

**Aging and Age-related factors:
Effects on Foreign Language Achievement
An implementation Guide for Career-Specific English
Teaching in Adult Learners**

Salinee Antarasena

Abstract

Currently, biological and cognitive theories present an explanation for correlation between learning of a foreign language according to age levels of the learners, and differences in foreign language achievement. This study then reports a pilot project examining how aging and age-related factors affect foreign language acquisition. In the cross-sectional pilot design, a sample of 30 nurses was used, and two-way ANOVA analysis was performed to investigate variables associated with language competence among learners across diverse age groups. Finally, the implications of study suggest a desirable future direction for teaching career-specific English, and a need for diversity in age among employees at work place where English-speaking employees are needed.

Introduction

For years, the government's plans for establishing Thailand's international reputation as a medical hub of Southeast Asia by 2008 have strived to accelerate the development and implementation of healthcare expertise in order to serve the rising number of patients from abroad. The ethnic diversity among the care seekers includes not only native-speakers who could communicate in English fluently, but also those whose English-language skills limit their ability to explain medical problems in English to a care provider, or to understand verbal and written explanations and instructions given in English during the medical visit (Figure 1).

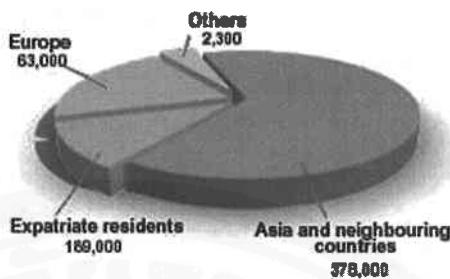


Figure 1: No. of Foreign Patients Seeking Treatment at 33 Private Hospitals in Thailand (2002)

Source: Department of Export Promotion, Ministry of Commerce

Among the factors that may contribute to accessing needed healthcare services are the numerous English-speaking healthcare professionals, in accordance with a rising number of quality services. Further, the linguistic and cultural competency of caregivers are also important to eliminate “differences” in clinical practice and healthcare delivery, which are one of the factors in health disparities.

In view of this, Rajvithi Hospital has thus invested in English trainings for their staffs in order to reaffirm that their recognized capacities in healthcare services will be moved ahead. A pilot study was then organized to increase the quality of the communication delivered in English and to seek a desirable future direction for career-specific English teaching. The project was of four-week duration and of part time basis, at intervals of approximately 4-5 days to provide the participants enough time for lesson review. The course introduced verbal and nonverbal communication situations that often occur when people from different countries interact. Primary areas of teaching include greetings, giving directions and instruction, explaining written examination reports as well as eye contact, facial expressions and gestures.

Literature Review

In past decades, language teaching has focused its interest in the individual diversity, and a curriculum for adult learners should be focused on the their needs and interests (Haycraft, 1984; Linderman, 1926). Some researchers have suggested that the age effect is a dominant pervasive influence in foreign language acquisition and competence, along with other variables in age difference such as personal motivation, anxiety, input and output skills, settings and time commitment (Thorndike, 1928; Birdsong, 2001). Thorndike (1928) claimed that the ability to learn declined at about 1% per year after age twenty-five.

Although the optimum age for foreign language acquisition is still a matter of controversy, some evidences of age effect and foreign language acquisition negative correlation do not deny the possibility that later learners may achieve success in second language acquisition and competence. Yet, different teaching strategies, alternative assessment methods, and new ways of teacher preparation are needed (Thomas, 1992).

Schaie (1994) noted that although one's ability to learn improves gradually until about age forty at which time the abilities tend to stabilize until approximately age sixty, the decreases are small until mid seventies, and noticeable overall mental decline in the primary abilities does not generally occur until later in life. Some researchers explain that slowing of new information of older adults may occur because of a large knowledge base, or their extensive past learning experience, which shows the decline of learning speed, not intellectual power (Sternberg & Berg, 1992).

Some studies report different cognitive functions having different life courses, and although a sensory-cognitive link appears to have a substantial impact on cognition of the elderly, recognizing changes in sensory and cognitive functions may speed information processing, as

many people retain many cognitive capabilities into very advanced years (Hultsch et al., 1998; ; Lindenberger & Baltes, 1994; Schaie, 1994;). Seliger (1975) argued that while acquisition of new language outside the optimum age period is not impossible, it will proceed by a different route from younger learners.

Teaching methods is thus claimed to be the second impact on their success in new language learning. Generally, because of greater memory storage and capability of conceptual system, older adults may learn faster and more efficiently when cognitive involvement and contextual support have been taken into account (Harley, 1986).

Some cognitive psychologists have identified two distinct kinds of intelligence--fluid intelligence and crystallized intelligence--that helped account for improved performance by adults. Cattell (1963) made the distinction between 'fluid intelligence' and 'crystallized intelligence', and claimed that the age curve of these two abilities is quite different. They both increase up to the age of about 15 or 16, and slightly thereafter, to the early 20s. Then, fluid intelligence steadily declines because of the physiological changes that accompany aging whereas crystallized intelligence, or aspect of cognition in which initial intelligent judgments have become crystallized as individual habits, stays high and do not appear to be critical to performance.

Later, this helps to develop a theory of literacy as information processing skills and comprehension that can inform new approaches to adult education. Merriam (2001) considers that since the traditional classroom is far from any similarities to the real life situation, learners in early adulthood thus perform at a higher level [than older learners] where rote memorization that is part of fluid intelligence is measured. Older adults, on the contrary, have a deep-need to be self-directing, and generally want to immediately apply new information or skills to current

problems or situations and do not wish to learn what they will never use (Lightbown et al., 1993).

These learning characteristics of adults go in line with the recent development in English language teaching, which has shifted in focus from teaching individual components such as reading, writing, speaking, and grammar to teaching these components integratively, as they are being used in daily communication. This change in methodological approach subsequently affects the way language teachers perceive learner's errors: to be concerned about how the messages communicating effectively and meaningfully. This is appealing for EFL learners as English is not the language used at home among family members and among friends, but used mainly *for communication with foreigners*. Knowles (1984) also noted that as adults are most interested in learning subjects that have immediate relevance to their job or personal life, class instruction should be task-oriented instead of memorization.

In order to monitor whether such age factors affect foreign language achievement, a pilot observation has been assessed.

Method

Design and Procedures

A cross-sectional study was designed to examine variables associated with foreign language acquisition and competence among hospital nurses, represented as a sub sample of employees at the hospital where data were collected. The study sample of 30 female registered nurses selected through cluster random sampling from each division, was divided into 2 groups based on age (26–39, and 40–60). Every nurse obtained a Bachelor's degree in Nursing, same study years of English during formal and university education, and reported basic knowledge of

English tenses and conversation. Individual differences are different distributions of age and years of experience.

Classroom activities and lessons (profession specific)

Over the duration of a course, the participants were presented with job-related lessons, and frequently given oral/written feedback to reinforce accuracy and skill as necessary to their work. The teacher was presented as a facilitator rather than presenter of content, and class activities were divided up among two sections, including listening & writing, and reading & speaking.

In Listening & Writing session, the emphasis was placed in listening to audio files about health related issues. Then, participants were required to take notes while the files were being played. There were pauses (about 5 minutes each) during the play to allow time to write the answers.

Further, as medical vocabulary use in the hospital always contains a large number of low-frequency words and newly created words, the lesson also covered teaching and learning how to communicate them with people outside the medical field including every vocabulary item necessary when encountering patients and ordinary people. Hence, in reading & speaking section, word-guessing and role-play were used. The nurses were required to read situation prompts, with brief descriptions of each selected items, and other nurses would interrogate their colleague to guess specific medical term as assigned to her. Sheets explaining shifts of meanings in different use of tenses were provided in this class. Results showed that nurses spent less than 3 minutes in each case to verify the symptoms of the diseases, and to seek solutions for problematic situations. The majority of them were proficient in the use of medical terms during their communication among the nurses to accelerate the diagnosis and the

solution. In addition, although some of them sometimes made an incorrect guess they gradually simplified the text and made short concise questions, together with their use of verbal repetition such as “what do you mean by...?” to clarify the symptoms and the situations.

In another class activity, the hospital provided room and equipment to train the nurses for doing check-ups. Nurses were then required to provide check-up service, along with explanation of the rights of the patient. The nurses used the equipments proficiently, but were a bit reluctant to complete the double tasks assigned in a short time.

Additionally, as far as this study is concerned with the language learning of ELF nurses, with its aims to investigate the use of teaching strategies in relation to real-life medical situation use, by the end of the course a test of English language proficiency was also used to determine the participants' level of proficiency. The exam was a week after the completion of the training.

The subjects were then randomly divided into six groups. There were 6 groups of examiners and 180 questions in total in the test. Subjects were required to respond to the situation prompts they have selected as they were randomly assigned to each examiner. The test was similar to the Occupational English Test (OET), or a language test for overseas qualified medical and health professionals whose first language is not English, and it is designed to ensure that language competency is assessed in a relevant professional context. The questions were based on hospital situations encountered at the hospital. Examiners were required to mark on a four-point scale ranging from 1 to 4 (as below). Before the exam, a brief explanation of the rules was provided to the subjects. Subjects were advised that responses would not affect their performance review at the hospital. The answered questionnaires were collected right after the subjects completed the test. Six time-stoppers were assigned to eliminate

confusion during the markings and to assist the examiners of each table so the examiners could concentrate more on the test.

Analysis of Data

After the administration of the tests, the data were collected and subjected to statistical analyses. Considering the fact that the two parts of the test were administered to two groups of participants, two different groups of raw scores could be identified: scores belonging to career-related problem-solving skills and linguistic competence, and scores belonging to sociolinguistic and discourse competence. Results indicated no differences in the first group of scores and all participants obtained the grade of P whereas scores in the second group varied.

(1) Scores belonging to career-related problem-solving skills and linguistic competence

This set of scores covers the following topics:

- (a) Taking notes and case history & explaining diagnosis
- (b) Managing bullying or harassment & patient's needs
- (c) Explaining patient's rights
- (d) Giving instructions & Encouraging & Reassuring

Results indicated no differences in this set of scores as all participants satisfied all study entry criteria and received the grade of P. Based on cognitive theories, the finding indicates that increase in age does not necessarily imply a decline in learning a second language, and language comprehension. Given 'years of experience', which at the same time, are years of discontinued English study as formal education, the finding also reveals the differences in language development of this criterion in both groups: although with longer years of discontinued English study, older learners with longer years of experience appeared to

improve their performance at a faster pace, whereas this is not the case with younger learners.

The implication here is that when the topic area is oriented within career-oriented tasks, the more the individuals have worked in their career, the more their years of experience help them accelerate their language development. Meanwhile, the number of years of discontinued English study does not play a significant role in this part.

(2) Scores belonging to sociolinguistic and discourse competence

This set of scores covers all abilities to use English appropriately in different contexts (i.e. Modals), including cohesion and coherence, which aid in holding the communication together in a meaningful way, as well as body gestures (i.e. eye contact, pacing, poise, and voice).

Results indicate that although aging does not imply a significant role in English learning when problem-solving skills are required for career-related topics, scores of participants in both groups in this set of scores varied. A possible reason is that although years of experience may be contributed to dramatic development in career-related focuses, they may not result in language development when sociolinguistic and discourse competence matter.

A two-way ANOVA was then calculated to measure whether the effect of two independent variables (age, and years of experience) could be attributed to the differences in performance of sociolinguistic and discourse competence among the participants (dependent variable).

Table 1 below shows that there was no statistically significant difference between these two variables and the performance.

Table 1: Two-way analysis of variance for the performance of sociolinguistic and discourse competence

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Age	5.2618977	1	5.2618977	.6459751	.4314966
Years of experience	4.5954192	1	4.5954192	.5641551	.4617933

Based on the results from the test, the findings reveal that when compared with younger adults, older adults appear to be deficient in these processes. Generally, they do not spontaneously use organizational strategies as extensively as do younger adults, or if they do, they do so less effectively. But when, organizational strategies are built into real-life situations, the performance of older adults improves markedly. The satisfactory results of scores in the first group typically show no evidence of age differences in the retrieval of knowledge and reaffirm that older adults retrieved such information as well as or better than do younger adults. But within some contexts (i.e. when complex sentences or structures are required for politeness), older adults appear to integrate and retain the structures of some sets of sentences and texts at slower pacing than younger adults.

Conclusion

Age differences and age-related factors which accompany aging does not necessarily imply a decline in second language acquisition and

competence. Findings indicate that the more rote memorization is needed to complete the tasks, the more difference age makes. Older learners benefit more from career-related topics than do younger learners as they show more obvious improvement in performance, even when their years of discontinued English study are longer.

Certain language teaching methods (i.e. exercises such as oral drills and memorization of grammatical rules and contexts irrelevant to their career) may be found inappropriate for older adults since memory often declines with age, so this type of teaching technique could put the older learner at a disadvantage. On the contrary, older adult learners learn language best not by rote, but by integrating new concepts and material into already existing cognitive structures. Speed can be another factor that matters to older adults, so fast-paced drills and competitive exercises and activities may not be successful with the older learner. Activities such as group discussion can inhibit the older learner's active participation while at the same time, establish new information of knowledge for their language learning.

Despite the benefit in second language teaching design for older learners, findings also show how differences and diversity in age and cognitive abilities can be a benefit to the workforce. From the study, as nurses in both groups report different outstanding abilities, diversity in age of nurses is important as nurses are not only needed to accommodate healthcare services as required by the care-seekers, but also to negotiate individual needs as well as myriad other elements that cultural context comprises. Younger nurses exhibit strong ability in grammatical uses and body gestures in different contexts and may be a strong workforce when aesthetic ability to communicate their concerns to care-seekers is needed. Conversely, older nurses can invite and encourage their younger colleagues when career-related focuses are emphasized.

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