学位論文の要旨

Using a Smartphone Application as a Tool for English Learning among Medical Staff and Students in Japan

（スマートフォンアプリケーションによる医療従事者および医学生の英語で行うコミュニケーション能力への影響）

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Yuri Iwata

岩田　悠里

Department of Gastroenterology

Yokohama City University Graduate School of Medicine

横浜市立大学　大学院医学研究科　医科学専攻　消化器内科学

Doctoral Supervisor: Professor Shin Maeda

指導教員：前田　愼　教授

ABSTRACT

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Introduction:

Learning English as a foreign language presents varying challenges, and outcomes differ among individuals. However, there is a widespread belief that "Japanese people cannot speak English". This notion extends to medical staff and students who are expected to be proficient in English after passing the competitive medical school entrance examination. Understanding this issue requires exploring Japan's English language education system, in both general and medical education, to identify factors contributing to limited speaking skills.

In the last fifty years, English language education in Japan has undergone multiple reforms, predominantly directed at enhancing practical communication skills. Despite these efforts, English-speaking skills of Japanese people remain low when compared to other Asian countries. Factors that contribute to this situation include the challenges and controversies in English language education reform, learner characteristics, monolingual environment, and linguistic distance.

In addition to these general challenges, English language education in the medical field has its unique issues. Towards the end of the twentieth century, needs to modify the medical education system increased due to globalization, which led to changes in medical English education. However, the education system of medical English in Japan is yet to be standardized and teaching content

differs among medical schools. While there is no official data on the English proficiency of medical staff and students, studies have shown that they lack self-confidence, especially in their speaking skills.

To develop proficiency in English, it is necessary to focus on this lack of self-confidence, as it significantly influences one's willingness to communicate. Willingness to communicate, a concept in applied linguistics, is defined as the intention to speak or to remain silent, when presented with the choice (MacIntyre, 2007). Numerous factors influence willingness to communicate, and assessing these factors will give us a better understanding of why learners do or do not engage in second language communication (MacIntyre et al., 1998). Of particular relevance is self-confidence, which, regrettably, tends to be low among medical staff and students. This impacts their willingness to communicate, and consequently the use of the English language.

Cultivating self-confidence is the key to improving English-speaking skills, given its substantial influence on willingness to communicate. Therefore, the utilization of online English learning platforms, which has the potential to lower the hurdles of English conversation lessons, may be the key to improving self-confidence among medical staff and students. Studies employing computer-based videoconferencing have suggested that online English conversation lessons could increase self-confidence in English communication, develop oral communicative competence and intercultural awareness (Kobayakawa & Fukuda, 2012; Mita, 2014; Ryobe, 2008, 2009; Terhune, 2016). The portability and flexibility of smartphones can lower the barriers of conversational practice further, especially for medical staff and students who face time constraints or have unpredictable schedules. However, there is a lack of smartphone-based studies focusing on the development of speaking skills.

Due to the need for improvement in English-speaking skills among medical staff and students, and the lack of studies on smartphone-mediated conversation practice, the present study set

out to investigate the effects of a smartphone application for learning English as a foreign language among medical staff and students.

Methods:

This study was approved by the Ethics Committee of Yokohama City University (Approval number A170400004). An exploratory quasi-experimental study was conducted among eight medical staff and 10 medical students in Japan. The participants used an application called “ABC Talking”, installed on their smartphones, to engage in conversations with native English speakers from overseas. They used the application for five minutes, twice a day, over five consecutive days, as per their convenience.

Three sets of data were collected: assessment, pre- and post-study questionnaires, and follow-up questionnaire. In the assessments, the participants self-evaluated their listening and speaking skills after each call. The assessment was on a scale of 1-5, with 1 representing “very poor” and 5 representing “very good”. The online teachers assessed the participants using the same scale.

The pre- and post-study questionnaires investigated participants’ perspectives on the application, their English communication skills, and their attitudes toward English learning. The questionnaires used a seven-point Likert scale, with 1 representing “strongly disagree” and 7 representing “strongly agree”. The post-study questionnaire also included open-ended questions.

The follow-up questionnaire investigated whether participants continued to use the application after the study, if they had opportunities to use English outside the application, if they engaged in further English language study, and whether they observed any personal changes resulting from their use of the application.

t-tests were performed on quantitative data of the assessments and questionnaires. Content analysis was performed on qualitative data of the questionnaires.

Results:

The participants' self-assessment scores on their listening and speaking skills increased significantly from the first five sessions to the last five sessions (14.8–26.1%). However, there was no significant change in the assessments by the teachers (−4.5–2.1%). The self-assessment scores were generally lower than the teachers' assessment scores. This did not depend on the participants' English proficiency levels. Self-assessment, pre- and post-study questionnaires showed increases in the participants' "self-confidence".

Engaging in five-minute calls twice a day was generally accepted by the participants. Despite the flexibility of time and place for the use of the application, the participants predominantly used the application in the evening at home.

The follow-up questionnaire showed that only a few participants continued their study of English after the study.

Discussion:

The present study found an increase in participants' self-confidence. Some participants also experienced improvement of communicative competence, such as sociolinguistic competence and strategic competence. Consequently, this motivated some participants to pursue further advancements in English communication skills. Furthermore, the current study showed that self-confidence can be enhanced in just a matter of days. Although no objective assessment of participants' English communication skills was conducted during the course of the study, the results imply that the use of a smartphone application had a positive impact on the medical staff and students' willingness to communicate.

The strengths of smartphone applications are their portability and flexibility, allowing users to utilize the device at their convenience, regardless of time or place. The weaknesses of

smartphone applications observed in the current study were connectivity constraints, teacher unavailability and difficulties in maintaining learner motivation.

This study shows that brief daily conversations in English through a smartphone application could enhance self-confidence. While other methods of conversational practice, such as computer-mediated videoconferencing or traditional face-to-face lessons, also have the potential to enhance self-confidence, they often demand more substantial time commitments. The first challenge for learners is to take part in conversational practice. As smartphone applications allow medical staff and students to engage in conversation at their convenience, it should be considered as a tool to improve the English communication skills.

Keywords:

limited English proficiency, communication, medical training, language barriers

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PUBLICATION LIST

I) Main Paper

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II) Sub-Papers as first author

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III) Other Papers

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