

## OTHERS

# Medical English Education in Japan : Developing a Curriculum to Motivate Students by Providing Visualization Opportunities Using Near-peer Teaching

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**Abstract :** Despite advancements in the pedagogy of medical education in various fields, Japan has no standardized medical English education. The U.S. Medical Licensing Examination (USMLE) Study Group of Tokushima is an extracurricular activity in which medical students and recent graduates meet every 1–2 months. The aim is to stimulate students' curiosity ; cultivate their initiative, self-efficacy, and English learning goals ; and motivate them to be self-regulated learners. Accordingly, we conducted near-peer teaching style lectures that focused on sharing medical English-related experiences, so students could have regular opportunities to visualize the benefits of learning medical English. Following the activities, we observed increased motivation and self-study among students, resulting in a high USMLE passing rate. Furthermore, five members started their training at American hospitals and pursued careers in English-speaking environments. Thus, near-peer teaching style leads to shared medical English-related experiences that help students to visualize English-related opportunities. This education style taught by similar generations aids in setting a specific goal by providing access to role models, cultivating their initiative and self-efficacy, motivating them to learn English, and producing positive outcomes. Modifying the curriculum to actively create opportunities for students to visualize themselves in an international environment can motivate them to continue learning English. *J. Med. Invest.* 69:332-334, August, 2022

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To the Editor

The demand for medical English education in Japan's medical schools—where instruction is purely in the Japanese language—has been rising with globalization (1-3). The number of medical schools with medical English in their curriculum is expanding. Admittedly, the National Medical Examination for Physicians in Japan (*Ishikokkashiken*) has added questions to test medical English and positioned medical English proficiency as a necessary competency for physicians (4). Despite advancements in the pedagogy of medical education in diverse fields, medical English education in Japan has not yet been standardized, and its objectives and methods vary among schools (1). For example, some schools have introduced English proficiency tests, such as the Test of English for International Communication (TOEIC) or the Test of English as a Foreign Language (TOEFL). A few schools offer medical English classes taught by native English speakers ; however, most medical schools do not. In this paper, we present an example of extracurricular medical English education at the Tokushima University and discuss its effectiveness and potential in the context of a medical English curriculum where English is taught as a second language, as it is in Japan.

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## THE USMLE STUDY GROUP OF TOKUSHIMA

The U.S. Medical Licensing Examination (USMLE) Study Group of Tokushima (USGOT) was launched at the University of Tokushima in September 2016. It was conceptualized as an extracurricular activity by three of the authors—YH (postgraduation year 1 at the time), KY (pediatric surgeon attending), and HT (fourth-year medical student at the time)—and involved about 25 (fourth–sixth year) medical students. The aim of the group was to share YH and KY's experiences of the USMLE and of studying medical English (Figure 1). We conducted 1–2-hour face-to-face sessions every 1–2 months. For the first 3 months, KY and YH shared their experiences studying medical English by presenting the following lectures : “What is USMLE,” “How to prepare for residency training in the US,” and “Diverse



Figure 1. The first lecture of the USMLE Study Group of Tokushima

medical professional career paths using medical English.” After the introductory session, we realized that more students than expected had joined the group, with a variety of goals related to the use of medical English. We decided to let students organize the lectures and share their interests, experiences, and goals (Figure 2). They discussed “how they have been studying for the USMLE or other English proficiency tests such as the TOEIC or the TOEFL,” “clinical clerkships in the US or other countries,” and “volunteer activities using English, such as medical support in developing countries.” Other students organized “USMLE-style question-based lectures” or “clinical case presentations and discussions in English” under the supervision of YH. We also held a yearly session for each medical student to discuss their reasons for studying English and their short-term goals.

In April 2020, when most classes shifted online due to the COVID-19 pandemic, the group activities were also moved online (Figure 3). This change in modality allowed for the participation of graduates physically located outside of Tokushima Prefecture. The group continued to present near-peer teaching style lectures both in-person and online regularly, with the goal of sharing medical English-related experiences ; helping students visualize the benefits of learning medical English ; and nurturing their curiosity, initiative, self-efficacy, and goals, to motivate them to be self-regulated learners.

In May 2022, the number of USGOT members expanded to 119 (last updated on May 22), including a few nursing and nutrition students from the University of Tokushima who were interested in learning medical English. Since the foundation of the group, eight members have passed USMLE Step 1 ; six members have passed USMLE Step 2 Clinical Knowledge ; and three

members have passed either USMLE Step 2 Clinical Skills (CS) or the Occupational English Test, which is compatible with USMLE Step 2 CS. Moreover, three members have obtained the Educational Commission for Foreign Medical Graduates (ECFMG) certificate, which qualifies international medical graduates to enter the U.S. health care system (Table 1). Five members started their careers in the US (one member started a pediatric surgeon fellowship, another member started a neurology residency, and three members started working at the U.S. Naval Hospital.) Furthermore, in 2019, with support from the University of Tokushima’s medical education department, the group began a yearly medical English course for all fourth-year Tokushima University medical students as part of the medical English curriculum.

Table 1. Number of study group students who passed the USMLE (updated on May 22, 2022)

| Year of graduation | USMLE Step1 | USMLE Step2CK | USMLE Step 2CS or OET | ECFMG certificate |
|--------------------|-------------|---------------|-----------------------|-------------------|
| 2016               | 3           | 4             | 2                     | 2                 |
| 2018               | 1           |               |                       |                   |
| 2019               | 3           | 2             | 1                     | 1                 |
| 2022               | 1           |               |                       |                   |

USMLE : United States Medical Licensing Examination, CK : Clinical Knowledge, CS : Clinical Skills, OET : Occupational English Test, ECFMG : Educational Commission for Foreign Medical Graduates



Figure 2. 5th-year medical student sharing his USMLE studying experience



Figure 3. Online lecture during the COVID-19 pandemic

## NEW ATTEMPTS AND FUTURE PERSPECTIVES

As the number of members increased and more students decided to pursue lifelong medical English self-study to work abroad, we initiated a mentorship system for those whose career plans matched. For example, current residents doing their training in the U.S. are mentoring those who are planning to join the U.S. residency training, and current U.S. navy fellows are mentoring those who are planning to apply for the U.S. navy fellowship. We also began recording core lectures, so that future members could watch them at any time. Moreover, with more graduates applying for training abroad, we are planning an objectively structured clinical examination-style practice by having members working in the US serve as lecturers. Ultimately, we hope to collaborate with foreign students or to have Japanese medical students visit hospitals abroad where graduates are working. This will enable more diverse lectures to inspire medical students to learn medical English and broaden their horizons at an earlier stage.

## DISCUSSION

We will now discuss our extracurricular medical English education at the University of Tokushima. Medical English education has traditionally been conducted in the classroom, focusing on basic medical terminology as well as reading and writing in English (2, 3). It has been taught through didactic lectures in which students are expected to listen quietly. Although didactic lectures can provide medical knowledge to students, this teaching method is less effective in learning English communication and can decrease students’ motivation (5). Kuroda *et al.* pointed out that the fact that medical education in Japan is carried out only in Japanese is delaying Japan’s ability to absorb and add to

the newest scientific knowledge worldwide; this, in turn, leads to fewer opportunities for international collaboration among researchers and clinicians (2). Kuroda *et al.* also emphasized the importance of communication in English to broaden clinicians' understanding of the social determinants of health, a valuable asset for effective care, and academic development (2). Additionally, while reading and writing English is a necessary skill, verbal English fluency provides medical professionals with a wider array of qualities that are important to their practice (2). This skill is acquired throughout the lifespan of one's medical English education and depends on each individual's motivation to continue learning even after graduation. A previous study, which included 35 U.S.-trained Japanese physicians, found that nearly all participants felt that English communication remained a major challenge (6).

Interestingly, a study carried out at Kawasaki Medical School in Japan showed that 93.6% of first-year medical students, 85.6% of second-year medical students, and 80.6% of third-year medical students stated they were interested in learning English. Additionally, 93.7% of first-year medical students, 90% of second-year medical students, and 87.1% of third-year medical students said that "learning English is necessary to become a good doctor" (7). We believe that medical students—even though they acknowledge that "medical English is important"—have not vigorously pursued it because they could not find a "reason for learning medical English," creating a lack of motivation.

The goal of the USGOT is to inspire students to learn medical English independently in order to be lifelong medical English learners, so that they can communicate in English and avail more opportunities during their careers. To accomplish this aim, we focused on sharing experiences and opportunities regarding how medical English is used globally to enable students to visualize themselves in an international environment and realize the importance of learning English. Yashima noted the importance of visualizing future opportunities and developing an international perspective—seeing oneself as connected to the international community—for motivating students to learn English (8).

A near-peer teaching style, in which seniors temporarily assume the role of educator, was appropriate for this purpose. The group lectures were mostly conducted by YH (postgraduation year 1 at the time) and senior medical students. For example, a previous study showed that students preferred to discuss conceptual problems with peers who were closer to them, than with faculty teachers who could not understand their reasons for difficulty with the subject matter, or who might have limited interest in communicating with novices (9). According to Cate *et al.*, near-peer teachers create a comfortable and safe educational environment, provide access to role models, and enhance intrinsic motivation to study (9). We believe that the group—run by individuals of similar age—enabled the medical students to better relate to the lecturers and to consider them as role models. Further, this style helped participants speak freely during the discussion or ask questions to activate the group. In fact, we observed medical students volunteering to be lecturers independently.

The mix of online and offline lectures helped the group stay active. In the past, although we have had several individuals who pursued careers abroad, it was difficult to provide students with opportunities to hear from them due to accessibility issues. Instead, we were able to offer regular lectures given by graduates working outside the city who shared their experiences of taking the USMLE, working abroad, and other topics. Additionally, with the assistance of the Medical Educational Support Center, we are now able to hold yearly lectures by graduates for fourth-year medical students as part of the medical English

curriculum. Consequently, we discovered that more medical students found a reason for learning medical English and have been studying independently. Senior students and graduates of the group are now sharing their goals with juniors and creating a harmonious circle at the University of Tokushima.

In this paper, we presented a new medical English learning method employed at the University of Tokushima. Integrating lectures that focus on students' motivation to learn English by sharing experiences and opportunities related to medical English and helping them visualize themselves in an international environment, in the medical English curriculum can support students' lifelong independent pursuit of medical English.

## CONFLICTS OF INTEREST STATEMENT

The authors declare no conflicts of interest with respect to the research, authorship and/or publication of this article

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