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# The Effects of Study Abroad on Self-Perceived Communication Competence in English among Students Majoring in Various Medical Sciences

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**Abstract**

This paper explores changes in the way that a group of students viewed their English communication skills after a two-week period studying English and experiencing different cultures in an English-speaking country. Participants in the research comprised 29 university students majoring in various medical sciences such as nursing, and medical laboratory and radiological technology. The study concludes that studying English and being exposed to other cultures even for a short period of time has a major influence on students' willingness to communicate in English and their perceived competence in English communication. The results indicate that studying abroad, even for a short period, has a positive effect on students' attitudes toward communicating in English. The study also discusses the importance of giving students planning to work in the medical environment the opportunity to learn English and experience different cultures while studying abroad.

## 1. Introduction

There has been an increase in the number of universities setting up departments in medical fields such as nursing, and medical laboratory and radiology technology. There has also been a significant growth in the percentage of high school students wanting to become registered nurses after graduating from university[1] (see Figure 1). This reflects the difficulty of finding work as a result of Japan's prolonged economic depression. Realizing the importance of developing human resources in this field, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), is encouraging universities to focus on courses that foster the development of medical expertise. MEXT also provides active support for setting up graduate schools where students can develop their knowledge and skills at a more advanced level[2]. This has led to a focus on enhancing English communication skills as medical science students are likely to need English skills after graduating from university. Examples include the need to read medical references in English to increase expertise in illnesses, the ability to present the findings of their research in English at international conferences, and the need to communicate in English with patients from other countries (Takagi, 2008).

Another reason for medical science students to develop their English skills is the increasing number of people coming to Japan from other countries. The Ministry of Justice reports that the number of foreign residents in Japan has been increasing gradually[3] (see Figure 2). As a result, there is an increased need for medical staff to be able to communicate in English with non-Japanese patients. In recent years, a number of certified qualifications in medical English proficiency have emerged including the Social Workers Essential English Test (SWEET), the Examination of Proficiency in English for Medical Purposes (EPEMP), and Certification for Bilingual Medical Staff (CBMS). These qualifications support the idea that there is a growing demand for the development of English skills among health professionals in Japan. Although improved English skills are indispensable for the medical profession, not much research has yet been carried out in this area.

The purpose of this study, therefore, is to investigate how studying English and experiencing other cultures on a short study-abroad program can change the way medical science students view their communication skills in English.

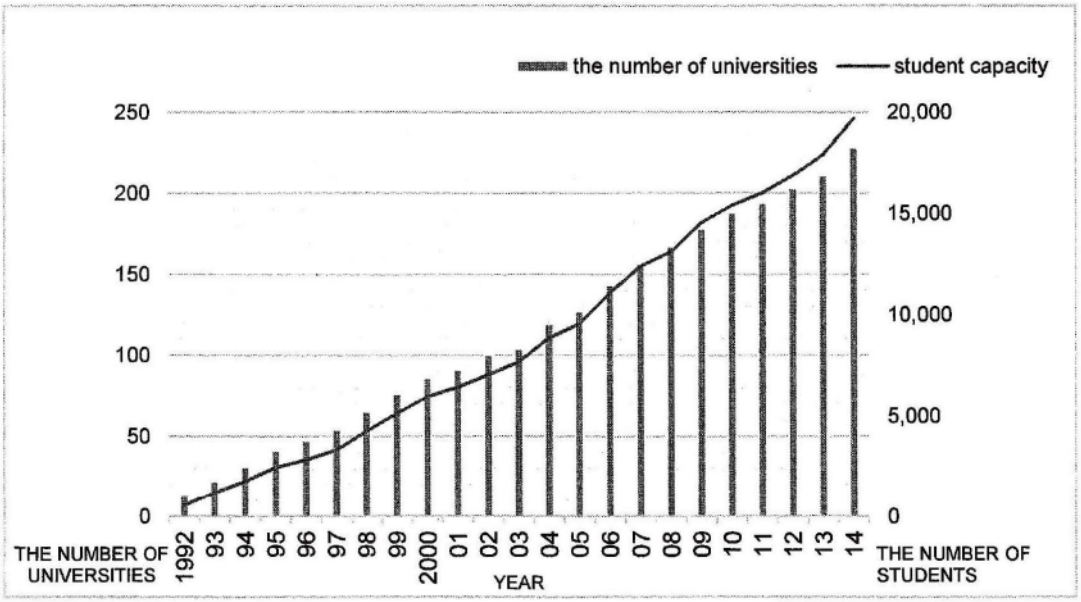


Figure 1. Changes in universities with nursing departments

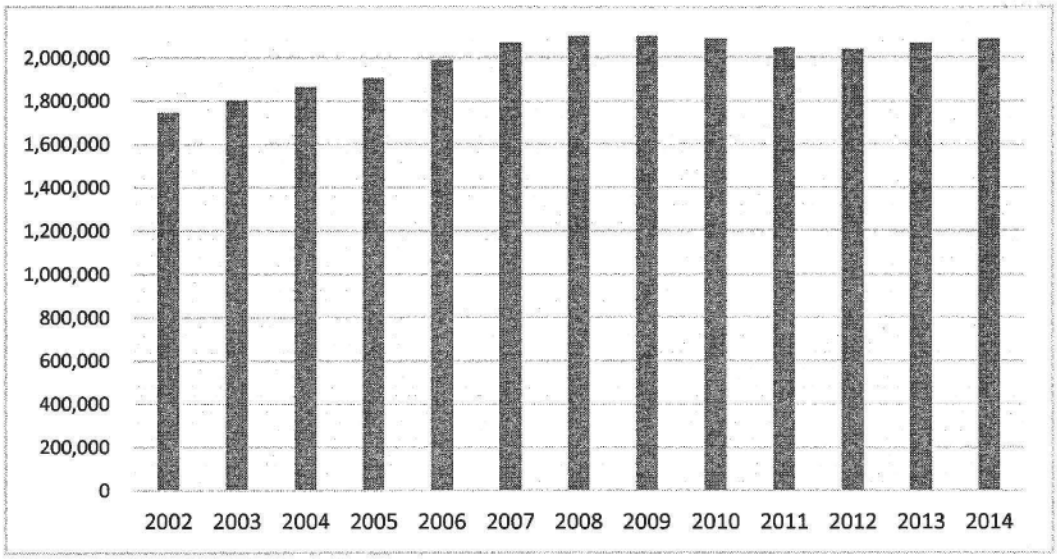


Figure 2. Changes in the numbers of foreign residents in Japan

## 2. Research on Self-Perceived English Communication Skills

Willingness to communicate (WTC) was originally studied by McCroskey and Richmond (1987). Their research evolved from the earlier work of Burgoon (1976) on unwillingness to communicate. The WTC scale, a 20-item, probability-estimate scale, was designed as a direct measure of the respondent's predisposition toward approaching or avoiding the initiation of communication in their first language. McCroskey (1992) investigated the reliability and validity of this scale by researching data obtained in the US and other countries. He concluded that "given the demonstrated reliability and validity of the Willingness to Communicate scale, it is reasonable to recommend it for future use as a research or screening tool" (p. 24).

MacIntyre and Charos (1996) applied MacIntyre's (1994) hypothetical structure of the WTC model in an L2 situation, taking account of McCroskey and Richmond's WTC model (1987) and Gardner's (1985) Socio-Educational Model. Since their research found that the effects of personality were indirect, being channeled through perceived L2 competence and L2 communication anxiety, they insisted that reducing students' anxiety and giving them confidence to communicate in L2 enhance their willingness to communicate in L2. In 1998, a heuristic model which showed the range of potential influences on L2 WTC was proposed by MacIntyre, Clément, Dörnyei, and Noels. They suggested that a suitable goal in L2 learning is to increase WTC so that language instruction might achieve its social and political goal of bringing cultures into contact and nations together. With the advent of this model, research into the relationship between L2 WTC and other affective factors such as L2 anxiety, L2 communication competence, and L2 confidence has been conducted. According to some studies, L2 WTC is

associated with frequency of communication in L2 (Baker & MacIntyre, 2000; MacIntyre, Baker, Clément, & Donovan, 2002) and may support language learning by improving willingness to talk in order to improve a person's L2 communication ability. As for other affective factors, there are some significant correlations among L2 WTC, L2 anxiety, and L2 perceived competence; however, MacIntyre, Clément, & Donovan (2002) stressed that, based on their findings, the learners' experience of L2 learning should be considered.

Yashima has conducted several studies on Japanese students' self-perceived communication competence in English based on the findings and models discussed above (e.g., Yashima, 1998; Yashima, 1999; Yashima, 2002, Yashima, 2003; Yashima, Zenk-Nishide, and Shimizu, 2004). Matsuoka (2004, 2005) has studied Japanese nursing students' self-perceived communication competence in English. Her 2004 study examined the way in which motivational factors, WTC in English, and English proficiency are inter-related. She concluded that WTC in English and English proficiency are not correlated. As for self-perceived communication competence in English, she argues that anxiety, instrumental orientation and extroversion may be good predictors of WTC in English, whereas self-confidence and integrative orientation may better predict English proficiency. Another study by Matsuoka (2005) investigated the correlational and casual interrelationships between two variables: WTC in English, and English proficiency. The results suggest that WTC is influenced positively when students have a high level of motivational intensity and an international outlook, whereas their WTC in English is negatively influenced when they are introverted and have high levels of apprehension about communicating in a second language. As these studies show, there are complex interrelated factors in learning a second language. The definition of self-perceived communication competence in English used in this study includes a number of communication dimensions such as WTC, perceived communication competence, and communication anxiety.

## 3. Methods

### 3.1 Participants

The students were participants in a short study-abroad program that took place in Hawaii in March 2013. The group consisted of 29 medical science students (including nursing students and students training to be laboratory or radiological technicians). The average age of the participants was 20.8 years. The purpose of the program was to enhance the cultural awareness of medical science students who may later work for non-Japanese patients in hospitals as well to motivate their English communication skills. During the program, they undertook 30 hours of classroom-based, basic-level English, which included medical terms, as well as two laboratory-based sessions with local students studying to be nurses or medical technicians in Hawaii. On the last day of the program,

the group gave a 20-minute presentation in English in front of other students and teachers. Other activities included visiting a children's hospital, taking part in local festivals, and spending time with local students on campus. Through these activities, the students had a chance to be exposed to other cultures and local people as well as to learn English in a classroom environment.

### 3.2 Procedures and Measures

The participants were asked to complete a questionnaire about WTC, perceived communication competence (PCC), and communication anxiety (CA) in English before and after participating in the program. These three scales, which constituted ways of measuring self-perceived communication competence, were used to measure the affective components of language learning.

The WTC scale, created by McCroskey and Richmond (1987), consists of 12 items, with eight dummy items. The 12 items on the scale represent the intersection of three types of receivers (strangers, acquaintances, and friends) with four communication contexts (public speaking, talking in meetings, talking in small groups, and talking in dyads). The respondents were asked to indicate the percentage of time they would choose to communicate with each type of receiver and in each communication context when completely free to do so using a figure between zero and a hundred. This scale was designed as a direct measure of the respondent's predisposition or aversion to initiating communication (McCroskey, 1992).The 12-item PCC scale was developed by MacIntyre and Charos (1996). It assesses the average percentage of time (ranging from 0% to 100%) for which respondents feel competent to speak English. The 12 items in this scale are identical to the items in the WTC scale. The same 12 items were used in the CA scale developed by MacIntyre and Clément (1996). Respondents indicated the percentage of time for which they felt nervous when communicating with each type of receiver (strangers, acquaintances, and friends) and in each communication context (public speaking, talking in meetings, talking in small groups, and talking in dyads).

To ensure that each item was translated correctly into Japanese and could be clearly understood, Yashima's studies (2002, 2004) were used as a basis because she used the same scales in her research. A nonparametric test (Wilcoxon signed-rank test) was employed for statistical analysis.

## 4. Results and Discussion

The results show that students were significantly more willing "to communicate in English" and "perceived [a higher] communication competence in English" regardless of type of receiver or communication context after taking part in the two-week study-abroad program (Table 1, Table 2). Students were also less likely to feel anxiety when

communicating with strangers, and in meetings and public-speaking contexts after participating in this program (Table 3). These findings indicate that studying English and experiencing other cultures through living abroad would be of great benefit to students in terms of influencing their attitudes positively toward communication in English even for such a short period as two weeks.

The findings also reveal that students' willingness to communicate and their perceived communication competence in English were significantly higher on all counts after participation in the program. However, their anxiety levels did not decrease significantly in some communication contexts and with some types of receiver. This finding implies that even though students may have some anxiety about communicating in English, this does not necessarily mean that they will not actively communicate in English, or that they feel incompetent when doing so.

Table 1. Willingness to Communicate in English

| | Willingness to Communicate in English | | |
|---|---|---|---|
| | Pre | Post | z |
| Stranger | 70 (25–140) | 150 (92.5–235) | -3.43** |
| Acquaintance | 125 (50–200) | 200 (158.75–267.5) | -4.21** |
| Friend | 175 (62.5–207.5) | 220 (167.5–287.5) | -3.88** |
| Group discussion | 85 (32.5–137.5) | 165 (120–200) | -4.11** |
| Meetings | 65 (20–120) | 145 (105–170) | -3.61** |
| Interpersonal conversation | 90 (35–160) | 155 (103.75–180) | -3.16** |
| Public speaking | 85 (22.5–127.5) | 145 (116.25–195) | -4.31** |

median (interquartile range) ** p <.005

Table 2. Perceived Communication Competence in English

| | Perceived Communication Competence in English | | |
|---|---|---|---|
| | Pre | Post | z |
| Stranger | 70 (0–165) | 140 (72.5–215) | -2.58* |
| Acquaintance | 70 (15–165) | 140 (95–250) | -3.36** |
| Friend | 75 (13–184.5) | 180 (95–250) | -3.43** |
| Group discussion | 65 (15–122.5) | 120 (70–185) | -3.02** |
| Meetings | 60 (5–117.5) | 110 (62.5–160) | -3.47** |
| Interpersonal conversation | 75 (12.5–145) | 120 (75–170) | -3.37** |
| Public speaking | 50 (4–110) | 130 (72.5–150) | -2.88** |

median (interquartile range) *p <.05 ** p <.005

Table 3. Anxiety

| | Anxiety | | |
|---|---|---|---|
| | Pre | Post | z |
| Stranger | 310 (252–342.5) | 230 (150–265) | -4.05** |
| Acquaintance | 210 (115–242.5) | 100 (100–219) | -1.85 |
| Friend | 140 (110–180) | 100 (70–185) | -1.02 |
| Group discussion | 110 (75–165) | 100 (47.5–145) | -.76 |
| Meetings | 190 (130–165) | 150 (100–190) | -2.76** |
| Interpersonal conversation | 110 (70–150) | 80 (45–133.5) | -1.53 |
| Public speaking | 230 (175–250) | 150 (115–190) | -3.39** |

median (interquartile range) ** p <.005

## 5. Conclusions

This study investigates the effect of short periods studying abroad on students' self-perceived communication competence in English. The study focuses on students majoring in medical sciences. The student curriculum for medical science students in Japan does not offer flexibility in comparison with other subjects; many classes are mandatory and include apprenticeships relating to medical specializations. This could be one of the reasons why medical science students have less time for or interest in studying English. The findings of this study, however, show that participating in study-abroad programs would not only motivate these students to study English but also increase their self-confidence in communicating in English irrespective of communication context or type of receiver. Some studies insist that having a positive attitude toward communicating in English is an essential factor in developing proficiency in English (e.g., Baker & MacIntyre, 2000; MacIntyre, Baker, Clément, & Donovan, 2002 MacIntyre, Clément, Dörnyei, & Noels, 1998; Yashima, 2002; Yashima et al., 2004). With the exception of Matsuoka (2004, 2005), there has been little research on self-perceived communication competence in English among medical science students. It is hoped that the findings of this study will lead to further research in this area.

As MEXT has a goal to overcome an "inward tendency" among younger Japanese people and to foster leaders who can meet global challenges and succeed in international fields, there is a need to develop people who can think globally in Japan. This need is not limited to students in medical science. However, nurses and medical technicians are more likely to need to be aware of their patients' conditions, values, beliefs, and cultural backgrounds. The experience of studying abroad gives students a chance to meet people with other cultures and values. This leads not only to improving competence in English but also enhances sensitivity toward and awareness of different cultures, values, and backgrounds. These are great assets for careers in the field of medicine. Few medical science

departments in Japanese universities currently offer a study-abroad program. As such programs give students greater opportunities to study English and experience other cultures, they are strongly recommended for medical science students who plan to work both in Japan and overseas.

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**Footnotes**

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