mainly focusing on physical health care such as muscle training and oral hygiene<sup>15)</sup>. However, without attending to the needs of mental and social health, in other words a holistic approach, which supports independent living with dignity for the elderly and a positive attitude toward their lives, are not likely to be accomplished. Our research showed such phenomena (Figure 5-7), include external and internal conditions (Figure 8-12). In such a situation, the social welfare service seeks to utilize programs which promote not only the physical but also the mental and social health of the elderly<sup>9)16)</sup>. The present study addressed this issue through implementing Example program of English learning activities, aiming to exercise and promote participants' mental activity voluntarily. Such activities are also believed to develop social interactions among participants. Investigation of participants' previous learning and traveling experiences, their interest in learning in relation to their self-assessment on the degree of independence, health status, QOL and fruition of their lives was carried out. The aim of this investigation was to study factors involved in participation in the programs as well as to understand the relationship among these factors. Understanding such possible influential factors is critical to implement effective programs which attract participants.

Thus the results of cross tabulation analysis lead us to the following conclusions.

**First**, there was a high correlation between previous English learning experience and self-evaluation of independence. When participants have English learning experience, they rate their degree of independence, especially mental independence, very high. It may be speculated that previous education may contribute to constructing a positive self-image of independence.

**Second**, individuals who show an interest in learning activities rate their degree of independence very high. Since interest in attending the program is closely related to voluntary motivation, having a positive image of independence correlated with high motivation.

**Third**, in terms of participants' self-assessment of their health in relation to previous learning and interest, it also showed positive correlations between these variables.

However, the correlation was not as high as observed in the first findings on the relationship between the participants' previous learning experience and the degree of independence as well as between their interests and the degree of independence. Healthy individuals are not always interested in participating in English learning activities. These findings suggest that a variety of learning activities which can meet the different preferences and needs of participants is needed<sup>10)11)</sup>. Such variety is

believed to motivate individuals to participate in the program. Therefore, programs for the elderly in future should be constructed, implemented and evaluated<sup>17)</sup>.

Currently the concept of 'aging' is still vague<sup>9)16)</sup>. Aging is a process of various changes in physical, psychological, and social domains. In such a change, how individuals think, believe, view, and expect would also change in different social contexts. Constructing positive ways of understanding such changes associated with the aging process becomes a critical issue in this aging society<sup>16)</sup>. At the same time, we should recognize that the recent population structure in Japan shows a new diversity among the elderly not seen previously. The differences include aspects of health, finance, family environment, personal experiences, and values<sup>17)</sup>. Thus sound service for the elderly should accommodate such diversity. The service aim to support individuals to be socially independent and to have productive lives while maintaining physical, mental, and social wellness. The recent focus on life-long learning and gerontology, the study of aging and its physical, psychological and social impacts, is evidence of the response to this diversity in a super-aging society<sup>8)18)</sup>. Promoting images of the elderly and their self-confidence in physical, mental, and social health are critical in implementing effective programs.

The Japan Aging Research Center raised the following four fundamental concepts in implementing effective and meaningful measures for the elderly. ①. Emphasis on the independence, participation, and choices of the elderly, ②. Systematic implementation of measures throughout people's lives, ③. Prospect of regional autonomy and ④. Effective implementation of the measures. As mentioned before, affective aspects of life such as mental and social health are not easy to measure, which leads to difficulties in implementation and evaluation<sup>18)19)</sup>. However, such aspects are closely related to individuals' self-confidence. Therefore, programs for the elderly should be organized to include all aspects of the health concept. The last but not least important point is that such programs should be attractive to the elderly population. The program should encourage feelings of self-worth and usefulness. Despite the common belief that there is a decline in the ability to learn as people get older, many studies on aging have shown that learning abilities do not decline with age although chronic diseases such as visual acuity and hearing loss can inhibit learning<sup>18)</sup>. Schleppegrell, M (1987) suggests that in order to implement a successful learning program, it is important to meet the needs of the adult learner<sup>18)19)</sup>. She argues that learning should be a pleasurable experience for the older adults who can exercise their self-directedness, their life experiences, and their independence as learners. Therefore, tapping into the elderly individual's self-confidence and motivation to learn seems key to running successful programs. Another key is to create a supportive environment. As the aging society progresses and the

proportion of the elderly population becomes larger, a mutual support system in which everyone, regardless of age, sex, career, and education achieve a fulfilling life. In this universal support system, it is realized that we are all participants who can contribute to our society. It accords with the principles ICF proposes. Without such awareness, it will not be easy to overcome the financial burden of this super aging society.

Note 1: These activities include English learning, a personality test (egogram) and a simple math calculation exercise for self-cultivation. The manual which describes the program, instruction for the activities, and exercises are developed for this study and provided to the participants (Report of a program for promoting elderly's health: corporative program of medicine, hygiene and education, Health Science University 2004).

Note 2: Limitations of the study: In questionnaire I, the questions regarding independence were designed to ask degrees of (1) individual independence in general, (2) physical independence (3) mental independence and (4) social independence. However, it seems that the term 'social independence' caused some confusion among the respondents. For example, in Figure 4, responses among those who have had previous learning experience vary, compared to Figure 1, 2, and 3. It may be speculated that the meaning of the term "socially independent" may not have been clear; the respondents' confusion might have led to this variation on this particular question. Confusion of terminology was also observed in the questions which asks about quality of life the fruitfulness of life. Since the term 'self-actualization' was not clearly defined on the questionnaire it might have led to divergent answers. Such results have warned the researchers to clarify the definitions so that researchers and participants may come to a mutual understanding of terms. Another limitation of this study was the number and nature of the participants. Due to the limited number of subjects in our study and, partially due to the inconsistent attendance of the elderly, it may not be appropriate to generalize our results in other populations. However, it is believed that our research raises issues and future prospects for implementation of programs which promote the mental and social health of the elderly in Japan.

## Bibliography

- 1) Ministry of Health, Labour and AWelfare, Home Page (2006).
- 2) Journal of Health and Welfare Statistics (2006) vol. 53, No. 7.
- 3) Murakami, K. (2002) "Research on a local system which promote living function and social participation of elderly." *Foundation for Advancement for International Science*
- 4) World Health Organization (2001) Geneva ICF; International Classification of Functioning, Disability, and Health, pp. 11-13, 212-214. WHO home page (2005).
- 5) Fujimoto, K., et.al (2004) "Research on factors which determine quality of life among elderly living in rural areas" *Index of Social Welfare*, vol. 51 : pp. 24-32.
- 6) Anme, T. (2004) "Social relationship as an index for evaluation of welfare - Study on

- mortality and social relationship among the elderly.” pp. 1-16.
- 7) Noda, M. (2006) “Considering possibilities of support program for independent living” *Comprehensive Research Institute for Social Welfare*, vol. 8 : pp. 58-81.
  - 8) Japan Aging Research Center (1998) Report of the project in aging society. *Aging in Japan 1998*.
  - 9) Matsui, Y. (eds.) (2004) *Measurement for Psychology*. Science Press. pp. 57-62.
  - 10) Yamazaki, M. (2006) “What is a needs-oriented welfare services in a care home for aged people?”, *The Journal of Japan Geriatrics*, vol. 43, pp. 58-61.
  - 11) Yamazaki, M. (2006) A trial-making a needs-extraction questionnaire in quality assessment for welfare-services-From the standpoint of ICF Universal Model, Health Science University, *Journal of research*, vol. 2, pp. 159-172.
  - 12) Yamazaki, M. (2006) “Assistive Technology and the Effective Usage of Soft Welfare Information: An example of questionnaire result which applied ICF independent scale - Attitude” *The Journal of The Japan Society for Welfare Engineering*. vol. 8 : 2-7.
  - 13) Akiyama, T. (2005) *Philosophy of Welfare*, Mineruva Shobo : pp. 55-65.
  - 14) Yamazaki, M (1998) Research regarding the special education for developmental delayed children and the applied research of quality function deployment for welfare services, thesis of Ph. D., Yamanashi University.
  - 15) Nikitachi (2006) Future direction of new Kaigo Hoken, Revolution of re-structure system of social welfare, *The Journal of Japan Social Welfare*, vol. 95, pp. 20-28.
  - 16) Hori, S. (1999) *Concept of Educational Gerontology– Education and Long–life learning* Gakushusha.
  - 17) Oishi, S., Diener, E. et.al(1999) “Cross-Cultural Variations in Predicators of Life Satisfaction: Perspectives From Needs and Values” *Personality and Social Psychology Bulletin* : pp. 980-990.
  - 18) Ostwald, S. K., & Williams, H. Y. (1985). Optimizing learning in the elderly : A model. *Lifelong Learning : An Omnibus of Practice and Research*, 9 (1), pp. 10-15.
  - 19) Schleppegrell, M. (1987). *Can older adults successfully learn foreign languages ?* Washington, DC : ERIC Clearinghouse on Languages and Linguistics.