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Perspectives

Professionalism in EMP

Language teaching is as old as human communication and throughout the ages language learners tried to judge their performance using as standards their own mother tongue. The result was two separate approaches, you can learn about the foreign language in your own tongue, or learn directly by listening to, and imitating the speakers of the new language. These approaches developed into two schools of thought, reading translation, better suited to formal learning and school curricula since the learners could be formally tested, and the Direct Method that aims for practical outcomes and is suited to those who are interested in using the language.

With the advent of professional study of language teaching, applied linguistics, the training of professional language teachers was instituted. Over the last thirty years the number of professional language teachers increased and, at the same time more language teaching institutions are demanding professional credentials of their teachers.

As the whole field of Applied Linguistics became established and grew, so did its division and diversification. This happened mainly along two lines, the various technical ways in which language can be taught, textbooks, computers and the like; and the various types of language that are the learners need. The latter includes EMP.

Medicine has always had a language of its own, Greek, Latin or, in more recent times German. The rationale for a separate language includes the reliance on a superior authority, a dominant feature in medieval medicine with its reliance on Galen et al., the need for status (ordinary people are unable to understand us), the need for a universal means of communication (many American texts still list the electrocardiogram as EKG, a remnant of German influence), and the importance of precise, unambiguous communication especially at a time of a scientific world with few borders and instant communication. The language that medicine is relying on today is called Medical English, although it is more Latin than English and will not really be understood by Everyman in most English speaking countries.

At the same time there has been a decline in classics' education in European and American schools. Now students entering medical school, even with a fairly good secondary education, find that they need to master a new lan-

guage. True, to the English speaker the language is more a word list than a new syntax, albeit a rather extensive word list. The result has been a plethora of textbooks of medical vocabulary aimed at the English speaking market as well as speakers of other languages. So there is recognition of the need for professional language teachers, of a need for learning the medical language and, we may add, the need for professional medical education. And yet, little has been done to formally create a professional EMP specialist.

What is the EMP specialist supposed to do? Education needs to be outcome based, and to accomplish that the EMP specialist will need to create a program that will teach Medical English in a manner that will produce outcomes with at least 80% of the learners. At the same time, the EMP specialist needs to help freshly graduates to learn to work in English. This means to work with texts, to understand some of the many CME sites on the internet and to be able to write acceptable English. Many, if not most, English teachers at medical schools are involved in correcting manuscripts and copy editing. Although in demand and usually also lucrative, the EMP professional should be more concerned with learners achieving a high level of competency so that they will not need to approach the resident 'native' each time they have strung together a few lines of randomly linked English verbiage.

Journal of Medical English Education
English Editor

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Abbreviations and Acronyms Occurring in Studies on English Education

This list is a quick reference for readers whose academic field may not be the study of English education but whose work puts them in contact with such terms. Caution: The list is not a free license for authors to bypass the writer's etiquette and responsibility to spell out the full meaning when the term is first used in the main body of a paper.

	Abbreviation	Full Expression
1.	CALL	Computer-Assisted Language Learning
2.	CARS	Create a Research Space
3.	**COBUILD**	**COLLINS Birmingham University International Language Database**
4.	DDL	Data-Driven Learning
5.	**EAP**	**English for Academic Purposes**
6.	EEP	English for Educational Purposes [now almost obsolete, replaced by EAP]
7.	**EFL**	**English as a Foreign Language**
8.	EGAP	English for General Academic Purposes [e.g. listening and note-taking, academic writing, reference skills, seminars, discussions]
9.	EGP	English for General Purposes
10.	ELP	English for Legal Purposes
11.	ELT	English Language Teaching
12.	**EMP**	**English for Medical Purposes**
13.	EOP	English for Occupational Purposes [e.g. doctors, hotel staff, airline pilots]
14.	EPP	English for Professional Purposes English for Pharmaceutical Purposes [of recent origin]
15.	**ESAP**	**English for Specific Academic Purposes** [e.g. medicine, law, engineering, economics]
16.	ESL	English as a Second Language
17.	**ESP**	**English for Specific Purposes**
18.	EST	English for Science and Technology
19.	EVP	English for Vocational Purposes
20.	IELTS	International English Language Testing System (UK)
21.	ITA	International Teaching Assistant
22.	L1	First language/mother tongue
23.	L2	Second language/medium of communication
24.	NS	Native Speaker (of English)
25.	NSS	Non-native Speaker (of English)
26.	**PBL**	**Problem-Based Learning**
27.	PERC	Professional English Research Consortium [based in Japan]
28.	RELC	Regional Language Centre (Singapore)
29.	TEFL	Teaching English as a Foreign Language
30.	TENOR	Teaching of English for No Obvious Reason [e.g. for children unaware of any particular need for English, sometimes equated with EGP]
31.	**TOEFL**	**Test of English as a Foreign Language**
32.	**TOEIC**	**Test of International Communication**
33.	TSA	Target-Situation Analysis

Boldface indicates terms sometimes found in *Journal of Medical English Education*.
This list was compiled by the editors.

[Invited Article]

Medical English Education in Japan: Past, Present & Future

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Until the end of World War II Medical English was neither taught nor used because medicine had been introduced from Germany by the Meiji government and medical German had been used by all physicians in Japan. After the 2nd World War, American medicine was rapidly introduced and many young physicians and medical scientists studied in the U.S.A. Many of these physicians tried to teach medicine in English, while at the same time practically all medical journals, books and international meetings adopted English as a sole communication tool. Unfortunately, unlike medical German education in the past, medical English education proved unsuccessful because the national medical licensing examination was initiated and was entirely in Japanese, and because the health insurance system forced physicians to use only Japanese. The complete failure of general English education in high schools, as compared to the successful foreign language education in America and Europe, further emphasized this failure of medical English education in Japan. As a most developed country, Japan must contribute to the progress not only of medicine but also of other types of technology and culture, and strategies for effective teaching/learning of English should be devised in accordance with human cerebral mechanism for language learning so that an independent speech area specific to English is established in the brain of every student. The problem-based learning of practical medical English following pretests of listening and writing as practiced by the author is based on this principle and has proved effective in large classes.
J Med Eng Educ (2009) 8(1): 7–11

1. Introduction

Medical and related fields of science and technology are progressing quite rapidly and shared by all physicians and medical caregivers for the benefit of patients throughout the world. To accomplish this global sharing, English is used as the common universal language. Medical and related professionals must acquire sufficient skills to manage in not only general English but also in the special English used for medical purposes, known as "Medical English".

In Japan general English is taught for three years in junior school, three years in senior school, and two years in colleges and universities including medical schools. Medical English is taught to some extent for one or two years in many medical schools. All medical students need to pass an entrance examination that includes general English.

Based on my teaching experience of medical English for over 40 years in many medical schools, I discovered that, unfortunately, with the exception of those who have lived abroad, practically no medical student can understand radio or television news in English, nor can they read editorials in English newspapers without a dictionary; they are unable to write not only proper English but even simply grammatically correct English.

In the following sections, problems of teaching medical English in Japan in the past (until the end of World

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War II), the present (after WWII to the present) and the future (from now on) will be discussed.

2. Medical English education in Japan in the past (until the end of World War II)

The Japanese Government first imported Dutch medicine for a short period of time, and then reverted to German medicine throughout the Meiji and Taisho eras, a policy that continued until the end of World War II during the Showa era. Education of medical German language was considerably successful to the point that practically all Japanese physicians mastered German medical terms and phrases and routinely used German to describe history and physical findings without any Japanese medical terms. Even in medical textbooks written in Japanese, all technical terms were in German, often without a Japanese translation.

For example, 「この Kranke (patient)は plötzlich (sudden)の Bauchschmerz (abdominal pain)を Hauptklage (chief complaint)として aufnehmen (admitted)し, Untersuchung (examination)の結果, Magengeshwür (gastric ulcer)の Perforation と Diagnose され, Notoperation (emergency operation)にて Magenresektion (gastric resection)が施行された」.

Many medical schools sent young medical scientists and teachers to Germany for a few years. Upon their return to Japan, they were content teaching medicine in German. Even when I was a medical student in Chiba University in 1958, the Professor of Otorhinolaryngology forced us to speak only German in front of patients.

I personally learned anatomy using three volumes of a textbook of anatomy written in German. A textbook of physical diagnosis written in German was recommended to all students in our class.

On the other hand, medical English was neither used nor taught at all in those days.

3. Medical English education in Japan in the present (after the World War II to the present)

After the Second World War, since Germany was also defeated, American medicine was rapidly introduced to Japan. Medical books and journals adopted English, and shifted from German to English even in German speaking countries. Practically all international medical meetings adopted English as the sole common language, though some French speaking scientists continued to use French.

Many young Japanese medical scientists and clinicians studied and/or received training in U.S.A., with scholarships awarded by either the Japanese or the American government. Upon their return, they tried hard to teach medicine in English, but met with little success for the following reasons.

Unlike the successful teaching of medical German in the past, two major factors have been interfering with the introduction of medical English in Japan.

One is the Japanese national medical licensing examinations in which all problems, including medical terms, are in Japanese. As medical English is not essential for clinical practice in Japan it cannot be included in the medical licensing examinations. Medical students must learn all the medical terms in Japanese, and need no medical English at all to pass the examinations. Medical textbooks are all in Japanese with occasional few important medical English terms.

Before the war, the medical license was awarded upon graduation from medical school without a medical licensing examination. In those days, many teachers tested the students using medical German terms. Medical students had to master medical German to graduate.

The second factor is the national health insurance system in Japan. All medical terms in the chart, especially those for diagnoses, examinations, procedures, treatments and surgeries, must be in Japanese when reviewed and assessed for refunding. Before the war, all charts used German medical terms, and many physicians were not even familiar with some of the proper Japanese terms.

At the same time, the Japanese education of general English in junior and senior schools has been a complete failure. Even medical students, who have passed an entrance examination that includes general English, cannot really use English in daily life, with the exception of those who have lived in English speaking countries.

At the beginning of my class of medical English, I always have students listen to a few minutes' talk of President Bush or Former Prime Minister Blair recorded from television. At best some students can catch a few words, but they cannot explain the meaning, nor do they understand what the speaker was talking about. No student has ever raised a hand when I asked if they could read editorials in English newspapers without a dictionary. The pretests I do, usually have average scores of 50–60 for listening and writing.

On the other hand, a friend of mine who had not

learned German at all in Japan, was suddenly sent to Germany to work. In Germany, she was taken to a refugee camp for three months of intensive training in German. Later she wrote me a letter in good German, telling me that she had no difficulty in using German in her daily life and work.

In a certain junior college, a Japanese professor of German had taught German for more than 20 years but many students usually failed the term examination in German language. The college invited a native German teacher from the same refugee camp to teach students for one year, with no lessons by the Japanese professor. Initially the students did not understand the German teacher at all, but within a few months all students could not only understand, but also started to participate in discussions in German. This was followed by a term examination conducted by the Japanese teacher in which all students obtained good grades and no one failed.

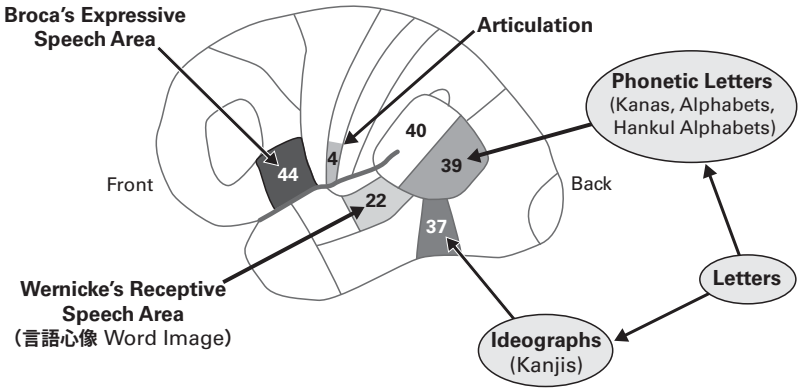

Fig. 1. Schematic illustration of the lateral view of the human left (dominant) cerebral hemisphere, showing representative cortical areas related to speech functions.

The numbers in the figure represents the numbers given by Brodmann, who claasified the cerebral cortex into 53 different areas based on his cytoarchitectural study of the human cerebral cortex. Wernicke's receptive speech area located in the posterior part of Brodmann's area 22 in the temporal lobe, is related to understanding the heard language. A small lower part of Brodmann's area 4 is related to articulation, and speaking of sentences is related to Broca's expressive speech area located in Brodmann's area 44 in the frontal lobe. Phonetic letters like Kanas, Alphabets and Hankul alphabets are related to Brodmann's area 39 in the parietal lobe, whereas ideographs like Kanjis are related to Brodmann's area 37 in the temporal lobe.

More than 10 years ago, I happened to meet an American student in an airport in the U.S.A. He was majoring in Japanese culture at Harvard University. He had never been to Japan. He had learned Japanese for only two years and was able to speak quite fluent Japanese without a foreign accent; he could also read an editorial in Asahi without a dictionary.

I heard that about 40 years ago some American military physicians passed the essay questions of the Japanese National Medical Licensing Examination, writing their answers in Japanese with kana and kanji, after learning Japanese in California for only two years.

Why has foreign language education failed in Japan but has been successful in America and Europe?

4. Medical English education in Japan in the future

The effective strategies for teaching/learning foreign languages must accord with the cerebral mechanisms for learning languages. The human brain is organized so that babies will learn the mother tongue first by listening to their mother's language, then by trying to speak through imitation and feedback correction by the parents. Children learn reading, writing and grammar only after they enter school.

The most effective and efficient way of learning a foreign language for adolescents and adults is to live in the country where the language is used so that they can learn the language not only through daily conversation but also through reading and writing. My son, a violist, was born in the U.S.A. but grew up in Japan from the age of 2.5 years. At the age of 20 he went and studied music in the U.S.A. for eight years and then practiced music in Italy for eight years. He learned both English and Italian, not at a formal school learning reading, writing and grammar, but through daily conversation, and he tells me that he even understands jokes like any of the native speakers. In Italy he met a visiting Japanese professor of Italian. The professor did not understand Italian jokes at all even though he had been learning and working with Italian in Japan for over 20 years.

The functional organization of the cerebral cortex for intelligence and memory has been reviewed in English[2,5] and Japanese,[4] and the discussion here will deal with the parts related to speech function alone.

Regardless of which side is dominant, most people have speech areas in their left cerebral hemisphere, also known as the dominant hemisphere. As shown in Fig. 1, we understand the language we hear in Wernicke's receptive speech area in the posterior part of

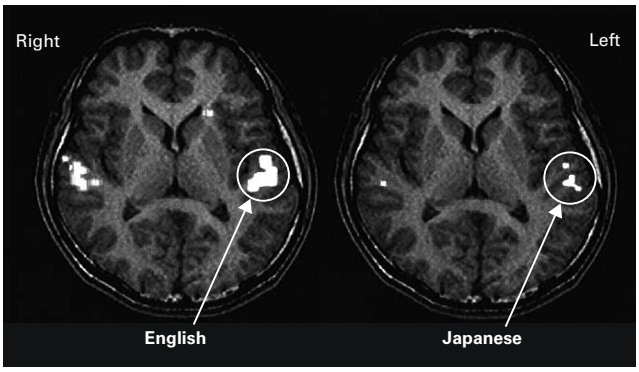

Fig. 2. Functional Magnetic Resonance Imange (fMRI) on a non-bilingual subject.

The images are horizontal sections of the brain through Wernicke's receptive speech area, viewed. In each image, the left side represents the right side of the subject, and vice versa. The white marked areas show increased blood flow. He had no difficulty in reading and writing medical books and papers in English, but was unable to speak English without experience of studying in English speaking countries. The left image was taken while he was listening to recorded English news, while the right one was taken while he was listening to recorded Japanese news, showing that the same area was activated. He did not understand English news at all, indicating that he did not have a separate area specific for understanding English.

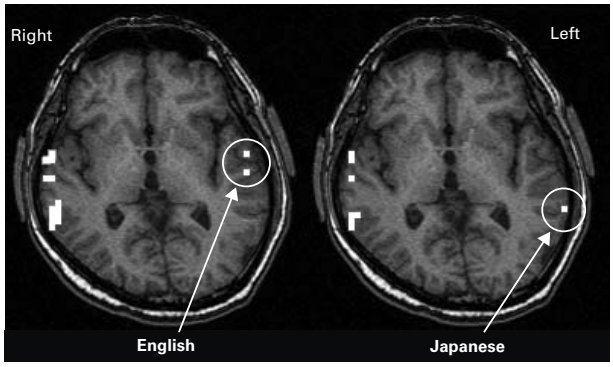

Fig. 3. fMRI on a bilingual subject, the author.

The area activated while listening to English is located more anterior to that activated while listening to Japanese.

Brodmann's area 22 in the left temporal lobe. We articulate words with the motor cortex of Brodmann's area 4, responsible for the movements of the face, mouth and throat, and speak sentences with Broca's expressive speech area in Brodmann's area 44 in the frontal lobe. Phonetic letters like Kanas, Roman Alphabets, and Hankul Alphabets are related to Brodmann's area 39 in the parietal lobe, whereas ideographs like Kanjis are related to Brodmann's area 37 in the temporal lobe.

Formerly we thought that Wernicke's receptive speech area as a whole was related to the understanding of the aural mother tongue. However Ojermann reports that bilinguals have two separate areas for respective languages, each representing a very small area within Wernicke's receptive speech area.[1] In 1995 he told me that he had studied 16 bilinguals, finding no exception. In our department, we used functional magnetic resonance imaging (fMRI) to study the brain of one non-bilingual person and one bilingual person.

As shown in Fig. 2, listening to Japanese as well as English activated the same area in Wernicke's receptive speech area in the non-bilingual who did not understand the news in English at all, indicating that he did not have an independent area specific to English, though he did not have any difficulty in reading and writing medical papers in English.

On the other hand, as shown in Fig. 3, in the bilingual author of this paper listening to Japanese activated a posterior part of Wernicke's receptive speech area, while listening to English activated its anterior part. This person was exposed to English first in kindergarten, relearned English from American soldiers in his junior and senior school days and received postgraduate medical education for seven years in the U.S.A., and for six months in the U.K., and has also helped at medical meetings with Japanese-English simultaneous interpreting for over 30 years.

These data clearly indicate that one cannot understand any spoken language unless one has an independent area specific to the respective languages within Wernicke's receptive speech area, and that one will never establish an independent area for any foreign language unless one learns it by listening and speaking, no matter how long one continues to learn through reading and writing using grammatical and literal translation alone.

At the beginning of the Meiji Era, Japan had to import much foreign culture from developed countries in America and Europe at great speed; yet Japan had very little to offer in return. Thus the ability to translate from English, German or French into Japanese through grammatical literal translation alone was naturally overemphasized, and little attention was paid to writing and conversation.

Now, however, Japan is an important developed country and must make international contributions to scientific, technological and cultural development and progress. In most fields, including medical science and technology, English is the accepted international communication tool. All physicians and medical scientists must be able to communicate in fluent English at academic meetings and through publications.

New strategies for English education in medical

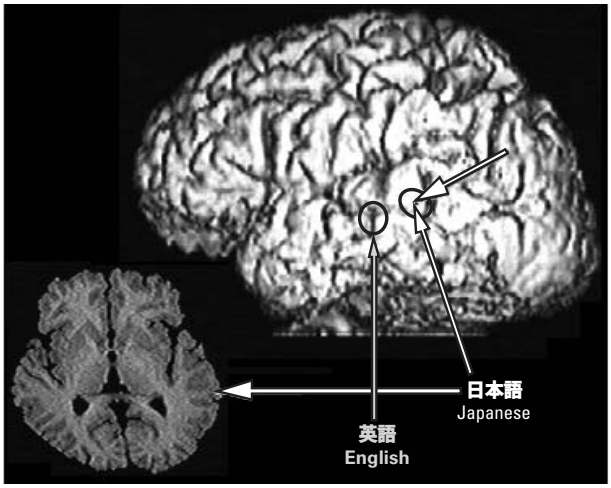

Fig. 4. **fMRI on a bilingual subject, the author.**
The left lower figure is an image similar to the right one in Fig. 3, while the right figure represents a lateral view of the author's left cerebral hemisphere reconstructed from the images in Fig. 3, clearly showing separate areas for English and Japanese.

schools as well as in high schools must radically be innovated so that an independent area specific to English is established in the Wernicke's speech area of every student.

5. Proposals

A drastic change in the English entrance examinations to medical schools will invigorate the English education in high schools. The changes should include tests of the following abilities; (1) listening to recorded television or radio news in American and British English, (2) writing not only grammatically correct but also comfortable English,[3,4,7] and (3) reading paragraphs of a certain length within a predetermined time, with no time for English-Japanese translation.

Teachers of English in high schools must change their strategies, emphasizing listening practice, abandoning grammatical literal translation from Japanese to English and employing interpretation to comfortable English from given Japanese sentences, encouraging small group discussions in English, and conducting English speech contests where not only pronunciation, intonation and speaking abilities but also the structure of manuscripts are properly assessed. Native teachers of English need to talk to students at a natural speed and should not slow down to make the students understand, because slower talking will establish an English speech area which can understand only slowly spoken English.

In medical schools, teachers of English should reinforce the abilities of listening and writing rather than reading which should have been mastered in high school. Paragraphing and the structure of papers should also be taught. Bilingual medical teachers should teach the basic structure of medical technical terms, have students practice listening to medical English and reading medical articles at home with appropriate textbooks and tapes or CDs, and teach basic principles of interpreting Japanese into acceptable English instead of simply grammatical and literal translation. Problem-based teaching/learning is an effective strategy even in a large classes as proved by the author.[6]

For postgraduate students and young medical scientists, composing proper titles for and working on the structure of medical papers should be taught.[4] The writing of effective and informative titles rather than the commonly practiced indicative titles should be taught. The importance of a well structured introduction and discussion cannot be overemphasized.[4] Proper paragraphing should also be taught.

The Japan Society for Medical English Education (JASMEE) should continue to improve strategies and resources to teach medical English effectively and efficiently, to recruit more teachers of English and medicine, to motivate medical students to learn practical medical English, and to certify their skills through the Examination of Proficiency in English for Medical Purposes (EPEMP) through JASMEE.

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[Invited Article]

Local Answers to Global Medical English Needs in the Medical School of the University of Pécs, Hungary

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Hungary is a small country with few natural resources and a traditionally massive knowledge potential that she needs to utilize to the greatest possible extent. Globalization not only facilitates this process but also poses new challenges for a highly qualified, flexible and ambitious generation of professionals, especially those working in biomedical research or as practicing physicians. This global challenge involves new tasks such as meeting foreign patients, working in foreign countries, as well as becoming efficient communicators in the global community of researchers. The best possible means of increasing international compatibility is to equip these professionals with the cultural knowledge and communication skills they need. This is done by familiarizing them with the tool of this global exchange, Medical English. The present paper is intended to give an overview of the concept and structure of this pedagogical activity carried out at the Department of Languages for Specific Purposes at Pécs University Medical School, Hungary. A system of courses on Medical English has been developed. The highlight of this system are the four courses presented here, which, relying on the knowledge acquired and skills developed, provide an effective introduction to four major groups of activities that medical professionals and researchers need to face. The validity of the structure and content of these courses is justified by the high success rate at PROFEX, a standardized and accredited Medical English testing system.

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Key words: English for Medical Purposes, doctor-patient communication, genre-based EMP courses, presentation skills, medical research writing

1. Introduction

The concept of medical communication embraces a number of areas, genres and media. Of these the present paper discribes the English for Medical Purposes (EMP) courses taught at the Department of Languages for Specific Purposes (LSP Department) at the University Medical School of Pécs, Pécs, Hungary. The medical aspect of teaching doctor-patient communication as a crucial part of the healing art is the responsibility of the Department of Family Medicine at the University, taught exclusively by physicians with expertise in primary care. The linguistic aspect, which is an important complementary element, is presented in the elective EMP courses, Presentation of Case Reports and Taking Medical Case Histories, offered by EMP professionals. So are the EMP courses, Presentation at Biomedical Congresses and Writing-Up Research, focusing on the international communication of biomedical research. This paper is intended to demonstrate how these courses support the process of becoming an internationally mobile physician as well as how to manage communication within the international discourse community of biomedical research.

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2. Principles of Course Development

2.1 Background of course structure and design

The four courses mentioned in the introduction can be considered the output and highlight of Teaching English for Medical Purposes (TEMP). Their linguistic and communicative background is provided by ancillary EMP courses at two levels. The first level includes a two-semester introduction to EMP topics and lexis. This course is based a textbook, *Professional English in Use (Medicine)* by Eric Glendining and Ron Howard.[1] The second level of TEMP is represented by two courses. The functional notional approach forms the basis of the EMP course called Functions and Notions, based on an in-house textbook authored by the EMP instructors of the LSP Department; the other EMP course, EMP Discourse and Genres at this level adopts a discourse and genre based approach. The textbook for this course was also compiled by members of the LSP Department.

2.2 Course on taking medical case histories

This course focuses on doctor patient communication, a most important aspect of treatment. Failure in communication may have an unfavorable effect on the course of treatment, which may result from misunderstandings and/or using inappropriate sociolinguistic devices: it may lead to a failure in reaching a correct diagnosis when the patient does not properly understand the physician or when the physician misinterprets the patient's responses.

It may also develop an undesirable patient's attitude towards the physician when the physician uses inappropriate facial expressions[2] and/or politeness strategies.[3] The genre-based course is divided into two parts. The first part is based on the research-based textbook, *English for Doctors* by Maria Györffy.[4] The sessions discuss how to take medical case histories in the major fields of medicine: internal medicine, obstetrics and gynecology, pediatrics, urology, ENT, orthopedics, surgery, dermatology, genitourinary infections, ophthalmology, neurology and dentistry.

The second part deals with some pragmatic and sociolinguistic aspects using several in-house materials and the valuable audiovisual educational components recently developed by the International Medical Communication Center at Tokyo Medical University.[5] The pragmatic component identifies the structure and rhetorical moves most often applied during a doctor-patient interview, while the sociolinguistic component deals with the topic of face-work, face threatening activities, bold-on records, off-records as well as positive and negative politeness strategies.[3]

Feedback on the success of the course is provided by EMP test results. PROFEX, is a state and EU recognized accredited EMP Testing System developed in Hungary in 2000. It seems that medical students and professionals perform well in the medical history taking component of this testing system. This suggests that those having met the requirements of the course have acquired communication skills in the field of history taking, which enable them to work more efficiently with patients and enter the international arena of medical professionals.

2.3 Course on presentation of case reports

The theoretical background of the course is based on the results of a research project which analyzed the genre of medical case reports presented in English using the methods of corpus linguistics.[6] The 28-contact hour course is divided into three main parts, the genre of case reports, presentation skills, and oral case presentations.

Although the course uses a genre-based approach, it is complemented by some pragmatic, lexico-grammatical and sociolinguistic elements. The pragmatic element covers the study of the discourse structure and rhetorical moves, the lexico-grammatical element includes discussion of the expected use of tense, aspect and voice, as well as the appropriate use of lexis, while the sociolinguistic sessions are devoted to modality and politeness strategies. The second part of the course focuses on basic biomedical presentation skills, presented in the next paragraph. The final part of the course is a "mini-conference," in which the students can practice the skills they have acquired in medical case reporting and presentation techniques. They are asked to give a 10-minute PowerPoint case presentation, which is analyzed and discussed in class.

Here, feedback on the success of the course is also provided by the PROFEX test results. The majority of those having attended and met the requirements of the course can pass this component of the test without major difficulties. It seems that the course can provide a practical guide for medical students and medical professionals in how to present medical cases within the international community of medical professionals. This skill can also help them both in the struggle to publish in internationally recognized journals and in gaining recognition at international conferences.

2.4 Background for EMP courses on reporting research

The two most prestigious genres of the international biomedical researchers' discourse community are biomedical conference presentations (BCP) and medical research articles (MRA). Both are meant to give at international fora an account of biomedical research carried out by research teams, an important prerequisite for gaining acknowledgement and seeking further funding.

Swales in his seminal book on genre analysis defines the attention that a discourse community can be defined by the fact that they own one or more genres.[7] Although we are aware of the wide variation in the prototypicality of certain genres, it still seems to be possible and necessary to provide basic knowledge of the most important ones and offer some practical tips and hints on how to use them successfully.

This is especially true for BCP and MRA, whose language is almost always English, which poses multiple difficulties for Hungarian researchers, who are non-native speakers. Not only are they forced to acquire the language as a code but they also need to realize that they are required to adopt a set of culturally determined constraints utterly different from those they encounter in their own culture. In other words, their content knowledge, medical knowledge and research expertise in themselves are insufficient.

They also need to possess or acquire the culturally based "discoursal expertise," which ideally should be part of their professional socialization. This idea brings us quite close to the title of this paper: 'local answers to a global challenge need to be given by Hungarians as well as other nonnative English speakers,' in order to have a chance to be accepted as researchers of equal standing.

The local answer or solution to this problem is delivered in the form of elective courses, one on BCP, the other on MRA. Based on genre analysis, both focus on three aspects of constraints: sociolinguistic, intercultural and linguistic. The sociolinguistic aspect of course design in both cases is mainly concerned with the social prestige and impact of these genres as well as the interpersonal plane of communication. The intercultural considerations throw light upon the most conspicuous and significant cultural differences non-native speakers of English encounter when trying to meet criteria mainly originating in the rules and conventions of communication in the Anglo-Saxon culture. Finally, the linguistic aspect is meant to offer an insight into the linguistic realization of the other two.

2.5 Course on writing MRAs

This tailor-made course is intended to serve as a springboard for researchers, sometimes even student researchers at the beginning of their career. On the other hand, it is also meant to provide a systemic overview of international biomedical research to anyone interested. As any other elective course at the University Medical School of Pécs, it has 28 contact hours over 14 weeks during term-time. Input from the course tutor, which takes approximately half of the time, is delivered in the form of free lectures, where the students are allowed to interrupt or the lecturer may stop to ask and answer questions. The input contains some major focal points of modern research writing.

The first group of these focal points include sociolinguistic and communication topics such as the social prestige of MRAs, the concept of the international discourse community of biomedical researchers and its characteristic features, specific problems and dilemmas of the non native English author, basic concepts of scientometry with special regard to impact factors of medical journals and citation indices of authors, and international agreements of medical publishers.

The second group of topics is concerned with research and its unwritten rules and conventions, including the inductive approach to medical research and its cyclical organization, types of scientific truth expressed in MRAs, the IMRAD structure of MRAs and its relationship with the structure of inductive inquiries, formulae of logic (definitions, descriptions, explanations, classifications and generalizations in MRAs), the function of each individual sub-section within the IMRAD structure, the philosophy behind scientific research with regard to objectiveness and subjectiveness, the utilization of medical research findings, moral and ethical aspects of scientific research, the moral issues of authorship with special regard to teamwork, reference to other authors' findings and claims, avoiding plagiarism and falsification, ways of submitting MRAs for publication, the role of statistics in creating topic generalizations, ways of making research written up in MRAs replicable, the role of face-work and positive and negative politeness in MRAs.

The third group of topics is purely linguistic. The topics focus on the realization of the first two aspects. The most important areas of concern in this group are concrete linguistic phenomena such as using reporting verbs, forms of hedging, various degrees of authors' commitment to their own and other authors' claims, the linguistic realization of politeness phenomena in MRAs,

the use of tenses and modality in MRAs and the lexical aspects of MRAs with special regard to nominalized phrases and their interpretation as well as considerations of terminology. It seems worth mentioning that the processing of the linguistic phenomena in the third group takes place in the form of individual and group work, which means that course participants are exposed to examples which they are asked to interpret, explain, transform or manipulate in some other ways. The course concludes with a 5- point-system, grade 5 being excellent and 1 being the failing grade. The criterion of acceptance is active participation in coursework and submission of an MRA with the student's annotations and comments.

Experience over 15 years with this course shows that both Hungarian and foreign students find this type of work enjoyable and useful, as they can see theory put into practice. One of the conclusions they often make is that after completing the course MRAs seem less ambiguous and they stop considering this genre as something that is deliberately made complicated, ambiguous and too highbrow.

2.6 Course on biomedical congress presentations

BCPs may be regarded as an oral way of "writing up research," however, it is far from being the counterpart of MRAs. The elective EMP course on preparing and delivering BCPs offered by the LSP Department of the University Medical School is meant to focus on this basic difference and also the similarities between the two genres. The topics discussed in this course can be divided into two large groups: theoretical considerations and practical tips and hints. Part of the theoretical considerations is quite similar to those described earlier. They concern the philosophy behind and the nature of scientific research. The other group of phenomena specific to the genre of BCP includes such topics as the three planes of communication in BCPs, the factual, the textual and the interpersonal.

The course is designed to give an overview of each of these three planes and about the way they can be used simultaneously, interweaving one into the other. The material includes lists and interpretations of discourse markers used at each level. Discourse markers on the factual plane include logical schemata such as definitions, descriptions, exemplifications, classifications, and generalizations, are each discussed and exemplified in detail. On the textual plane discourse markers are the so called sign posts, which help the audience to become oriented, thus making the processing of the text's oral delivery easier. Finally, on the third, interpersonal plane discourse markers indicating respect for the audience and language devices of positive and negative politeness can be found, which are also interpreted, discussed and practiced widely.

Practical hints and tips concern the physical side of BCPs, i.e., those related to the presenter's behavior, as well as some others, which are associated with the content, arrangement and structure of the BMP. Another important aspect of the course is giving ideas to the participants on materials' collection and PowerPoint presentations. There are two criteria of completion course participants need to meet: giving a pseudo BCP using PowerPoint to prove that they have acquired the main principles and presentation techniques, and writing up their experiences of preparing for this presentations.

The course is assessed in the same way as the MRA course. It is quite popular with students for two reasons. First, they experience that the theory and technique they learn can be useful in making their own presentations. And second, a more immediate utilization of the course is that the knowledge and techniques acquired can directly be utilized at oral exams, which are common in Hungary, thus improving their exam grades.

3. Conclusion

In conclusion we can say that the structure and content of the system of courses described in the present article covers the most important fields of medical communication, doctor-patient communication on the one hand, and international communication of biomedical research on the other. The rest of the courses can be considered as preparatory EMP studies. The proof of the students' endeavor to give a local answer to a global challenge can be found in the fact that more than 1000 students (approximately 90% of the total student population) take up these elective courses every year.

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[Original Article]

Analysis of the Results of the Pilot Examinations for Proficiency in English for Medical Purposes

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Background: The Examination of Proficiency in English for Medical Purposes (EPEMP), which certifies the ability of medical English for practical use, was fully started in April 2008 by the Japan Society for Medical English Education. Before the start of the formal EPEMP, two pilot examinations were performed in 2007.

Objective: To investigate the quality of the examinations and understand the levels of the examinees.

Methods: Retrospective analysis was performed on the questions and results of the first two pilot examinations. The backgrounds of the examinees, total scores and their distribution were examined. For each question, difficulty index, discrimination index and no-marking ratio were calculated.

Results: In the first pilot test, 56 persons took the 3rd level and 60 took the 4th level examinations. The average scores were 86.6% in level 3 and 82.7% in level 4 with asymmetric distributions. Discrimination indices were 0.24 ± 0.12 for level 3 and 0.23 ± 0.15 for level 4. Maximum no-marking ratios of the questions did not exceed 1.8%.

Conclusion: The examination characteristics reviewed in this paper should contribute to improve the questions of EPEMP in future.

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Key words: Medical English, Achievement test, Education, Difficulty index, Discrimination index

1. Introduction

The Japan Society for Medical English Education (JASMEE) has contributed to the development of medical English education for Japanese medical professionals. In 2005, in response to a proposal by one of the authors (JPB), JASMEE decided to conduct an achievement examination, Examination of Proficiency in English for Medical Purposes (EPEMP), to certify the ability of medical English for practical use.[1] Those who pass the level 4 competence examination are certified as having medical English ability equivalent to those who can graduate from a medical university or college in Japan. Those who can use English fluently for practical purposes at basic interactions with patients should be able to pass the level 3 competence examination. The examination for level 4 competence consists of answering written multiple choice questions (MCQs) while that for level 3 competence consisted of both writing and listening MCQs. Before the start of the formal EPEMP, two pilot examinations were performed in 2007 to assess the quality of the examinations and understand the proficiency levels of the examinees. Here we report the analyzed results of the first pilot examination of EPEMP.

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2. Materials and Methods

Two written examinations, the first pilot EPEMP for competence levels 3 and 4, and their results were used for analysis. Each examination consisted of MCQs which

had 4 options with a single correct answer. The contents of both examinations are shown in table 1. Based on the results of the examinations, the following items were calculated.

2.1 Examinee background

We examined the job or status of the examinee and classified them as medical doctor, medical staff other than medical doctor (including nurse, clinical examiner, etc.), interpreter or medical translator, medical student, and others.

2.2 Total score and difficulty index

The total score distribution was investigated for each examination. The difficulty index was calculated for each examination question. The difficulty index evaluated the examinee performance on each question and ranged from 0 (no correct answers) to 1.0 (all answers were correct). A difficulty index of 0.6 indicated that 60% of the examinees answered the question correctly.

2.3 Discrimination index

The discrimination index measures the differences between the percentages of examinees in the upper and lower groups who provided correct responses. When calculating this index, the values of upper and lower quartiles of the whole examinees are usually used.[2,3] However, in this analysis, we selected the upper and lower half for calculation owing to the relatively small sample sizes. Discrimination index values range from 1.0 to –1.0. A discrimination index of 1.0 indicates that all examinees in the upper half and no examinees in the lower half answered the question correctly. A discrimination index of 0 indicates that an equal number of examinees in the upper half and lower half answered the question correctly. Negative discrimination indices indicate that examinees who scored on the lower half of the overall examination performed better on a question than those who scored in the upper half of the overall examination.

2.4 No-marking ratio

No-marking ratio refers to the prevalence of no answers to the questions. This was calculated as the number of blank responses divided by the total number of examinees.

Table 1. Number of questions according to each section.

Classification	Level 3	Level 4
Idioms	40	40
Abbreviations	10	10
Fill-in-blanks	10	10
Synonyms	10	10
Reading	22	15
Conversation	8	7
Total	100	92

3. Results

3.1 The contents of the examinations

The 3rd level examination consisted of 100 MCQs, and the 4th level examination consisted of 92 MCQs. The contents of both examinations are shown in table 1. Various kinds of questions were used in both examinations. In each examination, sections were divided as follows: idioms (translating idioms from Japanese to English, or English to Japanese); fill-in-blanks (inserting the correct word); medical abbreviations (translating the abbreviated English medical phrase to Japanese); synonyms (selecting a word to fit the situation described); reading (answering the questions after reading the problem); conversation (answering the questions after reading a conversation).

Table 2. The average scores and the discrimination indices according to the sections of the examinations.

Section	Level 3		Level 4	
	Score (%)	Discrimination index	Score (%)	Discrimination index
Idioms	83.5 ± 16.0	0.25 ± 0.11	83.4 ± 15.0	0.23 ± 0.17
Abbreviations	85.7 ± 12.5	0.22 ± 0.12	88.0 ± 14.5	0.18 ± 0.08
Fill-ins	89.3 ± 10.6	0.18 ± 0.12	75.2 ± 17.6	0.23 ± 0.12
Synonyms	85.5 ± 10.0	0.27 ± 0.10	71.8 ± 8.2	0.30 ± 0.10
Reading	86.7 ± 9.7	0.29 ± 0.12	91.6 ± 12.1	0.16 ± 0.12
Conversation	91.5 ± 9.2	0.17 ± 0.19	77.4 ± 12.7	0.29 ± 0.17
Total	86.6 ± 11.0	0.24 ± 0.12	82.7 ± 11.3	0.23 ± 0.15

Values are represented as mean ± standard deviations.

3.2 Background of the examinees

Fifty-six persons sat the 3rd level and 60 the 4th level examinations. The distributions of the examinee's status in each examination are shown in Fig. 1. Level 3 examinees consisted mainly of medical staff (32.1%), followed by medical students (23.2%), interpreters (17.9%) and medical doctors (12.5%). However, in level 4, medical student were 38.3%, followed by others (36.7%), and interpreters (20.0%). Only one medical doctor sat the 4th level examination. A statistically significant difference was found in the distribution of medical doctors between level 3 and level 4 examinations (χ^2 test, $p < 0.05$).

3.3 Distribution of total score

The average score of level 3 examination was 86.6 ± 11.0% and that of level 4 was 82.7 ± 11.3% (mean ± standard deviations). The distributions were asymmetric with a single high score peak (Fig. 2).

3.4 Difficulty index and discrimination index

Average discrimination index of level 3 was 0.24 ± 0.12, and of level 4, 0.23 ± 0.15 (mean ± standard deviation). The average scores of each section were based on the difficulty indices of the questions. Both average scores and discrimination indices according to each section of the examinations are shown in table 2.

3.5 No-marking ratio

No-marking ratio of more than 0 was found in 7 out of 100 questions (7.0%) in the level 3 and in 7 out of 92 questions (7.6%) in the level 4 examination. Maximum no-marking ratios were 1.8% in the level 3 and 1.7% in the level 4 examination.

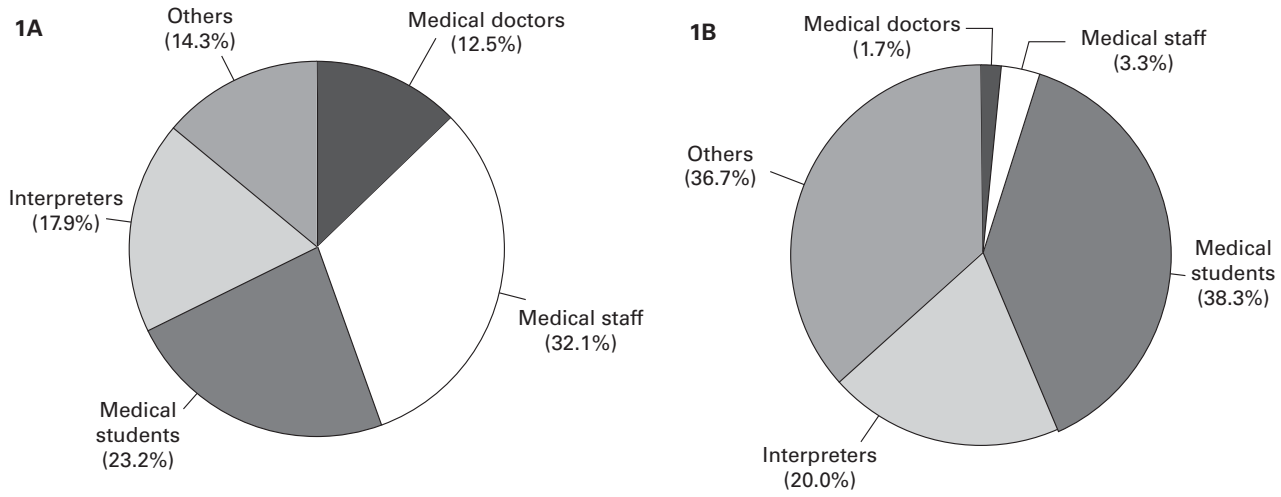

Fig. 1. Distribution of the status of the examinees, in level 3 (A) and level 4 (B) examinations.

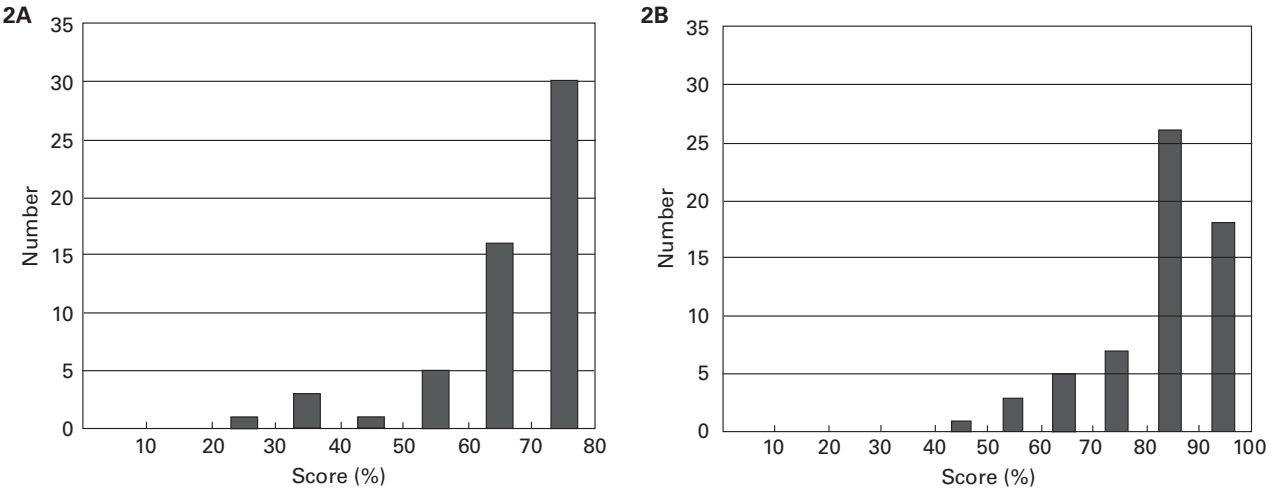

Fig. 2. Distribution of the total score, in level 3 (A) and level 4 (B) examinations.

4. Discussion

We set out to establish an examination to improve ability in medical English for practical users in the medical environment. Although there had been no comprehensive testing method to evaluate this ability, JASMEE developed an MCQ type examination.The goal is to achieve a good quality, thus both validity and reliability must be of a high level. After the evaluation, we had to determine if the yield scores were adequate for the purpose for which the questions were originally intended. Then, the quality of the questions was reconsidered. Because continuous developmental studies are needed for this goal, first of all, we performed analysis of the questions and results of the pilot examinations.

Various types of questions were given for both level 3 and level 4 examinations. Because there was an emphasis on medical vocabulary, most questions, except for reading and conversation, were related to the knowledge of vocabulary. Therefore, future examinations should be arranged with more emphasis on problem-solving questions and those related to the practical situations.

The maximum no-marking ratio did not exceed 1.8%, which shows that most examinees could solve all the questions within the examination period. Therefore, the amount of questions in the given examination period is considered to be adequate.

In both examinations, the average scores of examinees were high, more than 80%, and did not show normal distributions. This result suggests that the questions were too easy for examinees, so more difficult questions are needed in future to bring the average scores into a 60 to 75% range with normal distribution.[3–5] Furthermore, under these conditions, it is hard to identify reliable inter-individual differences. Generally, the discrimination index is closely related to difficulty.[3,4] When attempting to discover the levels of ability, it is not as easy to use very difficult or easy items as it is with items of moderate difficulty.

The discrimination index, which is often calculated in MCQ questions, determines the discriminatory power of individual items.[2–5] Discrimination indices are important to clarify poor discriminatory questions (bad questions). The higher, the discrimination index is, the better, the item can determine the difference between the examinees with high examination scores and those with low ones. In this analysis, the mean discrimination indices were 0.24 in level 3 and 0.23 in level 4. Although the questions with higher discrimination indices are believed to be better, the questions with more than 0.2 are considered to be appropriate for the examination.[2,3] Therefore, to maintain the higher discrimination index shown in this analysis is important for future development.

The examination characteristics we have reviewed in this paper might contribute to improve EPEMP questions in the future.

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[Original Article]

医学部教員と英語教員のチームティーチングによる模擬症例報告の指導を含む医学英語教育

Medical English Education Team Teaching Between Medical and English Faculty Including Simulated Case Presentations

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Background and Objective. How to establish team teaching in medical English education has been an issue in Japan. At the Asahikawa Medical College, 3rd and 4th year students receive medical English instruction from clinicians or scientists, and the instruction is usually limited to simply translating medical papers from English to Japanese. In the department of dermatology, however, we have been using various teaching materials and methods to provide more enriched medical English education.

Methods. We developed a medical English programme consisting of four activities for 4th year students in 2008. A dermatologist prepared the teaching materials and oral presentation skills were taught by an English instructor. We used the *MedlinePlus Interactive Tutorial* website to hone listening skills. Students then used the *Healthology* website sections on skin diseases and completed a listening comprehension quiz. Special guest dermatologists from English speaking countries came to give lectures that the students attended. The students then each prepared and delivered an oral case presentation in English.

Results. Five students took part in this programme. Based on responses to questionnaires, all the students considered these four activities to be effective in increasing their motivation to improve medical English.

Conclusion. This new innovative programme would be impossible without collaboration between the doctors and the medical English communications specialists. Therefore, it is essential to increase the number of medical English communications specialists on staff to develop curriculum with doctors and to provide much needed support to produce an excellent curriculum for all medical students.

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Key words: medical English education, oral presentation, team teaching

序

わが国における医学英語教育を初めとした ESP (English for Specific Purposes) 教育においては，英語教員と専門教員がどのように連携を図るかが大きな課題となっている。[1–8] チームティーチングが成功するためには，役割分担と責任を明確にすること，英語教員が専門教員に学習者の言語運用上の問題点，専門教員が英語教員に学習者の専門知識習得上の問題点をそれぞれ伝え合うことが，大きな鍵となる。[2,4] そして，各教員がそれぞれの専門性を活かして一つの英語学習プログラムを構築し，運用するためには，適切な目標設定，教材選び，カリキュラム作成が重要となる。ここでは，旭川医科大学の臨床医学講座が主体となって過去 7 年間実施した医学英語教育，特に，症例報告のプレゼンテーションを目標とした授業実践について報告する。

旭川医科大学医学科の現在のカリキュラムでは医学英語の必須の授業は第 1 学年の医学英語 IA, IB，第 2 学年の IIA,

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IIB，第 3 学年前期の III までを英語教員が担当し，第 3 学年後期の IVA，第 4 学年前期の IVB を基礎医学，臨床医学の講座の医師や医学研究者などが担当している。このうち，医学英語 IVA，IVB の授業内容は各講座に一任されており，多くは英語論文の翻訳や抄読などが行われている。皮膚科学講座では，平成 14 年から，講座の都合ではなく，学習者の将来的なニーズに焦点を当て，英語教員の協力を得ながら，多様な教材をもちいて聴き取りや口頭発表の能力を向上させる授業を展開してきた。本稿では平成 20 年度に実施された皮膚科学講座医学英語 IVB の授業内容を，それに対する学生の評価とあわせて報告する。

2. 方法

皮膚科学講座医学英語 IVB は，第 4 学年 95 名のうち，授業を選択した学生 5 名に対して実施された。内訳は，男性 2 名，女性 3 名で，そのうち 1 名は 10 歳まで英語圏で過ごしたバイリンガル，4 名は国内で一般的な英語教育を受けたモノリンガルであった。授業は，4 月からの半年間に展開され，正規の授業時間内では 60 分授業を週に 1 ないし 2 回，計 21 回行い，その他に，放課後を使って 2 回の授業，2 回の外国人教授の講演会（1 時間の講演と約 1 時間の情報交換会）への参加，各自の自習時間を使ったスライド作成，放課後の時間帯に最終回の発表会と情報交換会（約 3 時間）を行った。目標は，皮膚科学の専門的な内容について聞き取りができること，症例報告を英語でプレゼンテーションできることとし，皮膚科学講座の教員 1 名（皮膚科医としての臨床経験 25 年の日本皮膚科学会認定専門医。医学英語に関しては 2 年間の英語圏での研究歴，英文論文執筆，国際医学雑誌の section editor，国際学会演者，座長，事務局長の経験あり。），英語母国語話者である英語教員 1 名（教育学，生物科学専攻。医学部 3 年生に対し口頭発表に関する授業を 3 年間，医療通訳に関する授業を 4 年間，看護学校での英語授業を 7 年間担当。）のチームティーチングで授業を行った。チームティーチングでは，専門教員が全般的な指導をし，英語教員が言語面での指導を補完する形で進められた。教材選定は，専門教員が皮膚科学の教材を収集し，英語教員が学習効果を助言する形で行われた。プレゼンテーションの指導に際しては，専門教員が 1 回の授業で題材選びと専門知識の解説，皮膚科学分野で標準的なプレゼン形式の教授を担当し，英語教員は 2 回の授業と e メールを使って，スライドと発表原稿の校閲を担当した。完成したスライドと発表原稿については，e メール上のやりとりによって専門教員が専門英語の使用方法に関してその妥当性を確認した。プレゼンテーションの評価については，専門教員と英語教員の共同作業によって行われた。授業内容は，1）単語の聞き取り，2）長文の聞き取り，3）講演会出席，4）英語による症例報告の実践，と徐々に難易度を上げることで，学生が段階を踏んで実力向上できるように配慮した。具体的な内容は以下の通りである。

2.1 単語の聞き取り練習（活動 1）

皮膚科学の専門用語強化のためには，U.S. National Library of Medicine と National Institute of Health が提供するウェブサイト Medline Plus の Interactive Tutorial という多数の疾患についての説明が音声つきで利用できるコーナー（http://www.nlm.nih.gov/medlineplus/tutorial.html）を使用した。現在誰でも 165 もの疾患についての解説をみることができるが，この中から皮膚癌，悪性黒色腫，乾癬，脱毛，痤瘡など 4 年生でも比較的理解が容易と思われる題材を選んだ。このサイトからテキストをダウンロードし，ところどころの単語をブランクにして配布し，スライドを一枚ずつ進めながら音声を聞き，単語を聞き取ってもらった。スライドの途中には内容の理解度を試すクイズもあらわれるのでそれにも適宜回答してもらった。合計 8 回の授業を実施。

2.2 長文の聞き取り（活動 2）

聴き取り練習を単語レベルから長文レベルに引き上げるためには，Healthology のサイト（現在は閉鎖されおり，同様の内容は Health video のサイト http://www.healthvideo.com/で公開されている）で公開されていたビデオのうち皮

表 1　Health video のサイトで Medical Treatment Options for Male Baldness のビデオ http://www.healthvideo.com/video.php?id=271552 を見る際に提示した質問票

ビデオを見て次の質問に答えましょう。

1. Dr. Neil Sadick の職業は何でしょう？
2. Rogaine という名前で市販されている外用薬に含まれる minoxidil の濃度はいくらでしょう？
3. Minoxidil は，最近ではどこに作用するかもしれないと考えられるようになってきているでしょうか？
4. 何年間の研究で Propecia が持続的に男性の毛髪を維持することを示したと言っているでしょうか？
5. Propecia がよく効くのはどの部位の脱毛でしょうか？
6. どのような性格の患者さんが外用療法から開始したいと望むと言っているでしょうか？
7. このような生物学的な修飾薬の効果がでるにはどのくらい時間がかかると言っているでしょうか？
8. Propecia を服用している患者さんが気をつけなければならないのはどのようなことでしょうか？
9. 手術もしたくなく，薬ものみたくない脱毛症の人にはどのような選択肢があるでしょうか？
10. 薬の作用と副作用についての原則として紹介されているのはどのようなことですか？

膚疾患に関連するインタビューなどを毎回1話ずつ選び，2，3度繰り返して見てもらった。話題としてはアトピー性皮膚炎，乾癬，痤瘡，単純ヘルペス，脱毛などをとりあげた。その後内容の理解度を確認するための設問(表1)に回答してもらった。次に上記のサイトからダウンロードできた(現在は不能となっている)スクリプトを配布し，設問の正しい答を確認してもらった。単語の聞き取り教材にも共通するが，学生間に英語力の差が大きく授業内容の難易度の選択に工夫を要した。具体的には，聞き取り学習では平易な単語の聞き取りと，医学的知識がなければ答えられない質問を組み合わせ，どの学生にも易しすぎず難しすぎない設問を提示するように配慮した。合計8回の授業を実施。

2.3 皮膚科学講演会出席（活動3）

半年の授業期間中に，来日中のアメリカ人とイギリス人の皮膚科教授を旭川に招いて講演会と情報交換会を2回開催することができたので，医学英語履修中の学生にも聴衆として参加し，講演内容についての質問をしてもらった。また講演会後の情報交換会において演者と自由に会話をしてもらった。講演の内容は1つは皮膚疾患が皮膚の機能の理解を助けてきた歴史についてのレビューであり，もう1つは演者がかかわってきた先天性皮膚疾患の診断や治療の歴史であった。この講演会は正規の授業以外の時間に行われたが，あらかじめ正規授業4回の中で，講演内容に関連する基礎知識を予習してもらい聴講が容易になるように配慮した。これには無料で公開されている北海道大学医学部皮膚科学講座教授の清水宏先生の英語版教科書 Shimizu's Textbook of Dermatology のサイト http://www.derm-hokudai.jp/shimizu-dermatology/index.html を活用した。ここから関連項目の本文や図を印刷したものをあらかじめ学生に配布し，翌週に全員が順番に1文ずつ音読し合計17ページ分を翻訳してもらった。

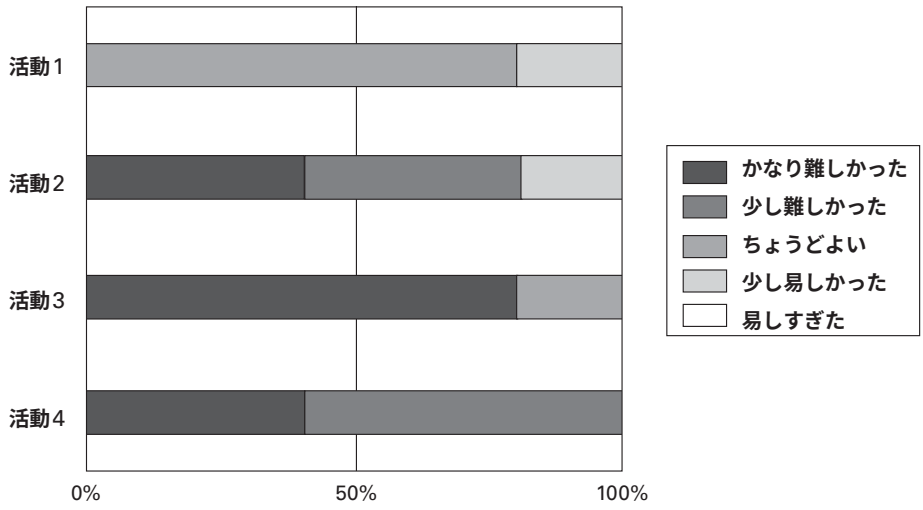

図1　4つの活動の難易度に関する学生の評価

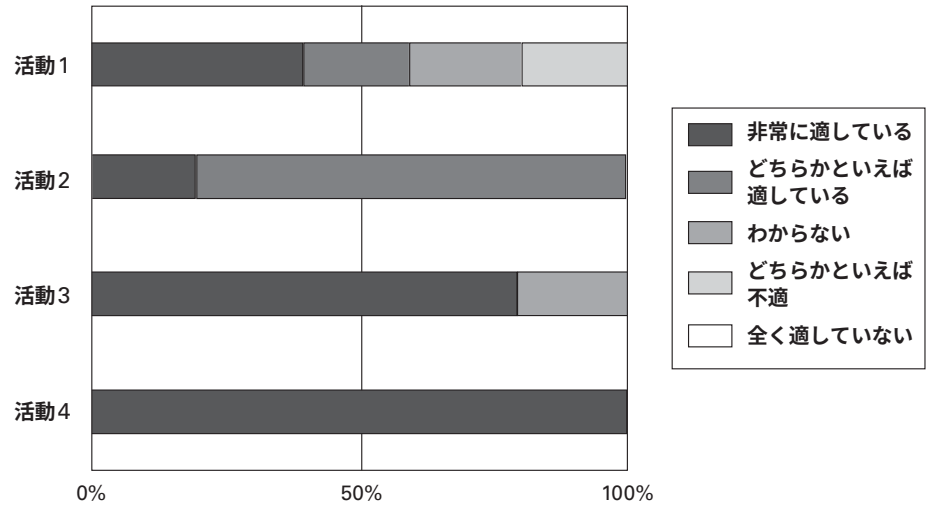

図2　4つの活動の医学英語の授業としての適切さに関する学生の評価

2.4　英語による症例報告の実践（活動4）

日本語の症例報告のパワーポイントのファイルをあらかじめ学生に提供し，これをもとに英語のスライドを作成し，口頭発表してもらった。まず1回の授業で，例として皮膚科医である専門教員が国際学会で使用した症例報告のスライドを供覧した。その上で，学生に過去に皮膚科医や医学部6年生の学生が作成した日本語の症例報告スライド数例を提示し，その中から選んでもらったものを英語のスライドに変換させた。なおこれらのスライドには患者個人が特定されるような情報は含まれていない。学生の試作ファイルはその後の授業中に提示させ，eメールによるやりとりで補足しながら皮膚科専門医と英語教員がそれぞれの立場から校正を加えた。また英語での学会発表についての一般的注意事項について，英語教員による解説の時間も別に2回，設けた。発表は学会形式で学生らに座長，発表者，

質問者の役割を分担してもらった。また学会における座長や質問者の定型的な発言の例文を市販の教材により提供した。発表会当日には皮膚科学講座の教室員，基礎医学講座の教員，英語教員等にも聴衆，質問者として参加してもらった。発表，討論の様子はビデオ撮影し，DVD に編集して学生に配った。

2.5 授業評価

半年間の授業が終了した時点で学生に授業内容に関するアンケート調査を行った。質問項目は上記の 4 つの活動内容についてそれぞれ，難易度と医学教育の教材としての適切さを問うものであった。難易度を問う質問には，①かなり難しかった，②少し難しかった，③ちょうどよい，④少し易しかった，⑤易しすぎた，のいずれかの答を選択してもらった。適切さを問う質問には，①非常に適している，②どちらかというと適している，③わからない，④どちらかというと不適，⑤全く適していない，の中から選択してもらった。それぞれの設問のあとには具体的な理由を記載するスペースを設けた。また最後に，本学での医学英語教育についての意見を自由に記載するスペースを設けた。

3. 結果と考察

本授業実践報告で行われたチームティーチングでは，課題となる専門教員と英語教員との連携が円滑に行われた。その成功要因としては，専門教員に留学や国際学会参加の経験があり，英語による研究発表の経験が豊富であったこと，そのために英語による綿密に打ち合わせが可能であったことが上げられる。さらに，英語教員は，皮膚科学講座の教員を対象とした英語教育と，学会発表スライドや論文の校閲を過去 1 年実施した経験があり，学生が口頭発表する専門的な内容にある程度通じていた点も大きかった。教員それぞれの専門性についての共通理解に立脚し，授業前後に綿密な打ち合わせたことで，冒頭で述べた ESP のチームティーチングに関する課題は解決することができた。

次に学生による評価についてである。授業の内容についてのアンケートには 5 名の学生全員が回答してくれた。結果を図 1 と図 2 に示す。図 1 に示すように難易度に関しては活動 1 が適切との回答が多かったが，他はかなり難しいとの意見が多かった。活動 1 で用いた Medline Plus のコーナーの英語は発音が明瞭でスピードも比較的ゆっくりであったため聞き取りやすかったが，活動 2 で用いたビデオでは出演者や司会者が自然な英会話のスピードで話していたため，聞き取りが難しかったと思われる。活動 3 の講演会では演者は日本人聴取を意識したゆっくりなスピードで話してくれたが，録画されたもとのは異なりその場で理解しながら聴き続けなければならないのが難しかったと思われる。活動 4 は英語のスライド作成や説明の手法や質疑応答の仕方になじみが薄く，難しいと感じたと思われた。しかし，図 2 に示すように，4 つの活動の医学英語の授業としての適切さに関しては概ね肯定的な意見が得られた。学生にとって内容は難しいものでも参加する意義はあると評価したものと思われる。

自由記載欄では活動 1 の対象とした疾患がその後に使用した活動 2 と同じ疾患であった場合によく理解できたとの意見があった。活動 2 のビデオについては「生の英語を聞くのにちょうど良い教材だと思いました。英語の内容は難しかったけれど，その中で自分の解る英語だけでも聞き取ったりしていて，そういう行為がとても聞き取りの練習になるのではないかと思いました。」「質問用紙があったので話の流れはなんとなく分かったのですが，結構難しく，…（中略）…でも，2，3 回繰り返し聞くとだんだん理解できたので内容が分かると面白かったです。」「自分には聴き取るのがかなり難しい教材でしたが同じ文章を何度か聞いていると，少しずつ理解できる内容が増えていき，日常的にやれると実力が上がるような気持ちになりました。」といった肯定的な意見が多かった。

活動 3 の講演会参加については「正直，先生方の話はほとんどわからず，つらかったです。でもその分，英語を強化したいというモチベーションが高くなったように思います。もっと早い学年で体験できたらと思いました。」「学生のうちからこのような講演会に参加でき本当に勉強になりました。内容も事前に勉強させてくれたので少しは理解することができました。また情報交換会で講師の先生や奥さんと話せて，もっと英語を勉強しよう!! とモチベーションが上がりました。」といった意見があった。難易度は高い教材であっても英語学習の必要性を身にしみて体験することはその後の学習意欲の向上につながるので積極的にとりいれてよいと思われた。

活動 4 の学生による英語での症例発表会については「スライドを英語に直したり，スピーチの内容を考えたり，疾患や成分の名前の発音などもとても難しかったです。でもやりとげた後には良い経験ができたと思いました。もし次にやる機会があればアイコンタクトや読む速度などにも気をつけてやってみたいです。」「発表の準備がかなり大変でした。あまり能動的に勉強する機会がない中で，自分で発表の準備をしたりするのはよい体験でした。準備が十分できず，自分の英語力のなさにうちのめされた感じで，もっと英語の勉強をしたいと感じました。」との意見がよせられ，学生のやる気を引き出すことができた良い実習であったと思われる。

全体についての自由記載の欄では「論文を読めるようにするのも大切だと思うのですが，今回やったようにリスニングやプレゼンをやることも大変勉強になると思いました。実際この数ヶ月で何かを身につけるのは無理かもしれませんが，この先もっと勉強しようと思えたし，選択してよかったと思っています。」とのコメントが寄せられた。

今回の授業評価の項目にはチームティーチングの有効性

に関する項目を入れていなかったため，学生が専門教員と英語教員が協力して行った授業形態をどのように評価したかを知ることができなかった。次年度の授業ではこの点を改めて実施する予定である。

4. 結論

本稿では，症例報告のプレゼンテーションを目標に据えた，オーラル技能を重視した授業実践を報告した。この授業実践では，専門教員が臨床知識について英語教材を使用しつつ段階的に教授し，英語教員がプレゼンテーションに関わる英語技能を指導する，チームティーチングが行われた。授業内容はおしなべて学生に好評であった。国際社会で活躍できる医師を輩出していくためには今後もこのような授業を継続することがのぞましい。しかし，大学病院の臨床科医師が他の職務と平行しながら，毎週の教材を準備するためにはかなりの超過勤務を要した。また活動 4 の学生自身による発表会の準備には，正しい英語での発表を担保するために英語教員との共同作業が不可欠であった。現在のところ本学の医学英語 IVA，IVB の授業でプレゼンテーションに関わる教育を取り入れているのは皮膚科学講座のみであるが，背景にはこのような，教員個人の努力と，英語教員との共同作業に依存しなければならないことがあげられる。将来のニーズにかなうこのような授業実践について汎用性を高めるためには，学会活動を通じた教材やその選択方法の共有，医学の専門内容を扱うことのできる英語教員の増員が必須である。なお我々の授業形態は今回授業を履修した 5 名の学生に好評であったが，今後は複数年度にわたって学生評価を実施し，より多くの学生の意見を集積し，さらに授業内容の改良を続けていきたい。

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[Original Article (Needs Analysis)]

Reevaluation of First-Year Nursing Students' English Proficiency in Expressing Body Movements and Activities of Daily Living [1]

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BACKGROUND. Beginner nursing students in Japan lack the English skills for communicating routine activities of daily living (ADL) and for expressing the terms for body parts and common symptoms, as documented by an open-ended completion-type test we designed in a previous study. In the present study, our objective was to verify the previous results with a cloze-type test.

METHODS. We designed a cloze-type test and administered the test to 155 Japanese first-year nursing students in the Hamamatsu area in May, 2006, right after they entered university. Grading was done by two Japanese English teachers and two native speakers of English. To identify the English idiosyncrasies of beginner Japanese nursing students, we also administered the same test to 55 Chinese first-year nursing students in Chongqing.

RESULTS. In the Japanese answers on body movements, 12.8% were correct, 45.7% were wrong, and 41.5% were left blank. In ADL, 24.3% were correct, 39.7% were wrong, and 36.4% were left blank. Chinese students tried various alternatives when they could not think of the target verb, whereas the Japanese students had a propensity to leave the answer blank instead.

CONCLUSION. The results confirm that the low scores of our previous study were not attributable to the test method but were a de facto indication of the students' inadequacy in English skills for communicating with patients about routine activities. We propose that if the students practice "talking to" a mannequin while practicing and pretending to perform a clinical task, their English skills for bedside communication with patients would improve considerably.

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Key words: beginner nursing students, English verbs in Activities of Daily Living, English for body movements, cloze-type test

1. Introduction

Competence in English communication is a growing need for nurses in Japan today.[1] With the influx of visitors and residents from abroad, many international people in Japan are not able to describe their presenting symptoms in Japanese when they need hospital care, and yet the doctors and nurses on duty may not be competent in English. Moreover, some of the nursing students have told us they harbor a dream to work in a foreign hospital, study abroad, serve in medical emergencies in Third-World countries, or work with the Japanese International Cooperation Agency (JICA). In a prestigious research project supported by the Ministry of Education, Science and Technology, Onjoji et al. reported that the growing need for English in nursing education has had a noticeable impact on the curriculum.*

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[1] Portions of this paper were presented at the 10th annual conference of the Japan Society for Medical English Education, July 15, 2007, Tokyo.

*Onjoji Y, Narusawa K, and Fukaya K. 2004. Needs analysis of English in nursing education and suggestions for curriculum. Research Project, Grant-in-Aid for Scientific Research [kiban kenkyu (c) 13680329] with a subsidy account from the Ministry of Education, Culture, Sports, Science and Technology.

In spite of the need for English, however, our previous study shows that beginner nursing students lack the basic English skills for communicating routine activities for daily living (ADL).[2] In the diagnostic test we created at that time, the English for ADL was comparable to the English used routinely in nurse/patient dialogue and was reminiscent of that found in textbooks for junior high and high schools. Nonetheless, most of the students were unable to answer the test questions, even though illustrations and Japanese answers were provided.[2] This raises concern as to exactly what kind of English ought to constitute the courses in English for nurse-care purposes and whether the specialized courses in English for medical purposes can sufficiently meet the needs of the students who have yet to master the fundamental English skills they somehow missed in their early years of English study. Other reports have raised similar concerns.[3,4]

The test used in our previous study required the students to write the full predicate, or all but two or three words of the sentences, e.g., "Can you (tie your shoes/shoelaces)?" Most were unable to answer these questions, but about 2% answered, "Can you tie?" without the object. Such answers led us to speculate that the students might, after all, know the verbs commonly associated with ADL, even though they were not able to complete the sentences. Therefore, we have constructed a new diagnostic test requiring only that an appropriate verb or verb phrase be inserted in a blank in each sentence. The objective of the present study was to reevaluate the competency of beginner nursing students in expressing ADL with a test that requires only the verb and not the full predicate. Results of this study would presumably have pedagogical implications for the creation and selection of English learning materials for students preparing for university with a nursing career in mind.

2. Methods

A cloze-type diagnostic test was designed to target verbs which we assumed the students had studied in junior high or high school and which are commonly used in expressing body movements and ADL. The test was administered to 155 Japanese first-year nursing students in the Hamamatsu area in May, 2006, right after they had entered university. All the students had recently graduated from high school.

2.1 Test construction

The test included 10 illustrations depicting body movements and 10 illustrations showing daily activities. Each illustration had an English sentence with a blank in parentheses, and the students were instructed to insert the appropriate verb in the appropriate form to complete the sentence. The complete sentence was also shown in Japanese.

Part 1. Body Movements

The first 10 illustrations required the students to insert an appropriate verb or verb phrase into a sentence describing the body movement depicted in the figure. The first illustration was accompanied by this sentence: The man is (_____) his waist right and left. One of the following words, twisting, turning, or moving would be the appropriate answer. The other 9 questions on body movement are shown below:

2. To keep healthy, you need (*to exercise*).
3. Try to (*stretch*) your arm like this.
4. Do you think he will be able to (*lift*) the barbell?
5. He is lying on his back and (*bending*) his knees.
6. The nurse is (*pushing*) the wheelchair for the patient.
7. The doctor is (*leaning / leaning forward*) toward the patient.
8. Please (*take / hold / grab*) this apple.
9. She is (*picking up*) the ball.
10. Please (*climb up / go up*) the stairs.

Part 2. Activities of Daily Living

In Part 2, the 10 illustrations called for expressions for ADL and were also accompanied by the Japanese equivalent of the target English sentence. The first illustration showed a girl stacking blocks. The English sentence presented with the illustration was: The girl is going to (_____) the final block on top of the others. The answer could be place, put, or stack, for example. The rest of the questions on ADL are shown below:

2. Can you (*reach*) the clothesline?
3. She is (*getting out of*) bed.
4. My mother (*is hanging up*) wet clothes to dry.
5. Please (*turn on / switch on*) the television.
6. (*Washing the dishes*) is my job at home.
7. Are you able to (*do the laundry*) yourself?
8. She is (*taking out*) the garbage.
9. Be sure to (*take*) this medicine at the regular time.
10. She is (*sweeping*) the floor in the classroom.

2.2 Evaluation

Each question had more than one possible answer. Taking all possibilities into consideration, two Japanese English teachers and two native speakers of English did the grading.

To further pinpoint the English ability peculiar to the Japanese first-year nursing students, we administered the same test to 55 Chinese first-year nursing students in Chongqing in October, 2006, just after their entrance, and analyzed the Japanese answers in light of the answers in China. The Chinese equivalent of the target sentence was provided. To ensure consistency, the same two Japanese and two native speakers of English graded the tests of the students from both countries.

Statistical analysis was performed with Microsoft Excel software. A P value of ≤ 0.05 was taken to indicate a significant difference.

3. Results

3.1 In Japan: Part 1. Body Movements

Out of the 10 body movements tested, in Japan 12.8% of the answers were correct, 45.7% were wrong, and 41.5% were left blank.

Figure 1 shows the five questions (Q) that received better results than the other five. First, *"The nurse is (pushing) the wheelchair for the patient"* (Q6) received the highest number of correct answers, but even so, only 35.5% of the students answered correctly (Fig. 1). Second, in reply to the question *"To keep healthy, you need (to exercise / to get exercise)"* (Q2), many students did write in the answer instead of leaving it blank, but most said do sports. Third, in reply to the question *"Please (climb up/ go up) the stairs"* (Q10), many students answered simply up instead of climb up.

For the other five questions related to body movement, very few answers were correct (Fig. 2). Most were either outright wrong or were left blank. For example, instead of *"She is (picking up) the ball"* (Q9), many students answered simply She is (*up*) the ball, comparable to "please (*up*) the stairs" in Q10.

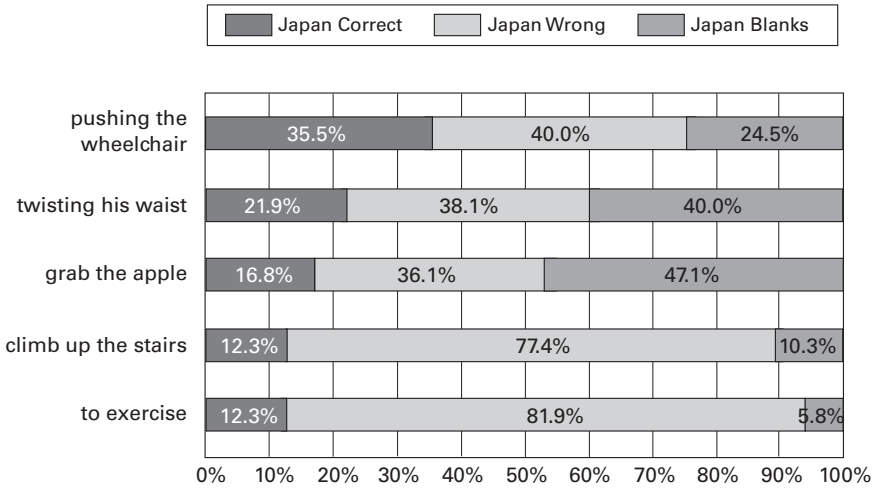

Figure 1. Best 5 answers to the test of English for body movements as expressed by the Japanese students.
Questions are ranked from top to bottom in the order that received the best scores.

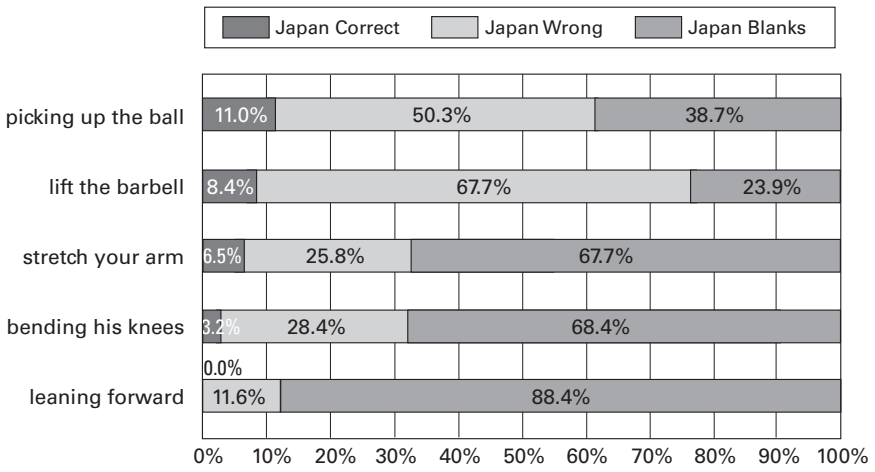

Figure 2. Worst 5 answers to the test of English for body movements as expressed by the Japanese students.
Questions are ranked from bottom to top in the order that received the lowest scores.

3.2 In Japan: Part 2. Activities of Daily Living

Of the 10 questions on ADL, 24.3% were answered correctly, 39.7% were wrong, and 36.4% were left blank. Overall, the ADL questions generated more correct answers than the Body Movements part of the test, and fewer questions were left blank.

Figure 3 shows the five questions that generated the best answers. *"Be sure to (take) this medicine at the regular time"* (Q9) received the highest score, 52.3%. The second highest score in ADL was 49.0%, for Q5, *"Please (turn on / switch on) the television."* About half of the students knew the expressions *take medicine* (Q9) and *turn on the TV* (Q5).

On the other hand, in the low-scoring questions, most of the students were not familiar with the phrasal verb *hang up* in Q4, *"My mother (is hanging up/ hangs up) wet clothes to dry"*; only a smattering 1.3% wrote the right answer (Fig. 4). *"Getting out of bed"* (Q3) also received a drastically low score; a mere 2.6% of the students answered correctly, despite the fact that this expression would be indispensable in their future as nurses. They knew the expression *get up*, however. Many answered *get up* instead of *get out of*, but they were not sure about the difference between those two expressions, or perhaps they had not mastered the grammar for intransitive active verbs (S + V) and were trying to treat "bed" as a direct object (get up bed). Some may have confused the transitive active (S + V + O) usage seen in newspapers, such as *"The government upped the price of oil,"* where "government" is the subject, "upped" is the verb, and "price" is the direct object. When teachers explain "get out of bed" and "get up," to help the students distinguish the difference, it may be prudent to explain the newspaper usage of the independent verb up by citing a variety of uses found in current news reports and then asking the students to compare the difference in the correct idiomatic expressions for healthcare.

3.3 Characteristics of English usage of Japanese students

A cursory overview of the scores would suggest that

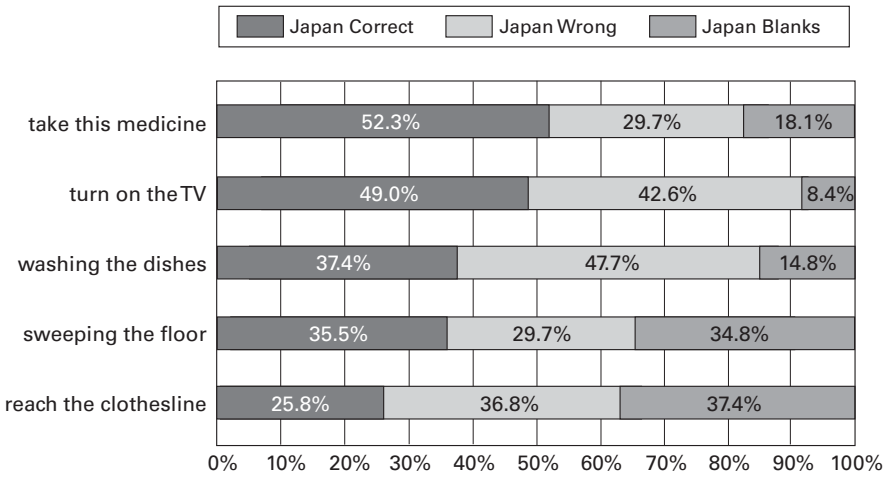

Figure 3. Best 5 answers to the test of English for activities of daily living as expressed by the Japanese students.
Questions are ranked from top to bottom in the order of questions that received the highest scores.

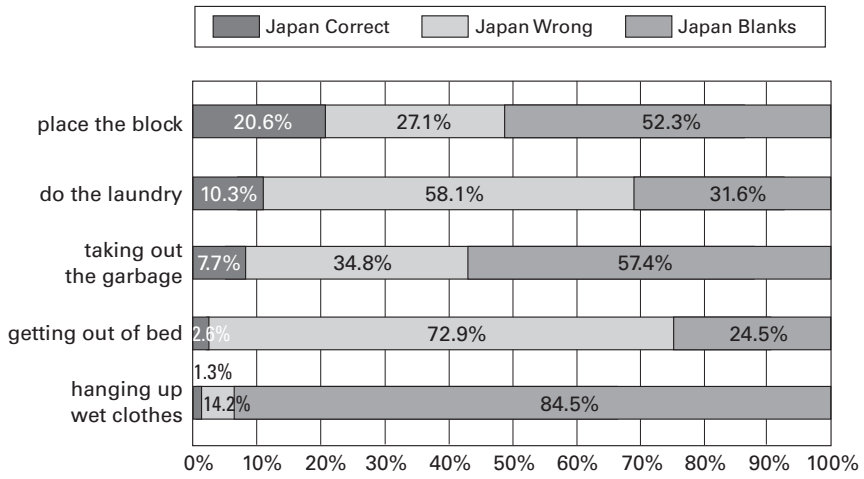

Figure 4. Worst 5 answers to the test of English for activities of daily living as expressed by the Japanese students.
Questions are ranked from bottom to top in the order of questions that received the lowest scores.

the results of the Chinese students were better than the Japanese students. For Body Movements, the Chinese performance showed an overall average of 24.8% correct answers (Fig. 5), which was twice that achieved by the Japanese students, and the Chinese left only 17.8% of the answers blank, whereas the Japanese left 41.5% blank. In ADL, 51.7% of the answers were correct in China as opposed to 24.3% (roughly half) in Japan (Fig. 6). Looking at all of the blank answers, only 4.6% of the ADL questions were left blank in China, as opposed to 36.4% in Japan. The main reason for the test in China, however, was not to compare the Japanese and Chinese students' English but to differentiate between English usage outside Japan and elucidate the English peculiar to, or characteristic of, the Japanese nursing students. To pinpoint the idiosyncrasies and attributes of the Japanese students in their use of practical English, therefore, we took a closer look at the question-by-question results.

On question 1 in Body Movements, "*The man is (turning/twisting/moving) his waist right and left,*" 21% of the Japanese students answered correctly, whereas only 6% of the Chinese students answered correctly. Although more than three times as many Japanese than Chinese students appeared to answer this question correctly, the difference was not statistically significant. However, 40% of the Japanese answers were left blank, whereas only 23% of the Chinese answers were left blank. This phenomenon indicates that the Chinese students were willing to risk making a mistake, whereas the Japanese students were more reserved, shy, or standoffish. The propensity of Japanese students to leave answers blank was found repeatedly throughout both parts of the test. Curiously, when the Chinese students could not match any of the target verbs *(turning/twisting/moving)* (Q1) they tried an intriguing variety of other interesting verbs such as ***shaking***, ***wriggling***, ***wagging***, and ***turning around***. Faced with the same predicament, however, only two Japanese students ventured as far as to ***swinging*** instead of leaving a blank.

In question 5, *"He is lying on his back and (bending) his knees,"* the percentage of correct answers was a surprising low 2%, and almost the same in both coun-

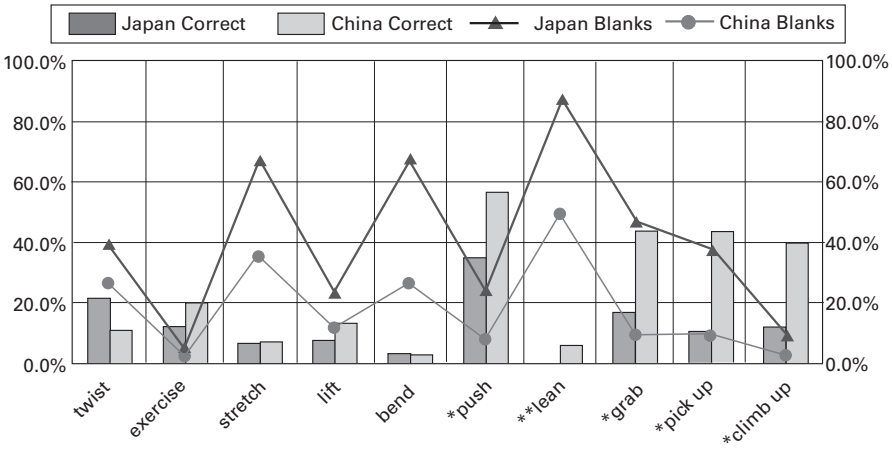

Figure 5. Body movements as expressed in English in Japan and China.
*P < 0.01, ** P < 0.05

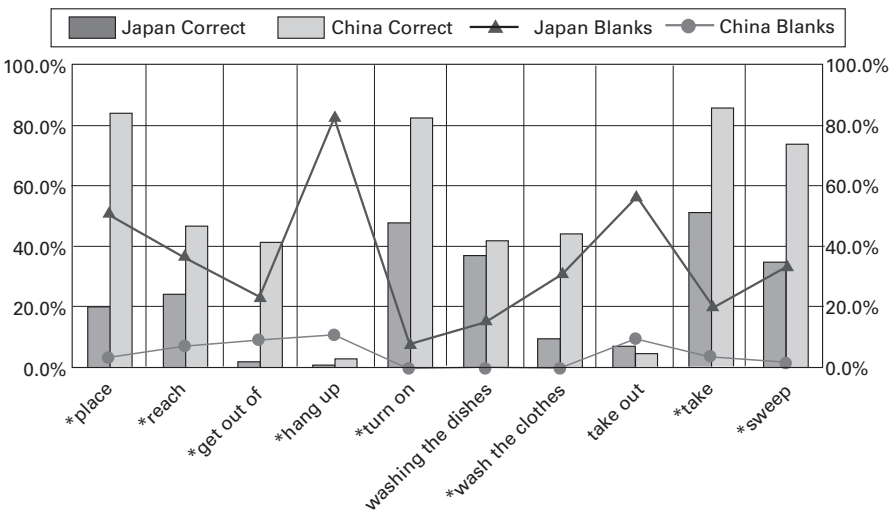

Figure 6. Activities of daily living expressed in English in Japan and China.
*P < 0.01

tries, but here again the Japanese students left more blanks. Instead of *bending*, Chinese students tried *bowing*, *curling*, *flexing* and *folding*, while a scant few Japanese students put *turning* and the rest of them left the answer blank.

Generally the Chinese students used a much wider array of verbs for any given sentence than their Japanese counterparts. The Chinese students tended to try another word when they could not find of the right target verb. This suggests not only that they dared to risk making a mistake but that they apparently knew more words than the Japanese students. The Japanese students gave the impression that they had an extremely limited vocabulary, or at least a limited repertoire of verbs, and also that they would not attempt to answer in other words. Instead, when they were unable to think of the right verb, they preferred to leave the problem unanswered. In Body Movements, they left 41.5% of the answers blank, and in ADL, 36.4%. The blank answers could not be attributed to the time allotted for taking the test because while proctoring the test we made sure that the students had ample time to finish the test as well as have time to go back and work through their answers. We suspect that the cultural background or upbringing in Japan has some bearing on their propensity to leave unknown answers blank. Historically, Japanese students sometimes tend to avoid situations of risk because they may lose face. Some think the teacher would consider their "different" answer ludicrous, so they prefer to leave the blank rather than have their answer stand out as "different" or strange. Further study could perhaps shed light on why the students tend to leave blank answers.

Another characteristic of the Japanese students' answer was the habit of using only an isolated adverb or preposition instead of using the complete phrasal verb (verb + adverb/preposition). For example, for the following expressions, many Japanese students answered with *up*, mistaking it for a verb:

- [Target] *She is (picking up) the ball.*
  [Answer] *She is (up) the ball.*
- [Target] *Please (climb up) the stairs.*
  [Answer] *Please (up) the stairs.*
- [Target] *She is (getting out of) bed.*
  [Answer] *She is (up) bed.*

For the foregoing three expressions, the renditions in Japanese would be「拾い上げる」(*hiroi ageru*),「階段を上がる」(*kaidan o agaru*), and「ベッドから起き上がる」(*bed kara okiagaru*), all of which are use the Japanese word for *up*. Whether the students believed their partial answers right or not is not known, but they repeatedly used the single word up as the main verb.

Another characteristic was the conventional mother-tongue interference. The students translated Japanese expressions literally, consequently using an unnatural English verb in sentences like *"Be sure to (take) this medicine at the regular time"* (Q2). In Japanese, people say「薬を飲む」(*kusuri o nomu*) and, accordingly, some Japanese students translated the expression as *drink* the medicine.

Not only did the mother tongue interfer, but social convention may have been responsible for the erroneous substitution of *"do sports"* for the target answer *"to exercise"* (Body Movements Q2). In Japan the popular *undoukai* in schools and the community centers on competitive activities, like sports. The competitive nuance of the *undoukai* may lead many people to think of the word *sports* when they hear the Japanese word *undou*. Because they do not separate exercise from sports in daily life, the students may not distinguish between the words, *exercise* and *sports* either. In the test, however, the possibility cannot be ruled out that some of the students simply could not think of the word exercise and, therefore, answered with the closest expression that came to mind, do sports.

Overall in Japan, only two questions were answered correctly by as many as half of the students, i.e., Part 2, Q9 *"take the medicine"* (52.3%) and Part 2,Q5 *"turn on the TV"* (49.0%).

4. Discussion

Taken together, the results of this study indicate that the previous low scores we reported[2] were not due to the test method we used but that, rather, the low scores indicate the students' inadequacy in the language. The scores at that time were a de facto representation of the students' incompetence in the language being tested. In the present study, the diference from our previous work was that instead of requiring the students to compose the full predicate or almost the full sentence, the present test provided the sentences and required the students to fill in only the main verb, an infinitive, a gerund phrase, or another short phrasal verb or verb phrase. Such a cloze test is generally easier than tests requiring an open-ended completion of the entire predicate. Nevertheless, the scores on the present test remained as low as the scores achieved before.[2]

Had we offered the same questions in either a multi-

ple-choice framework or a matching framework, most of the students in both countries would probably have performed well and attained good scores. But multiple-choice and matching primarily involve word ***recognition***, which is far less demanding than word ***recall***. In English as a Foreign Language (EFL) as well as in one's mother tongue, word ***recognition*** is a function of the user's ***receptive*** vocabulary knowledge, enabling the user ***to receive*** information such as that gleaned through listening and reading. Our previous test involved word ***recall***, however, which is a function of the user's ***production*** vocabulary knowledge whereby the user must ***produce*** a meaning through speaking or writing. For reevaluating and confirming the results of our previous test, therefore, any test that would target principally the students' ***receptive*** vocabulary knowledge would be incongruous and invalid and, therefore, irrelevant as a tool for either reevaluation or confirmation. For that reason, the present reevaluation employed a cloze-type test, a "cousin" of the previous sentence-production type, so as not to misconstrue the results by attempting to compare receptive vocabulary with production vocabulary. Even though one's production vocabulary is recruited from the user's larger pool of receptive vocabulary, the ability to recall the words and the ability to use the words require different skills from the skills required for word recognition and comprehension. The present diagnostic test was compatible with our research objective and consistent with the first test in targeting the students' productive vocabulary knowledge and their ability to use the parts of speech.

Although some scholars maintain that a cloze test calls for every *n*th word, such as every 5th word or every 6th word, to be omitted from the test passage, full paragraphs or longer passages for evaluation of reading comprehension are generally used when the rule of every *n*th word is followed strictly.[5] In shorter texts such as the single sentences used in the present test, however, a targeted placement of the blanks to be filled in is preferred as a way to circumvent misplaced emphasis on the article and other unspecified targets as the test is meant to evaluate the students' use of certain designated parts of speech.[5] One of the main advantages of using a cloze-type test is that it allows for the targeting of specific parts of speech and vocabulary the teacher intends to test.[5]

Furthermore, unlike examinations that test designated segments of material in a course of studies, a diagnostic test precludes preparation by cramming. This important feature in the present may be one of the main reasons for the students' poor performance. Students in Japan are used to studying "for a test," and they usually know in advance the scope of material to be tested. Indeed, one of the purposes of an examination for credit is to entice the students to study. The diagnostic test may reflect the learner's actual command of the language more realistically than a test that promoted cramming.

Our present results show that errors involving both word choice and word combination pose a major hindrance to the English communication abilities of Japanese nursing students. This finding is in agreement with a study offering an instructional model for teachers and students in the use of corpus search by computer, in which Mudraya provides compelling evidence that the majority of errors made by EFL and English as a Second Language (ESL) learners are semantic errors of inappropriate word choice caused by vocabulary deficiency and particularly by lack of collocational power, i.e., word combinations.[6]

The errors in word choice and word combination committed by the nursing students in Japan also relates to the notion demonstrated by Gerling in a study on the written language of medical research papers, namely that the Japanese students need to receive a more solid foundation than they now have in the use of common, everyday English, and not to concentrate solely on the more specialized nomenclature of medical English.[3] Furthermore, the findings agree with Takakubo, who maintains that teaching only technical terms in courses of English for Specific Purposes would not suffice for meeting the English needs of the nursing students in Japan.[4] Evidence is accruing that attests to the need of nursing students and other medical students to practice speaking and writing, i.e., to **produce** short explanations and descriptions in clear, communicative English. Professionally, both the nurse and the physician will have to use a blend of medical English and ADL-type English, and not merely one or the other.

The results of the present study have strong implications for remedial English training of first-year nursing students (taking care not to label the training "remedial," of course) within the framework of medical English. Such training needs to provide not only vocabulary but also to the usage of words in a variety of short, practical contexts, particularly verbs having to do with nurse/patient dialogues including body movements and ADL. This approach lends support to Takakubo's review of three major wordlists suggesting the usefulness of corpus studies as a rationale and gauge for selecting English vocabulary to teach Japanese nursing students.[4] With

the results of our diagnostic test, joint efforts to collect a corpus-based collocation of words associated specifically with verbs for body movements and ADL can generate authentic guidelines for developing new learning materials geared specifically to nurse/patient encounters.

In a robust study that has pertinent application to gauging and helping to authenticate materials used in teaching nursing students in Japan, nonnative speakers of English who have immigrated to the United States and are studying to become nurses were reported to have the most difficulty when communicating with the patients in a clinical setting.[7] Not only do they experience difficulty communicating at the bedsid but also performing clinical procedures, particularly when the patient is talking to them while they are performing a clinical task, such as giving an injection or collecting a blood sample. Some of these students said they could not concentrate on the clinical task and listen to the patien at the same time. Others complained that it is too difficult to try to think of how to respond to the patient while carrying out a clinical task. Many said that if they have to use English during the clinical task, then they lose their confidence and find it difficult to perform the clinical procedures they had become good at doing on a mannequin in the laboratory.[7]

According to a needs analysis conducted on the Minneapolis campus of the College of St. Catherine, the nonnative-speaker nursing students were unable to complete 12 out of 17 procedures because of lack of assertiveness with the patient.[7] Much of the communication breakdown, however, occurred with the use of expressions similar to those we tested in Japan and China for ADL. The nonnative speakers in the U.S. had difficulty, for example, asking patients direct questions such as:

- Do you feel pain in your lower back when you sit up? [7]
- Would you like to sit up now?[7]
- Did you understand what I just said? [7]

The results of the present study suggest that if the Japanese nursing students and other nonnative speakers of English were to become more proficient in the use of English associated with body movements and ADL, they would gain confidence in both verbal communication and clinical tasks. Indeed, if the Japanese nursing students are truly to master this vocabulary, then in the light of the Minneapolis report, we propose that English training in Japan will involve nursing students "talking to" a mannequin while either demonstrating or performing a clinical task. In the English classroom, such demonstrations or dramatizations might be repeated until the students become comfortable with the English, thus laying a firm foundation upon which they could use more and more verbs and raise their confidence in how to use the verbs that suit each particular situation. By combining the verbal and the clinical aspects of the nurse tasks, the training would more closely simulate the bedside setting, stimulate spontaneous responses in English, and convert "remedial English" into a higher practical English perspective specifically suited to nurses. In this way, the individual's motivation to master the English would increase as well.

In Japan, students are notoriously known for causing communication breakdowns by hesitating for a long time while they formulate an English translation of the Japanese in their heads. To overcome such frustrating breakdowns and become competent in spontaneous responses, the nursing students, we believe, could greatly improve their English communication not only by "talking to" a mannequin but also by listening to iPod or CD recordings of short dialogues and other short sentences repeating the target verbs in a variety of situations. Uemura has reported that in lieu of daily contact with native-speaker friends, then active, repeated listening to a foreign language recorded on audio study tapes can establish a physiological home base for the language in the cerebrum of the learner's brain, as shown by functional magnetic resonance imaging (fMRI).[8] Moreover, the study suggests that learners without that home base in the cerebrum may not progress well in the spontaneous listening and speaking of the language if they depend on reading and grammar skills alone.[8] According to the fMRI results described, after 4 months of targeted listening in combination with the learner's efforts to shadow parts of the tape, immediately repeating random phrases and sentences orally and then studying the grammatical constructions later, the learner comes not only to recognize meaning but also to communicate freely and spontaneously by speaking and writing in the target language.[8] In language education in Japan the benefits of repeated listening and of listening comprehension have often been disregarded and overshadowed by dependence on textbooks and translation.

We believe that, in the hands of innovative teachers, the results of our present study can help shape the development of practical and effective learning materials that would help first-year nursing students in Japan to overcome their difficulties in the use of common verbs, phrasal verbs, verb phrases, and other expressions

encountered in routine nursing situations. Although many textbooks and tapes may be based on theoretical or imaginary cases, our study suggests that, to be effective, the English learning materials for EFL nursing students ought to reflect the actual ADL and the actual nurse-to-patient situation. In Japanese hospitals, the research and collection of nurse/patient English dialogues in the clinical setting is largely ignored because most of the actual encounters take place in Japanese. The effectiveness of the textbooks and tapes that depend on imaginary cases may be markedly enhanced, however, if the dialogues were based on authentic Japanese cases and translated into natural English expressions that the students could listen to on iPod or CD and practice over and over. In addition, actual experiences reported from studies of other nonnative speakers of English who study nursing abroad can be beneficial in efforts to make authentic learning materials in Japan. In these ways, the future Japanese nurses would not just come to recognize words but would also acquire the ability to recall them quickly and use them in correct combinations to produce meanings appropriate to the context of each nurse/patient encounter.

5. Conclusion

This study unequivocally confirms our earlier findings that nursing students in Japan come to university without a elementary knowledge of English vocabulary and especially of expressions for body movements and daily activities. The students did not perform any better on the cloze-type (gap-filling) tests, in which they had only to fill in the appropriate verbs instead of having to write the full predicate or full sentence. The results also show, that they rely too heavily on Japanese words and do not fully understand the meanings of the English. With these results, the university teachers may be better equipped to search the corpus-based collocation of verbs specific to bedside nurse care and create new learning materials for the specific purpose of helping nursing students build the foundations they need for communicating spontaneously with patients in English while performing clinical tasks at the same time.

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[Original Article]

Helping Japanese Medical Researchers Reduce Errors in Writing Research Papers in English by Introducing a Self-Improvement Support System

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Introduction. It is difficult for many Japanese medical researchers, particularly novices, to write medical research papers acceptable for publication in English language medical journals.

Methods. From a survey sent to authors it was found that my editing suggestions were not being used to improve their writing; they continued to make the same common errors. Accordingly, I created material describing common errors made by Japanese authors with the help of English-speaking editors and sent to researchers who had been using my services over the past 10 years. In addition, I started to explain—in Japanese—the reasons for the corrections I made in my editing so that the authors could better understand them. The present study compares the number of writing errors in the three-year period before and after introduction of the above-mentioned self-improvement support (SIS) system. The manuscripts selected each year for the study were written by the same 30 authors (one per author) for whom I had previously edited.

Results. Average total errors per manuscript during the three-year period after introduction of the SIS system (2005–2007) were significantly lower than during the period preceding introduction of the SIS system (2001–2003), ($p<0.002$, paired t-test).

Discussion. This study suggests that researchers with little experience in writing scientific papers in English can improve their writing if given clear guidelines that are explained in their first language. My sample writers could effectively reduce the number of commonly-made errors after receiving my systematic training manual.

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1. Introduction

Many Japanese medical researchers wish to publish their research in medical journals in English. There are many books explaining how to write medical research papers in English[1–5] but there has been no report of a quantitative study regarding how well any self-improvement support system actually works to improve writing. To help achieve this goal, I began an English editing service in 1994, with the cooperation of English-speaking editors. I solicited manuscripts on medical research written in English by Japanese authors. I edited 794 English papers during the ten-year period up to 2003. I wanted to know if individual authors made good use, during these years, of my editing feedback.

I noticed that many authors continued to make the same common errors and to use the same awkward English expressions. I speculated that the reason for this was that they had not sufficiently understood the reasons for my earlier suggestions. In fact, my survey of 137 authors for whom I had performed English editing services revealed that 80% of them had not actually used my edit-

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ing very much to improve their English. It appeared that it was often difficult for authors to clearly understand the reasons for my corrections, and that a clear explanation should be given in their own tongue—Japanese.

I analyzed repeated errors and awkward expressions in the English papers that I edited during the ten-year period and wrote three self-improvement support (SIS) documents with explanations in Japanese. I sent these documents to authors whose papers I had edited, recommending that they refer to these documents as often as possible when writing medical papers in English.

In this study, I quantitatively analyzed errors in English papers by those authors before and after implementation of my SIS system to find out whether it was effective in improving the English writing of these authors.

2. Methods

2.1 Analysis of repeated errors and awkward expressions and preparation of self-improvement support documents

I analyzed repeated errors and awkward expressions in all 794 English papers I had edited during the ten-year period from 1994 to 2003. I classified the errors into three categories. Category I errors included inappropriate location of information with respect to the different sections of a paper and inappropriate verb tense (see supplementary document I). Category II errors were commonly made errors in the use of nine parts of speech (supplementary document II). Category III included other types of errors and awkward expressions (supplementary document III).

Table 1. Comparison of the average # of errors per manuscript 2001–2003 vs. 2005–2007

Error Content (Category)	Average # of errors 2001–2003 (SD)[a]	Average # of errors 2005–2007 (SD)	Reduction in average # of errors 2001–2003 vs. 2005–2007	T statistic[c] (degrees of freedom)	P-value[d]
Total errors	46.7 (11.6)	12.3 (5.2)	34.4[b] (74%)	27.70 (29)	$p<0.002$
Abstract & IMRAD (I)	9.0 (1.8)	2.1 (0.6)	6.9 (77%)	24.70 (29)	$p<0.002$
9 Parts of Speech (II)	29.3 (8.7)	7.4 (4.6)	21.9 (75%)	26.74 (29)	$p<0.002$
Other Errors & Awkward Expressions (III)	8.5 (1.4)	2.8 (0.5)	5.6[e] (68%)	25.30 (29)	$p<0.002$

a. SD = standard deviation.

b. The 95% confidence interval for the average reduction in total errors per manuscript is 34.4 ± 2.5, or 31.9 to 36.9 errors.

c. Test statistic for paired t-test comparing pre- and post-intervention mean # of errors.

d. P-value for two-tailed test with Bonferroni adjustment for multiple testing.

e. Due to rounding, the value in column 4 (5.6) does not exactly equal the value in column 2 minus the value in column 3.

Table 2. Comparison of the average percentage reduction in average total errors per manuscript 2001–2003 vs. 2005–2007

Average % reduction in errors 2001–2003 (SD)[a]	Average % reduction in errors 2005–2007 (SD)	Average % reduction 2005–2007 minus 2001–2003[b]	T statistic[c] (degrees of freedom)	P-value[d]
22.6 (4.7)	67.0 (22.1)	44.5[e]	9.88 (29)	$p<0.001$

a. SD = standard deviation.

b. The 95% confidence interval for the average difference in percent reduction in total errors per manuscript is 44.5 ± 9.2, or 35.3% to 53.7%.

c. Test statistic for paired t-test comparing pre- and post-intervention mean percentage reduction in errors.

d. Two-tailed test.

e. Due to rounding, the value in column 3 (44.5) does not exactly equal the value in column 2 minus the value in column 1.

2.2 Self-improvement support system

I used the three categories listed above to write detailed explanations in Japanese. These documents were sent to 137 authors whose papers had been edited by me. I recommended that the authors refer to these documents as often as possible when writing medical papers. In addition, I began to explain in Japanese (previous explanations had been in English) the reasons for the corrections I had made, and I encouraged them to ask me anything they wanted about my editing.

2.3 Pre- and Post-Quantitative analysis of the errors

To determine whether the SIS system improved the quality of subsequent English papers, I quantitatively analyzed the number of errors in all three categories before and after implementation of the SIS system. For each of the 6 years (3 pre-, 3 post-intervention), I selected one manuscript from each of the 30 authors. Since 30 manuscripts were analyzed during the transition year as well, the total number of manuscripts was 210. These were authors for whom editing had been performed every year between 2001 and 2003 (before introduction of the SIS system), the transition year 2004, and every year from 2005 to 2007 (after introduction of the system). I calculated the number of errors in each manuscript. Papers were from different disciplines within medicine, and content varied widely. Of the authors, 98% had MD degrees; those who were novices in the writing of manuscripts had been selected preferentially.

2.4. Statistical analysis

Paired t-tests were used to compare the average number of errors per manuscript made by the same 30 authors for 2001–2003 vs. 2005–2007 (Table 1) and to compare the average % reduction in average total errors per manuscript for 2001–2003 vs. 2005–2007 (Table 2). The *p*-values for all reported statistical tests were based on two-tailed hypothesis tests, and all *p*-values in Table 2 incorporate a Bonferroni adjustment for multiple testing. Minitab 15 software was used for all statistical calculations.

3. Results

Figures 1–3 show the number of errors for the manuscripts before and after implementation of the SIS system. Regarding Category I errors, errors in the Discussion section were most common, followed by those in the Introduction and Abstract sections (Figure 1). Regarding Category II errors, the largest number of errors was related to verb use (including auxiliary verbs), prepositions, and nouns. Errors in the use of relative pronouns and pronouns were rare (Figure 2). In Category III, misspelling was the most common error (Figure 3). Reduction in the average number of errors from 2001–2003 to 2005–2007 was largest in Category II, followed by Categories I and III (Table 1).

The average percentage reduction in errors for 2001–2003 vs. 2005–2007 was 74%, and similar improvement was observed in all three categories (Table 1). The num-

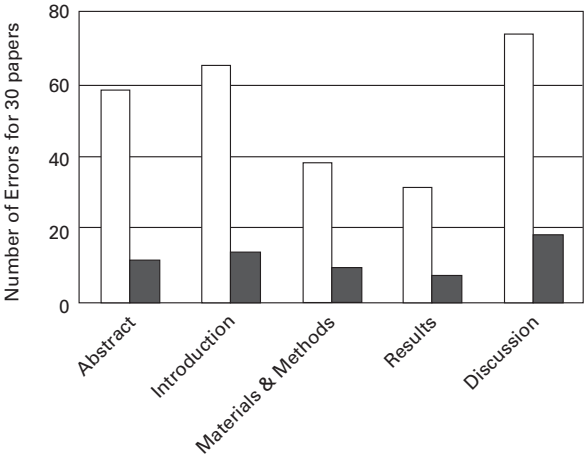

Figure 1. Average number of errors per year in Abstract, Introduction, Materials and Methods, Results, and Discussion sections in 2001–2003 (open column) and 2005–2007 (closed column) for the 30 papers surveyed each year.

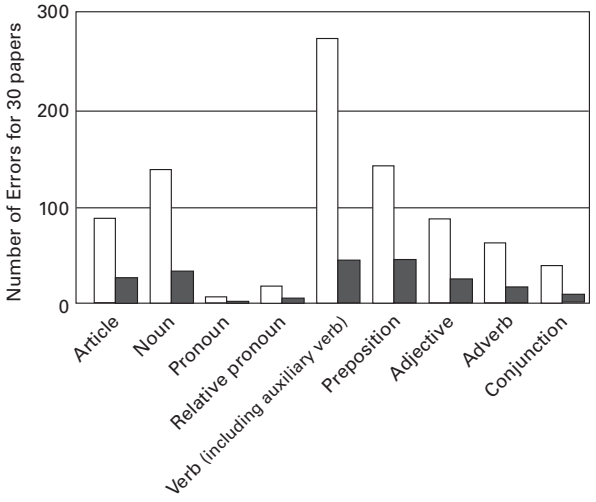

Figure 2. Average number of errors per year in use of 9 parts of speech in 2001–2003 (open column) and 2005–2007 (closed column) for the 30 papers surveyed.

ber of errors for each of the 30 authors each year between 2001 and 2007 is shown in Figure 4. The number of errors among individual authors showed a tendency to decrease every year at a certain rate. The most significant drop in errors was in 2004–2005 right after the SIS system was sent to the authors. Even before implementation of the SIS system, the number of errors had declined by 22.6% from 2001 to 2003, probably because the authors had improved their skills in English writing as they were writing more papers. The rate of reduction rose significantly after implementation of the SIS system (Table 2).

4. Discussion

In this study I have shown that it is possible to improve the quality of English in manuscripts written by Japanese physicians and scientists in biomedical fields by implementing an SIS system that includes a list of common errors in English usage and an explanation in Japanese of the reason for each correction. While authors showed improved English skills and made fewer errors with each new manuscript even before SIS implementation, the SIS system increased the rate of improvement. My findings also support my original notion that authors repeat the same mistakes because they do not sufficiently understand the reasons for earlier corrections.

Significant reduction in Category I errors was seen after introduction of the SIS system. Authors in the present study showed an improved understanding of what to include in an abstract as well as what to include in each of the four main sections of their papers - Introduction, Methods, Results, Discussion (IMRAD). The largest number of category II errors was related to the use of verbs (including auxiliary verbs), prepositions, and nouns. Presumably these errors were due to differences between Japanese and English usage. The commonly observed errors in nine parts of speech, including the three types of errors mentioned above, decreased substantially after the introduction of the SIS system in 2004. This was presumably due to the authors' improved understanding, through the use of the system, of the difference in word usage between Japanese and English.

The substantial reduction in Category III spelling errors was, undoubtedly, largely due to the use of computer spellchecking, which I recommended. Errors in abbreviations and redundancy were also largely reduced presumably because authors became aware of them. Since my current document did not seem to help writers reduce Category III errors other than spelling, abbrevia-

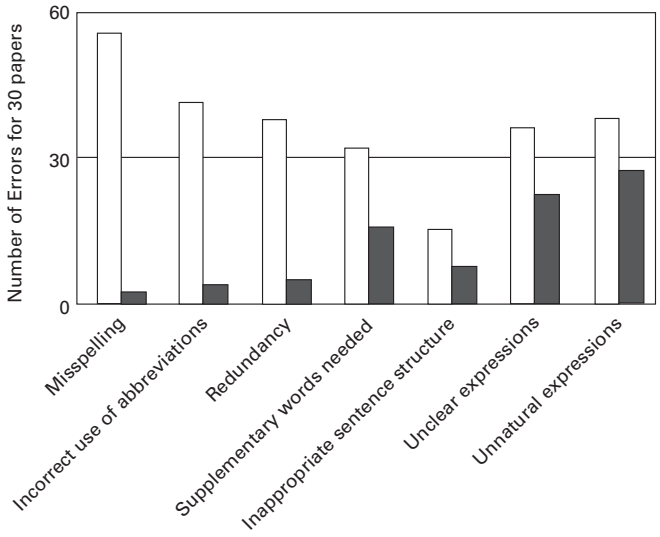

Figure 3. Average number per year of other errors and awkward expressions in 2001–2003 (open column) and 2005–2007 (closed column) for 30 papers surveyed.

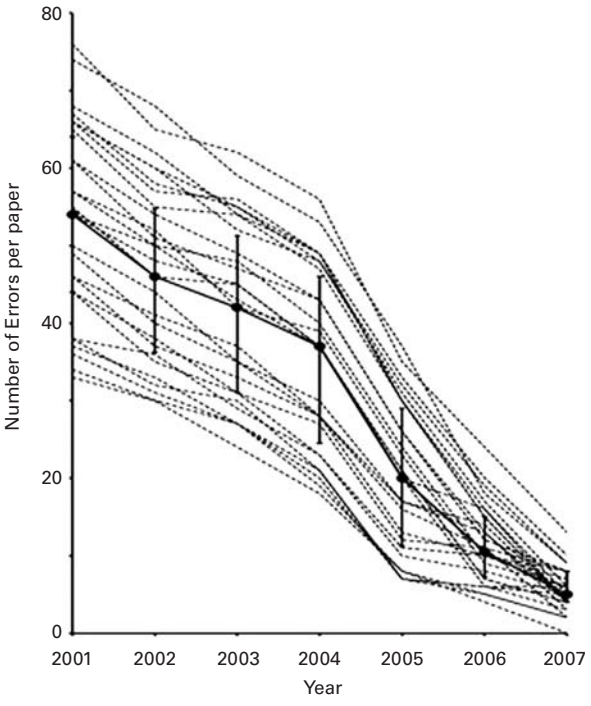

Figure 4. Broken lines indicate the number of errors by each of 30 authors every year between 2001 and 2007.
Closed circles indicate the median of the errors by each of the 30 authors, and vertical error bars indicate the interquartile range.

tions, and redundancy, I am, with the help of English speakers, currently revising my SIS documents to improve the explanations of the areas within Category III that had the fewest improvements.

In the current study, I did not have a control group (non-SIS-user) to compare with the group of authors observed. By analyzing the errors that occur in papers written by authors in a control group, I could have ascertained if the SIS document was indeed the key factor in the improvements in papers written by the authors selected for this study. This type of controlled study would be necessary to help rule out other possibile factors that might account, instead, for the improvements that my authors made in their manuscripts.[6,7] The promising results of the current study, however, suggest that such a randomized, controlled experimental design might prove to be a fruitful direction for future research.

This study suggests that explanations in Japanese on how to improve one's writing, such as the ones provided by my editing team, can, in a short period of time, help Japanese medical doctors write research papers with fewer basic errors in all three categories. Errors which did not seem to improve much (Category III, excluding spelling, abbreviations, and redundancy) seem to be due to differences in sentence structure and linguistic expressions between Japanese and English. It will take more time and practice to reduce these types of errors. I suggest that the most effective way to achieve this goal would be for Japanese medical schools to offer courses on writing research papers in English.

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Supplementary document I. Category I errors: Errors commonly made in writing the five main sections of a paper

(a) Abstract

o Failing to include the major points of the paper.[8]

o Quoting figures, tables, or references.[9]

o Exceeding the maximum word count stipulated by the journal.

o Omitting the paper's conclusions.

o Using an inappropriate format: structured vs. unstructured abstract.

o Using an incorrect verb tense. The present tense is used to explain the background. The purpose and methods of the study are explained using the past or present perfect tense. The past tense is used to present results, and the present tense or present continuous tense is used to discuss the results.

(b) Introduction

o Failing to clearly and concisely explain the reasons why the study was conducted. This identifies the problem and needs.

o Making the Introduction section too long. One-and-one-half double-spaced pages is usually the limit. Only those previous studies that are directly related to the story being told in the present paper should be referred to in the Introduction section.[10]

o Using an incorrect verb tense. Present tense should be used to describe the objectives of a paper, whereas past tense should be used to describe the objective of the study.

o Not describing what kinds of general experimental approaches or strategies were employed to solve the problems. This suggests a solution to the problem. Detailed experimental methods belong in the Materials and Methods section.

(c) Materials and Methods

o Not providing a clear description of all important materials and methods.

o Using an incorrect verb tense. The present tense should be used to describe matters which have remained unchanged from past to present (i.e. they are still true), as when referring to Tables and Figures. Most other topics should be discussed in the past tense.

o Not describing the methods appropriately. When authors use methods published in standard Western journals, just citing the literature source is enough. When authors substantially modify portions of these methods, they should describe the nature of and the reason for the modification and cite the literature source. If the method was published in Japanese and the journal is difficult to obtain in the West, the method should be described in detail.

o Not including a statement regarding ethics such as approval by the Ethics Committee (human studies committee, institutional review board) of the authors' institution and acquisition of informed consent in writing.

o Failing to write the generic name of a drug rather than the brand name or trade name.

(d) Results

o Repeating in the text numerical values that are clearly shown in the figures and/or tables.[10] Raw data or calculations made from raw data should be shown in figures and tables. Interpretation of data and important results can be discussed to a limited extent in the Results section, but mostly should be discussed in the Discussion section.

o Repeating in the Results section the description of methods previously given in the Methods section.

o Making no logical connection between the Introduction and Results sections.

o Failing to identify the new findings of the study.

o Failing to identify in the text the table or figure number where the data appear. The present tense should be used in the text when referring to tables and figures. The past tense should mostly be used for describing results.

(e) Discussion

o Failing to discuss major new findings described in the Results section and hypotheses or objectives described in the Introduction. The authors should explain whether the results support the hypotheses or answer the research questions asked.

o Simply repeating data already described in Results.

o Not discussing whether the results have any merit or can be generalized and/or not describing the limitations of the present study.

o Using verb tenses incorrectly. The past tense is typically used in the Discussion to describe the results the authors obtained, but results by other researchers may be written in the present tense if they appeared in published studies and are considered to be "established knowledge." Although one's own results should generally be written in the past tense, discussion or generalization of those results should generally be written in the present tense.

o Making the Discussion section too long. When the Discussion section is too long, the most important points tend to be lost, or can be difficult to find. As a rough guideline, it is desirable that the Discussion section does not exceed one third of the whole length of the IMRAD sections.

Supplementary document II. Category II errors: Commonly made errors in nine parts of speech

(a) Article

Indefinite article

o Not using the indefinite article "a" or "an" in front of a countable noun that appears in the paper for the first time. For example, "new drug" should be changed to "a new drug."

o Failing to realize that the use of "a" and "an" depends upon the pronunciation of words immediately following the article. Use "an" when the word begins with a vowel or a vowel-like sound. For example, X-RAY should be preceded by "an" not "a" because the first sound, éks, is vowel-like.

Definite article

o Not using the definite article "the" to indicate things or persons that are specified in preceding descriptions or subsequent phrases and clauses. For example, "site where the drug was injected" should be changed to "the site where the drug was injected."

o Not using "the" with the nouns listed below, even though they appear in the sentence for the first time.

- A singular noun representing the kind as a whole. For example, "rat is a useful model" should be changed to "the rat is a useful model."
- Organ names and body sites. For examples, "Insulin is produced in pancreas" should be changed to "Insulin is produced in the pancreas."
- Nouns that are modified by words that are characteristic of strong specification, such as "superlative adjectives," "present," "last," "same," "entire," "whole" and "only." For example, "most effective therapy" should be changed to "the most effective therapy."
- Nouns that follow such words as "many of," "most of," "all of," "much of" and "a few of." For example, "all of patients" should be corrected to "all of the patients."

(b) Noun

o Confusing the use of singular and plural of certain English words. The following words are often used erroneously in medical papers written by Japanese authors.

Singular	Plural	Singular	Plural
bacterium	bacteria	phenomenon	phenomena
medium	media	index	indexes (or indices)
criterion	criteria	analysis	analyses

o Using words inappropriately that have a similar meaning but are not the same, e.g., "cases" and "patients," "ache" (dull pain) and "pain" (sharp pain), "study" and "report," and "mean" and "median."

o Mistakenly using nouns as adjectives in plural rather than singular form. For example, "15 years old patient" should be corrected to "15 year old patient."

o Using Japanese word order in phrases rather than English word order, For example, "Collagen induced arthritis mouse" should be changed to "Mouse with collagen-induced arthritis."

(c) Pronoun

o Mistakenly using "another" without knowing that it means "an other." "The another drug" should be changed to "The other drug" or "Another drug."

o Inappropriately using "such as" and "etc." The use of the phrase "such as" suggests that the subsequent word is one example and there are more to follow. However, in many papers written by Japanese authors, the phrase "such as" is used to mean "i.e.," (namely).

o Misusing the word "all" in place of "any." For example, "No loss of weight was observed in all of the diabetic mice" should be corrected to "No loss of weight was observed in any of the diabetic mice."

(d) Relative pronoun

Failing to use "that" for defining clauses and "which" for non-defining clauses. For example, "The wards which were open to visitors were air-conditioned" could mean that "The wards, which were open to visitors, were air-conditioned" which indicates that all the wards were air-conditioned. However, the authors might have meant "The wards that were open to visitors were air-conditioned," which indicates that only those wards that were opened to visitors were air-conditioned. Japanese authors often confuse the two sentence structures.

(e) Verb (including auxiliary verb)

o Using the word "may" in a sentence that follows a noun that implies an assumption, such as "hypothesis" and "supposition." In such sentences, "may" should not be used. For example, in the sentence "These findings strongly support my hypothesis that the above mentioned process may be the mechanism underlying the

abnormal glucose tolerance," "may be" should be replaced by "is."

- o Making errors in the use of singular and plural verb forms. Many Japanese authors erroneously think that determining whether a verb form is singular or plural depends on whether the noun situated immediately before the verb is singular or plural. Sometimes the noun immediately before the verb is the object of a prepositional phrase and not the noun that goes with the verb. For example, "The indication for hypoglycemic agents are described below." In this sentence, "is" should be used instead of "are" or the word "indication" should be changed to "indications."
- o Making mistakes in the customary rules about tenses of subordinate clauses. Ordinarily, the tense of a subordinate clause coincides with that of the principal clause. However, if a subordinate clause describes facts that have been established scientifically, the present tense should be used for the verb of the subordinate clause, even if the verb of the principal clause is in the past tense. For example, "The previous report demonstrated that cilostazol is effective for ischemic syndromes." In this sentence, "is" is used instead of "was."
- o Erroneously using verbs in the past tense in sentences where only verbs in the present tense should be used. For example, in the following three kinds of sentences, the present tense should be used, rather than past: (1) "Table 1 (Figure 1) shows the results." (2) "These findings suggest the following." (3) "We demonstrate the following."
- o Confusing use of verbs the meaning of which in intransitive form differs from that in transitive form. For example, "Islets of Langerhans locate in the pancreas" should be changed to "Islets of Langerhans are located in the pancreas."
- o Confusing use of a verb that changes meaning when used with or without a preposition following it. For example, "We succeeded in operating the patients." should be corrected to "We succeeded in operating on the patient." Note that one can say "We succeeded in operating the automobiles."
- o Using a verb and an auxiliary verb when both of them mean or imply uncertainty. When a principal clause begins with a verb that means uncertainty, such as "it is likely," "it seems," and "it suggests," the following subordinate clause beginning with "that" should not use an auxiliary verb that implies uncertainty, such as "may" and "would." For example, "The result suggests that the drug may be effective...." In this sentence, "may be" should be corrected to "is."

(f) Preposition

- o Confusing "by" and "with." "By" is followed by methods, and "with" is followed by instruments and materials. The following are good examples. "The patient was examined by electrocardiography. The cardiac condition was examined with an electrocardiograph."
- o Using "concerning to" and "regarding to." "To" should not follow "concerning" or "regarding."
- o Misusing prepositions. Verbs in combination with specific prepositions make idioms that have specific meanings. For example, "Water consists in hydrogen and oxygen." In this sentence, "in" should be replaced with "of" to make sense.
- o Confusing "between" and "among." "Between" is used when comparing two items, A and B. "Among" is used when comparing three or more items, A, B, and C.

(g) Adjective

- o Mistakenly using "every" or "each" with plural nouns, rather than with singular nouns.
- o Placing part of an adjectival phrase before a noun rather than after the noun. For example, "responsible organ for glucose intolerance" should be corrected to "organ responsible for glucose intolerance."
- o Using literal translations of Japanese expressions that are not used in English. For example, "Large possibility" should be "great possibility."
- o Incorrectly using adjectives with inappropriate prepositions. Some adjectives take specific prepositions. For example: "Characteristic of" implies "typical," "representative," "emblematic," "symbolic," or "distinctive in character." "Consistent with" implies "in harmony," "in agreement," or "not contradictory."
- o Inaccurately using the comparative adjectives "more," "less," "more than," and "less than" when describing numerical values. Examples of correct usage are listed below:

  "More than 2.0 g" means 2.0 g is not included.

  "2.0 g or more" or "not less than 2.0 g" means 2.0 g is included.

  "2.0 g or less" or "not more than 2.0 g" means 2.0 g is included.

  "Less than 2.0 g" means 2.0 g is not included.

(h) Adverb

- o Incorrectly locating an adverb between a verb and an object. For example, "The rats ate fast food" should be corrected to "the rats ate food fast."
- o Inappropriately placing "respectively" so that it does

not immediately follow the series of numbers or words to which it refers. For example, "A and B increased 3- and 4-fold in 10 days, respectively." should be corrected to "A and B increased 3- and 4-fold, respectively, in 10 days."

(i) Conjunction

o Mistakenly using "and" together with "etc." For example, "Compounds A, B, C and etc." should be corrected to "Compounds A, B, C, etc."

o Erroneously using "and" in place of "or" when meaning selection. For example, "We could not achieve any purification by chromatography and electrophoresis." In this sentence, "and" should be replaced with "or."

Supplementary document III. Category III errors: Other errors and awkward expressions

This category contains the following seven types of errors and awkward expressions in English usage often made by Japanese authors. The authors were given examples and explanations in Japanese of how to write clear, correct English. The seven types are: (1) misspelling, (2) incorrect use of abbreviations, (3) redundancy, (4) supplementary words needed, (5) inappropriate sentence structure, (6) unclear expression, and (7) unnatural expression.

This section describes mistaken uses of English by Japanese authors that do not belong to Categories I and II (see Supplementary documents I and II). The seven items in Category III are explained below.

(a) Misspelling

I advised authors to check their spelling by referring to dictionaries of both common and medical English and by using a computer spellchecker. Using a search engine such as Google or a literature database such as PubMed can also be helpful.

(b) Incorrect use of abbreviations

The following errors were often observed:

o Putting a rarely-used abbreviation in the title of the manuscript.

o Not completely defining an abbreviation (with complete spelling) when it appears the first time in the manuscript and not using the abbreviation thereafter.

Some journals allow authors to use certain abbreviations without defining the words the abbreviations represent. However, authors sometimes use abbreviations other than those allowed by the journal without defining the meaning the first time they are used. I asked the medical writers to carefully read the instructions to authors given by their target journal to learn which abbreviations they can use without definition.

(c) Redundancy

Using redundant expressions. For example, "the office where he worked" should be simplified to "his office."

(d) Supplementary words needed (incomplete English expression)

The English language often requires more words to express the same meaning than the Japanese language requires. For example, "High risk patients with acute leukemia are increasing" would read more smoothly in English as "The number of high risk patients with acute leukemia is increasing."

(e) Inappropriate sentence structure

English expressions with Japanese sentence structure should be corrected so that English sentence structure is used. For example, "Discussion was made concerning with possible role of ...." should be corrected to "The possible role of...was discussed."

(f) Unclear expression

Unclear or ambiguous expressions must be clarified to make the English more understandable. For example, "HCV-associated HCC are aging and increasing in Japan." should be corrected to "For many years the incidence of HCV-associated HCC in Japan has been increasing."

(g) Unnatural expression

Unnatural English should be corrected to natural English. For example, "Each of the animals was individually kept in a separate cage" should be revised to "Each animal was kept in a separate cage."

[Original Article]

Teaching Professional Language and Lay Language in English for Medical Purposes Classes

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The aim of teaching English for medical purposes (EMP) is to improve the medical students' English ability and to prepare them to become capable performers in a profession in which English is the international language. EMP textbooks encompass grammar, medical terminology, pronunciation, expressions, collocations and style specifically used in the medical field. Students need to learn a vast range of highly specialized language. Considering the limited English language proficiency of the non-native English speaking medical students, however, EMP should also encompass lay terms and common expressions used by the patients since communication with the patients is at the core of patient care. Materials must be practical to minimize mechanical rote learning and enable students to function in English in their practice. The four skills of reading, writing, listening and speaking can be taught through the use of various materials ranging from research papers and case presentations to medical interviews and works of literature. Role playing of medical interviews can effectively enable students to learn both professional language and lay language and thus enable them to become capable performers in the practice of medicine with the understanding of not only the doctor's perspective but also the patient's perspective.

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Key words: professional language, lay language, class methods, role play, medical interview, patient's perspective

1. Introduction

English is the international language of medicine today and it is now indispensable for non-native English speaking medical students to develop proficiency in English. Important findings and contributions in science are published in English; most of the academic websites are in English; and the chief medium of communication in the global world, whether in clinical discussions, at international conferences, in person or online, is in English. Students who wish to enter certain residency programs, not to mention those who wish to go on to develop a career in domestic or international academic medicine, will be required to have EMP ability.

EMP encompasses grammar, medical terminology, pronunciation, expressions, collocations and style specifically used in the medical field. Medical students need to learn a vast range of highly specialized language used by their colleagues (professional language) with which they are initially totally unfamiliar. Considering the limited English language proficiency of non-native English speaking students, however, EMP should not only focus on teaching technical medical English but also cover lay terms and common expressions with equal importance as they are the patient's language. Medicine is a caring profession. The practice of medicine begins with the doctor listening to and talking with the patient and this conversation continues throughout the practice. Developing good patient-doctor communication is essential to the medical profession. This paper describes some ways to teach both the professional language and the lay language of medicine in EMP classes an introduces some practical lesson plans for teaching both types of language effectively.

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2. Professional language

The professional language of medicine encompasses medical terminology and expressions used among doctors, medical researchers and other healthcare professionals. It is highly technical and specific. It consists of terms and expressions related to anatomy, pathology, clinical procedures, laboratory tests, surgical procedures, reporting cases and medical research. Professional language inevitably requires much memorization especially for non-native English speaking students who are generally unfamiliar even with basic terms such as "otitis media" or "hyperemia."

To enable students to function in medicine in English and to decrease mechanical rote-learning, materials must be practical. Terminology and expressions are best presented in context so that they can be related to the actual practice of medicine; for example, medical terms are more easily learned when presented within a context relative to organ systems or diseases. Diagrams, such as the picture of the heart and the circulatory system consisting of the atria and the ventricles with the flow of veins and arteries carrying venous/arterial blood in the pulmonary/systemic circulation, will help facilitate systematic acquisition. Whenever possible, each term should be analyzed into word parts conveying meaning, such as "cardiogram" consisting of "cardi(o): heart + -gram: written record." Reading materials can range from basic clinical concepts to case studies, news articles, research papers and perspectives written by doctors and other healthcare professionals. Writing can include the first steps to writing research papers, medical charts and also documents such as referral letters or travel documents stating that the patient has an implanted medical device. Listening materials can range from lectures, conference presentations, case presentations to audiovisual media resources such as those on the Internet or TV. Speaking can be practiced through shadowing sentences of the listening materials or participating in discussions, making case presentations and conference presentations.

3. Lay language

In the practice of medicine, doctors are required to explain to the patient matters such as basic anatomy, tissue type of the lesion, clinical procedures, laboratory tests and surgical procedures in lay terms. In contrast to the highly technical professional language, the lay language of medicine seems to be easy everyday English with which the students are already familiar. However, for non-native English speaking medical students, the lay language of medicine includes many terms and expressions not commonly learned at schools. For example, students are probably familiar with the words "German measles" and "chicken pox" in their own language but not in English although these words are actually lay terms. They may not understand expressions such as "I'm under the weather." or "He blacked out." There are also expressions that help establish better communication and trust with the patient. For example, at the very beginning of the interview, "What brings you here today?" or "What can I do for you?" is more likely to make the patient willing to communicate than a blunt "What is the matter?" which is often used by Japanese medical students before they learn the proper expressions used in medical interviews.

Lay terms can be effectively learned with their technical equivalents for practical use. For example, "cough up blood," "nearsightedness" and "come along" can be learned effectively with their technical equivalents, "hemoptysis," "myopia" and "recover." Reading materials can range from patient interviews to perspectives and stories written by patients and works of literature. Writing can include writing explanations and documents for patients such as surgical procedures or informed consent. Listening materials can range from patient interviews and public forums to audiovisual media resources. Speaking can be practiced through shadowing the listening materials, and most effectively by conducting medical interviews encompassing tactics to effectively inform and communicate with the patient.

4. Teaching professional and lay language through medical interviews

Role playing of medical interviews is an effective method that enables students to learn both professional language and lay language in practical situations.

4.1 Patient's present complaint → Doctor's medical notes

An exercise in which the patient explains his/her symptoms in lay terms and the doctor writes medical notes in professional terms can be one effective way of learning both types of language. For example, the patient comes to see the doctor with the following complaints:

Patient's Complaints

Pain in the lower part of the right abdomen

Fever

Sickness

Throwing up

The patient explains his/her symptoms to the doctor and the doctor writes down in professional terms what the patient said.

e.g. *Patient: I have this terrible stomachache. Well, it may not be my stomach... It's down here, on the right side. And I have a fever.*

Doctor: I see...so you have pain down there in your right abdomen (confirming the location, write down "RLQ pain") and you have a fever (write down "febrile"). Anything else?

Doctor's medical notes

RLQ pain *(right lower quadrant)*

Febrile

N/V *(nausea and vomiting)*

4.2 Doctor's medical notes → Patient's condition

Once the doctor has gained information from the patient, the doctor, referring only to his/her medical notes, confirms the condition of the patient by talking in lay terms. The patient makes sure the doctor understands his/her symptoms correctly.

e.g. *Doctor: (Referring to his/her notes "RLQ pain" and "febrile") So, you have this pain in the lower part of your abdomen on the right side. And you have a fever.*

Patient: Right. It's agony.

4.3 Patient-doctor interview → Doctor's case presentation

The medical interview can be expanded by the doctor asking the patient about his/her past medical history, family history and social history. For example, "Since when have you had this pain?" "Have you experienced this kind of pain before?" or "What is your diet like?" Then the information gained from the medical interview can be written into cases and the students can practice case presentations.

e.g. **Case presentation**

The patient is a 42-year-old woman who presented to the outpatient clinic complaining of a right lower quadrant pain and a fever. The pain had developed after eating lunch 6 hours previously and it was initially 4/10 but worsened, becoming 7/10. She has a history of cholesterol gallstones, dissolved by oral medication in July 2005.... She has a liking for fatty food and drinks 2 glasses of wine every night...

4.4 Explaining diagnosis and treatment plan to a patient

One student, assuming the role of the doctor, explains the diagnosis and treatment plan in lay terms as he/she would to a patient. The other student, on listening to what the doctor says, writes down what he/she understands to be the diagnosis and treatment plan in medical terms. Acquiring the ability to explain diagnosis, test and surgical procedures and treatment plan correctly to patients in easy terms is very important and helps decrease lawsuits arising from misunderstandings. Through this practice, students will recognize the differences in knowledge between doctors and patients.

e.g. *Student A: You have gallstones in the bile duct. The bile duct is a tube that carries the bile which is a yellow greenish brown liquid made by the liver to help digestion. Since you are experiencing repeated abdominal pain and fever, we need to think about performing an operation to crush the gallstones in the bile duct.*

Student B: The patient has choledocholithiasis. Choledocholithotripsy will be performed.

Through various kinds of role play of medical interviews, students will be able to learn both professional language and lay language in practical situations. Ample opportunity should be given to the students for practicing so that they will be able to actually use them in their practice.

5. Doctor's perspective and patient's perspective

While the professional language of medicine centers on the scientific side of medicine, the lay language of medicine can help reveal the human side of medicine as well as helping to better communicate with the patient. Actual dialogues involving patients in any printed literature or recorded form are likely to reveal the patients' feelings and their state of mind: their fears, their sufferings, their concerns, their dilemmas, their helplessness and their values. Even a simple medical interview can help the doctor understand the patient through the narrative, its images, its associated subplots, the expressions and where the patient chooses to begin the talk.[1] Students will learn to see the illness of the patient from the patient's perspective, not only the disease of the patient from the doctor's perspective.[2]

6. Conclusion

English language proficiency is essential in the medical profession today. For non-native English speaking medical students, teaching EMP should encompass both the professional language and the lay language of medicine with equal importance. Various kinds of material and role play of medical interviews can effectively teach both types of language in practical situations. Competency in the professional and lay language of medicine not only enables students to function effectively but also helps them better understand both the doctor's perspective and the patient's perspective, the discrepancy between the doctor's knowledge and the patient's knowledge and the impact of illness on the patient.

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[Original Article]

外国人模擬患者を活用した英語による医療面接演習
Training Medical Interview Skills in English Utilizing Foreign Residents in the Community as Standardized Patients

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Background. Doctor-patient communication is an important topic of instruction in most English programs at Japanese medical schools. However, since English courses are generally not coordinated with content-area courses, students tend to be left with quickly forgotten expressions and technical terms. In order to develop students' medical interview skills in English, English education needs to be integrated into the core medical curriculum.
Objective. The present article proposes the idea of offering an English medical interview course utilizing foreign standardized patients in the advanced years of medical schools in Japan.
Methods. The Faculty of Medical Sciences at the University of Fukui introduced foreign standardized patients into one of its advanced English courses. The students learned in English those medical interview skills concurrently taught in the core medical curriculum.
Results. The students gained proficiency in English medical interview skills. They also reported high level of satisfaction with the course.
Conclusion. These results demonstrate the benefits of integrating English and medical education. This finding has pedagogical bearing on curriculum planning, materials development, and course content.
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1．序

法務省入国管理局の統計によると，日本における 2007 年末時点での外国人登録者数は 200 万人を超えている。過去 10 年で外国人登録者数は約 1.5 倍になり，現在も増加を続けている。在日外国人の中には，日本語が不自由なため病院や診療所への受診時にコミュニケーションの問題に直面する人も多く，医療機関はこうした外国人患者への対応に苦慮している。このような状況の中，英語は，母語の異なる人々の間をつなぐ国際的共通語として最も中心的な役割を果たしており，医師にとって英語のコミュニケーション能力を身に付けることは極めて重要となっている。この現実を踏まえ，現在全国の医学部の英語科目において，外国人患者とのコミュニケーション能力を育成する取り組みが行われているが，その効果に関しては疑問視する向きも少なくない。よく指摘される問題として，これらの英語科目の対象がほとんどの場合 1・2 年次生であるため，学年が進行し，診療知識や診療技能を学ぶようになる頃には，学習した英語表現の多くを忘れてしまうということがある。また，そもそも医学的知識に乏しい 1・2 年次生に対し，例えば病歴採取の意味や重要性をどれほど理解させられるかという疑問もある。

このような問題に対処するため，福井大学医学部では，4 年次の後期に外国人模擬患者（SP）との英語による医療面接演習を選択科目「実用医学英語」として開講している。同

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時期には医学教育モデル・コア・カリキュラムに準拠した「基本的診療知識」および「基本的診療技能」が開講されており，学期末にはOSCEも控えている。学生に対する動機付けや教育効果を考えた場合，英語による医療面接演習の実施はこの時期が最もふさわしいと判断した。また，臨床場面における英語運用能力を高めるには，実際の状況を模した環境での反復練習が不可欠であり，外国人SPの導入はこの目的に資するものである。更に，選択科目として開講することにより，少人数による密度の濃い演習を実現させている。

本項の目的は，福井大学医学部における事例を基に，医学英語教育への外国人SPの導入を推奨することである。具体的には，診療知識や診療技能を学習する時期に10コマ程度の選択科目を開講することを提案したい。この程度の教育内容の変更であれば，多くの大学で容易に実現が可能であろう。また，授業内容も，シナリオに基づくロール・プレイが主体であり，教員側の負担は極めて少ない。英語教員とのティーム・ティーチングを採用すれば，ほとんどすべての医学教員に担当が可能であると思われる。以下に，福井大学医学部における教育の詳細を紹介してみたい。

2．方法

2.1 模擬患者の採用

本授業は木曜日の1時限(8時45分から10時15分)に設定されており，安定した出席が可能な外国人SPを一定数確保できるかが開講に当たっての最大の懸念材料であった。募集に際しては，福井県国際交流協会と連絡を取り，多くの外国人が出入りする県国際交流会館における広報と外国人用メーリングリストによる案内の配信を依頼した。同時に，学内において数名の外国人研究生と連絡を取り，授業への参加を直接依頼した。募集に対する反応は学外・学内とも良好であり，過去3年間はすべて2週間以内にSPの人選を終えることができた(表1参照)。在留外国人が比較的少ない福井県において，外国人SPの確保を容易に行えたことは，他大学が同様な取り組みを行う上での参考となろう。なお，本授業はシナリオに沿ったロール・プレイによる反復練習が主体となるので，SPを演じる上で特別な知識や訓練は必要とされない。また，簡単な身体診察(聴診および触診)も行う予定であるため，SPは男性のみを募集することにしている。

SPには謝金として1時間当たり5000円(1コマ90分で7500円)が支払われる(大学規定による)。研究生や留学生の場合，謝金を受け取るには入国管理局による資格外活動許可が必要となるが，通常，申請を行えば許可書は同日中に交付される。謝金の経費は，当初は文部科学省からの補助金(現代GP)から支出していたが，補助期間終了後は，学内の競争的配分経費を活用している。SPの人数が多ければそれだけ教育効果も高まるであろうが，経費を考えると3～4名が限界であろうと考えている。

2.2 授業日程および担当教員

本授業は他の英語科目と同様15コマに設定されているが，SPの都合や予算の制約を考えた場合，毎週開講することには大きな困難が伴う。そのため，授業回数は11回とし，残りの4回分は別の課題(本学の留学生に対する英語による聞き取り調査)を行わせている。11回の授業における内容は下記の通りである。

第1～2回	講義（医療面接の構成，必要とされる英語表現）
第3～4回	外国人SPとの医療面接演習：呼吸器系（上気道炎，アレルギー性鼻炎，副鼻腔炎，咽頭炎，気管支炎，肺炎等）
第5回	同上：筋骨格系（捻挫，骨折等）
第6回	同上：腹痛（胃潰瘍，腸閉塞，虫垂炎，胃腸炎等）
第7～8回	同上：頭痛（偏頭痛，髄膜炎，クモ膜下出血等）
第9回	同上：気管支炎および聴診・触診
第10回	同上：まとめ
第11回	期末テスト（OSCE形式）

第1～2回の講義は筆者が担当し，第3回以降の医療面接演習では筆者と医学教員(非常勤講師を含む)とのティーム・ティーチングを採用している(医学教員は1人が1コマ

表1　外国人模擬患者（国籍・職業・年齢）

平成18年度	平成19年度	平成20年度
アメリカ人県職員 A さん（29 歳）	アメリカ人英会話学校講師 D さん（45 歳）	アメリカ人英会話学校講師 D さん（46 歳，19 年度より継続）
ニュージーランド人英会話学校講師 B さん（32 歳）	アメリカ人英会話学校講師 E さん（30 歳）	オーストラリア人英会話学校講師 H さん（28 歳）
ウガンダ人研究生（医師） C さん（39 歳）	ウガンダ人研究生（医師） F さん（34 歳）	ウガンダ人研究生（医師） F さん（35 歳，19 年度より継続）
	ウガンダ人研究生（医師） G さん（38 歳）	

表 2　医療面接で使用する英語表現

Chief Complaint: Good morning, Mr. Hara. I am Doctor Saito. How can I help you today?
History of Present Illness **Onset:** When did the pain start? **Frequency:** How often do you feel the pain? **Duration:** How long does the pain last? **Timing:** When do you feel the pain? **Location:** Where do you feel the pain? **Radiation:** Does the pain travel anywhere? **Intensity:** How severe is the pain? **Quality:** Can you describe the pain? **Associated Problems:** Did anything else happen when the pain started? **Alleviating Factors:** What makes the pain better? **Aggravating Factors:** What makes the pain worse?
Past Medical History: Have you had any serious diseases?
Past Surgical History: Have you had any surgeries?
Family History: Are there any diseases in your family?
Social History: Do you drink alcohol or smoke cigarettes?
Are you sexually active?
Medications: Are you currently taking any medications?
Allergies: Do you have any drug allergies?
Closure: Your problem is most likely to be (　　). I will give you some medicine to relieve your symptoms.

を担当)。取り上げる疾患の種類はすべて筆者と医学教員との話し合いで決定している。

2.3 教材および授業の形式

2.3.1　講義（第 1 〜 2 回）

講義の目的は，医療面接の基本的な構成を理解することである。教材は*日英対訳で学ぶ米国の臨床医学*[1]を使用し，学生は，主訴，現病歴，既往歴，手術歴，家族歴，社会歴，薬歴，アレルギーの順に英語での問診の仕方を学んでいく（システムレビューは質問が多岐にわたるので本授業では取り上げない)。なお，同書には現病歴に関する記述が少ないため，必要に応じて USMLE 用の参考書[2–4]を活用している。また，英語による医療面接の流れを映像で確認するために，CD-ROM 教材[5]の視聴も行っている。2 回分の講義で学生が最低限習得すべき英語表現を表 2 に示す。

2.3.2　医療面接演習（第 3 〜 10 回）

本授業は選択科目のため，年度によって受講者数が異なる。過去 3 年間の受講者数はそれぞれ 16 名，6 名，8 名であった。本項では受講者を 10 名程度，SP を 3 名として授業の流れを説明する。

授業開始から 15 分間は学生と SP とのフリートークを行う。学生を数名ずつの 3 グループに分け，各グループに 1 名の SP を割り当てる。互いに関する理解を深めることと，英語を話すことに対する学生側の緊張感を和らげることが主な目的である。会話が進むにつれ，教室は和やかな雰囲気に包まれるようになる。

フリートーク終了後，医学教員が教壇に立ち，当日取り上げる疾患についての説明を 15 〜 20 分程度行う。通常，3 種類程度の疾患(例：上気道炎，アレルギー性鼻炎，副鼻腔炎)について，問診・鑑別のポイントや英語表現について説明する。その後，1 つの疾患について医学教員と SP がシナリオを元に問診のデモンストレーションを行う。なお，SP には疾患の種類別のシナリオが事前に電子メールで送付されている。

デモンストレーション終了後，再び学生と SP を 3 グループに分け，問診のロール・プレイを行わせる。SP には数種類のシナリオを適宜使い分けてもらう。学生は原則としてシナリオを見ることができないので，鑑別を考えながら質問をすることが必要となる。筆者と医学教員は，教室内を巡回しながら必要に応じて指導を行う。ロール・プレイの時間は 30 〜 35 分程度であり，学生は互いに交代しながら，できるだけ多くのシナリオを練習する。

ロール・プレイの後は，医学教員によるミニ・レクチャーを授業終了まで行う。各担当教員には学生の興味を引くようなテーマでのレクチャーを依頼しており，USMLE や留学についての話が好評のようである。

本授業で使用するシナリオは基本的に医学教員が作成し，筆者が体裁を整えている。教員の自作によるシナリオもあれば，資料から引用したものもある。実際に授業で使用したシナリオの中から 3 例を表 3 〜 5 に示す。

表 3　上気道炎シナリオ（福井県立病院小宮良輔医師による）

Chief Complaint: I have a fever.
History of Present Illness **Onset:** Yesterday. **Temperature:** 38 degrees Celsius. **Runny Nose:** Yes. **Sore Throat:** Yes. **Cough:** Yes. **Shortness of Breath:** No. **Sputum:** No. **Yellow Nasal Discharge:** No. **Headache:** Yes. **Fatigue:** Yes. **Nausea / Vomiting:** No. **Associated Problems:** Joint pain. **Ill Contacts:** Some colleagues with the same symptoms. **Fluid Intake:** Normal. **Sleeping Difficulty:** No.
Past Medical History: None.
Past Surgical History: None.
Family History: None.
Social History: No drinking or smoking. Sexually active with girlfriend only.
Medications: No.
Allergies: No.
Physical Examination: No cervical lymph node swelling, no sinus pain or tenderness, no meningeal signs.
Sample Closure: Your problem is most likely to be a common cold. I will give you some medicine to relieve your symptoms.

表 4　偏頭痛シナリオ（*First Aid for the USMLE Step 2 CS*[2] による）

Chief Complaint: Headache.
History of Present Illness **Location:** It is here (points to the whole right side of the head). **Intensity:** When I have the pain, it is 9 / 10 and prevents me from working. **Quality:** Sharp and pounding. Getting worse (2-3 times a day). **Onset:** Two weeks ago. **Radiation:** No. **Associated Problems:** Sometimes I feel nauseated when I am in pain. Yesterday I vomited for the first time. **Alleviating Factors:** Resting in a quiet, dark room; sleep, aspirin. **Aggravating Factors:** Stress, light, and noise.
Past Medical History: In college I had a similar headache that was accompanied by nausea. I had sinusitis four months ago but the pain is different from the one I have now.
Past Surgical History: None.
Family History: My father died at age 65 of a brain tumor. My mother is alive and has migraines.
Social History: No drinking or smoking.
Medications: Ibuprofen.
Allergies: No.
Sample Closure: Mr. Clark, it seems your symptoms are due to a migraine headache, so I will prescribe some medications that will help you with your pain.

2.3.3　期末テスト（第 11 回）

期末テストは OSCE 形式で行われる。課題は英語による医療面接のみで，身体診察は行わない。試験時間は受講生 1 人当たり 10 ～ 15 分程度である。受講生の半数を筆者が評価し，残りの半数を医学教員が評価する。出題は授業で取り上げた疾患の中から行い，偏頭痛を課題として選択した場合，評価項目はシナリオに示した 16 項目（表 4 参照）および Communication Skills 4 項目（1. Making eye contact, 2. Showing compassion, 3. Acknowledging and responding to the SP's concerns, 4. Encouraging additional questions or discussions）となる（全 20 項目を○×の 2 段階で評価）。また，SP も受講生の英語能力について 3 項目（1. Pronunciation, 2. Word choice, 3. Minimizing the need to repeat questions or statements）を評価する（各項目を 5 段階で評価）。

2.4 評価割合

評価の割合は，平素の授業参加が 30 %，留学生に対する聞き取り調査が 20 %，期末テストが 50 %である。最終的に 60 %を下回った学生は不合格となるが，現在までのところ不合格者は出ていない。

表 5　聴診・触診シナリオ（*CD で学ぶ医師のためのオールラウンド英会話*[6] による）

D: Do you mind if I listen to your lungs?
P: No, not at all.
D: Breathe slowly and deeply through your mouth. Inhale. Exhale. Inhale. Exhale. Let's see how you sound from the back. Could you turn around? This time take a deep breath and exhale slowly. Good. Your lungs seem to be working fine. Now, I would like to listen to your heart.
P: Okay.
D: Please breathe quietly this time. Thank you. That's fine. Now, could you take a deep breath and hold it for a while? All right. You can relax now. Did you experience breathing difficulties after holding your breath for this length of time?
P: Almost, but it wasn't bad.
D: Okay. I'm now going to check your abdominal area. Could you lie down on this bed? Please raise your knees and relax your stomach muscles. I'm going to press your abdomen. Does it hurt when I press here?
P: Not much.
D: I want to examine your reflexes. Cross your right leg over your left. Now, your left over your right. You can sit up now. That's it, we're finished here.

3．結果

3.1 学生による評価

本授業に対する平成 19 度の学生評価(5 点満点)は，講義内容に関しては平均 4.76 点(医学科全開講科目平均 4.30 点)，教材に関しては平均 4.67 点(同 4.10 点)であった。平成 18 年は，講義内容が平均 4.72 点(医学科全開講科目平均 4.10 点)，教材が平均 4.64 点(同 4.00 点)であった。本授業は卒業要件とは関わらない選択科目であり，高い目的意識を持った学生のみが受講すると考えられる。そのため，必修科目に比べ評価の得点が高くなることが予想されるが，その点を考慮しても，過去 2 年間の評価得点の高さは注目に値する。授業を担当した医学教員や SP も一様に，受講生の熱意を強く感じたとのことである。授業評価の自由記述欄に記された多くの意見も，本授業に対する高い満足度を窺わせるものであった。その代表的なものを下に示す。

- すごくいい経験になりました。英語の勉強だけでなく，問診するという機会を持てて本当に良かったです。
- 診断すること自体の難しさと，英語での問診の難しさもあったけど，とても面白くできました。
- とても実践的なクラスで楽しかったです。診察中の様子や受け答えがとてもリアルで，実際の雰囲気を感じることができました。

3.2 問題点

本授業の最大の問題点は，SP 導入にかかるコスト(謝金)である。当面は学内の競争的配分経費を活用したいと考えているが，経費獲得のためにはそれなりの成果が求められる。他大学が同様な取り組みを考える際も，経費が大きなネックとなろう。学内および学外で SP のボランティアを募集するのも一案であるが，在留外国人が少ない地方都市でそれがどこまで可能であるかは未知数である。

また，最近 2 年間の受講生がそれぞれ 6 名，8 名と若干少なめであるという問題もある。少人数クラスによる高い教育効果を狙って選択科目とした授業ではあるが，SP を 3 人とした場合，適正受講者数は 12 名程度であろう。授業内容に対しては既に高い評価が得られているので，今後は受講生の募集により積極的に取り組む必要があると考えている。

4．結論

本授業に対する学生評価(5 点満点)は平均で 4.6 点を上回っており，この試みが学生に好意的に受け止められたものと解釈できる。外国人 SP とのロール・プレイを繰り返すことにより，学生は，コア・カリキュラムで学んだ医療面接の技能を更に深めると共に，英語によるコミュニケーションに対する貴重な自信を得たようである。また，当該取り組みを通じて，英語教員と医学教員が協力して英語科目を担当する体制を強化できたものと考えている。英語の学習は，継続して行うことが極めて重要である。本稿が，高学年における専門医学英語教育を実施する上で，多くの大学の参考となることを願っている。

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Continuing Professional Education

with thanks to Professor J Patrick Barron

Reuben M. Gerling

Many of us are flabbergasted when we encounter seriously challenging English in the professional literature. After all, this material has passed all the vetting procedures, peer reviews and editing by the journal and the publishers; and yet,

A.

The child, we[1] report, [2]became known to the registry in 1996 at aged 9 years. Parents are unrelated and [3]mother was aged 35 years at the time of her birth. [4]At 20 weeks gestation the possibility of hydrocephalus was raised when ultrasound monitoring demonstrated some cerebral ventricular enlargement, but this had resolved by 26 weeks. Pregnancy was otherwise uneventful apart from reduced foetal movements at 40 weeks. Delivery was by Caesarean section at 41 weeks and Down syndrome was diagnosed at birth. Birthweight was 3000 g and head circumference 34 cm with Apgar scores of 1 and 6.

J Paediatr Child Health (2004) **40**, 406–409

Can we learn from the mistakes of others? We can try.

1. It is preferable to avoid the personal pronoun. 'The patient was aged 9 at the time she was put on the registry,'
2. 'Became known to the registry,' is unnecessary. 'A girl with Down syndrome was first placed on the registry at age 9' is preferable.
3. 'mother was aged 35 years at the time of her birth,' hardly! It is an established medical fact that most people are born at age 0. The sentence should be, The (good ol' article there!) mother was 35 at the time of the patient's (or child's) birth.
4. 'At 20 weeks gestation the possibility of hydrocephalus was raised when ultrasound monitoring demonstrated some cerebral ventricular enlargement, but this had resolved by 26 weeks'
   The tem should be 'week 26' as it should be 'day 20.' 'Demonstrated' may not be the best choice for an ultrasound. 'Showed' or 'Revealed' would be more appropriate.

   If a mass is present, ultrasound **confirms** if it is cystic or solid.

   Ultrasound **shows** that Kager's fat is replaced by a mass.

   In the management of the atypical patient and there is a range of ultrasound **appearances**.

   Calcification is **visible** on ultrasound.

   'An ultrasound at week 20 showed cerebral ventricular enlargement in the fetus, raising the possibility of hydrocephalus. This, however, had disappeared by week 26.'

B.

Putting the world in order. It is assumed that information in a paper is of some importance, otherwise leave it out. It is therefore preferable to put the information in a manner that will be easily understood.

...we studied 48 patients with radiologically or endoscopically suspected inflammatory bowel disease when they were admitted for an elective bowel resection that was indicated as part of their medical care.
Gastoenterology (1999) **116**, 1420–1427

The sentence can be interpreted in two ways:

48 patients were studied.
They had been admitted for an elective bowel resection
(at which time) Inflammatory bowel disease was suspected (in all of these patients)
Suspicion was based on either radiological or endoscopic studies

Or:

48 patients were studied.
Inflammatory bowel disease had been suspected (in all of these patients)
Suspicion was based on either radiological or endoscopic studies
They had were admitted for an elective bowel resection
At which time we studied them

Assuming the second to be the correct version, we can re-write it as follows:

A study was conducted of 48 patients with either radiologically or endoscopically suspected inflammatory bowel disease who had been admitted for elective bowel resection.

The purpose of *Continuing Professional Education* is to provide enjoyment for the medical healthcare professionals as well as the English teaching professionals who make up the JASMEE membership. Prepared by the editors, with special reference to certain tough spots in English as a foreign language in Japan.

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下記の論文を日本医学英語教育学会会誌 *Journal of Medical English Education* に投稿します。なお，他誌への類似論文の投稿はいたしません。また，採用された場合，本論文の著作権が日本医学英語教育学会に帰属することに同意いたします。

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問合せ先：日本医学英語教育学会事務局
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編集後記

日本医学英語教育学会会誌 8 巻 1 号をここにお届けできることを喜ばしく存じます。今回から 2 名の編集責任者は，前文と編集後記を分けて担当することになりました。前号は編集中の論文を引き継ぎ発行しましたが，今回は平成 20 年 7 月以降に投稿された論文を新たな体制で編集した論文が収載されています。Original article と Short communication は担当編集委員が投稿規程に従った査読を行って掲載となっています。投稿された論文は編集委員 1 名が担当となり複数の査読者をたてるという一般の科学雑誌と同じスタイルの査読・審査を行なっています。編集担当と査読をされた先生方に感謝したいと思います。

論文の査読では，論点が本誌にふさわしいものかどうかを判定します。査読者は公平性・客観性を持ちながら論文を評価することが求められますが，時には相容れないこともあり，編集担当は複数の査読者を立て，該当論文についての意見を取りまとめ，編集責任者に報告します。今期から編集責任者が 2 名となり，最終的な諾否の判断は編集責任者の合議で決定します。この際には査読者および担当編集者の考えだけでなく，査読結果に対する著者の返信も検討します。

論文作成者は，多くの場合，査読者・編集担当者のコメントをもとに論文を改訂する機会を持つことができます。査読者は作成者と違う視点で論文を読むため，作成者が気付かなかった点，新たな解釈に気付かせてくれることもあります。一方査読者が常に正しいとは限らないので，作成者は査読者の意見が正しくないと考えたときは，その根拠を示すことで査読者に再評価を求めることもできます。私自身，科学雑誌に投稿した論文について編集者と何度もやり取りをして，両者相譲らず最終的に「編集者は著者の理論に賛成できないが，論理構成が正しく，根拠が示され，そこから導かれる結論は妥当なので本論文を採択する。」という結果を得た経験があります。査読者にも自分の理論・考えがあり，時には著者の論点との不整合を生じることがあります。理論・考えが異なっても査読者は客観的評価を行い，作成者は冷静に論理的に対応することで良い論文が生まれると思います。

編集委員一同本誌と学会の発展のために，お送りいただいた論文がより高質なものになるように努力したいと思います。読者と投稿者からのフィードバックも重要です。今後読者からのレターなども充実させられればと考えていますのでよろしくお願いたします。

日本医学英語教育学会会誌
Japanese Editor
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