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Journal of Medical English Education, the official publication of The Japan Society for Medical English Education, was founded in 2000 to promote international exchange of knowledge in the field of English education for medical purposes. Until June 2006 (Vol. 5 No. 2), the registered title of the Journal was *Medical English - Journal of Medical English Education*; the current title, which was registered in December 2006 (Vol. 6 No. 1), should be used for citation purposes.

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第20回 日本医学英語教育学会 学術集会 開催案内

日本医学英語教育学会は1998年に第1回医学英語教育研究会が開催され，その後，医学英語に関する研究を推進し，医学英語教育の向上を図る目的で学会として発展して参りました。現在では400名以上に及ぶ会員を有しております。

医学英語教育は卒前・卒後・生涯教育として重要であり，医療の国際化，医師国家試験の英語問題導入や医学英語検定試験など，専門職教育の限られた時間でどのように教育を行うかが課題です。学術集会では例年，医療系の英語教育に係わる教員･研究者・医療関係者が参加し研究･事例を報告します。平成29年度学術集会は下記により開催します。日本医学教育学会の委員会に起源をもつ本会に是非ご参加いただき，医学英語教育について情報を交換していただければと思います。

記

学会名：第20回医学英語教育学会学術集会

日　時：平成29年7月22日（土）～23日（日）

会　長：福沢嘉孝（愛知医科大学病院先制・統合医療包括センター）

会　場：ウインクあいち（愛知県産業労働センター）（〒450-0002　愛知県名古屋市中村区名駅4-4-38）

演題募集：平成29年2月1日正午～3月31日 正午

（医学英語教育の目標・教育方法・評価，学生評価，語学教育と専門教育の統合，実践力教育，グローバル人材育成，医学・看護学・医療系教育における医学英語教育，英語教員による医学英語教育，医学・看護学・医療系教育者による医学英語教育，医学英語教育におけるシミュレーション教育・ICT活用，教員教育能力開発，医学英語論文指導・校閲・編集，医学論文作成における倫理，国際学会でのスライド作成と発表法，USMLE受験指導，医療通訳，医学英語検定試験，その他の医学英語教育に関連する演題）

＊筆頭演者は本学会の会員に限ります。非会員の方は演題提出前に入会してください。
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First Announcement

The 20th Academic Meeting of the Japan Society for Medical English Education

The Japan Society for Medical English Education (JASMEE) held its first meeting as a study group in 1998. Since then, the society's main aims have been to promote research in fields related to medical English, and to support and encourage improvements in medical English education. JASMEE now has more than 400 members.

With the globalization of medicine and such recent developments as the introduction of questions in English in Japan's National Medical Practitioners Qualifying Examination, the challenge of how best to make use of the limited time available for medical English education in university curricula is ever more pressing. JASMEE's annual academic meetings seek to address this challenge with a wide variety of presentations, symposia, and workshops given by experts in the field.

Information about the 20th JASMEE academic meeting is presented below. We look forward to welcoming JASMEE members and non-members alike to this meeting, where they will be able to share their experiences and expertise with others in the field to the greater benefit of medical English education in Japan and beyond.

Dates: Saturday July 22 and Sunday July 23, 2017

Venue: WINC AICHI
4-4-38 Meieki, Nakamura-ku, Nagoya, Aichi 450-0002

President: Yoshitaka Fukuzawa
(Aichi Medical University Hospital)

Call for papers: Proposals for papers on the following subjects (or similar) should be submitted by March 31, 2017.

- goals, methods, and assessment of medical English education
- student evaluation
- integration of language education and specialized education
- global human resource development
- medical English for nursing and other healthcare-related fields
- the use of technology in EMP education
- faculty development
- teaching of medical writing
- medical English editing
- the art of presenting at international meetings
- USMLE preparation
- medical interpreting
- EPEMP

Submissions will only be accepted from JASMEE members in good standing. To submit a proposal, please access the JASMEE homepage (http://www.medicalview.co.jp/JASMEE/gakujutu.shtml).

Inquiries should be addressed to the JASMEE Secretariat (c/o Medical View, Attn: Mr. Eguchi)
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Journal of Medical English Education

The official journal of the Japan Society for Medical English Education

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Editor's perspectives

Conference coverage

The 19th JASMEE Academic Meeting was held over the weekend of July 16/17 at Keio University's Hiyoshi Campus, and as its President, I would like to thank everyone who attended (all 134 of you), and especially those who enlightened and inspired us through the presentations they gave. As Editor-in-Chief of the Society's journal, I would also like to thank the many presenters who responded positively to my request that they submit reports on their talks for publication in this issue. Of the 32 presentations given at the conference (including the symposium, the *JASMEE now and in the future* sessions, and the workshop), 20 are reported on herein. No format for these reports was stipulated or even suggested, so they vary greatly in that respect: some are short summaries, while others go well beyond the scope of what was presented in the original 15-minute talks, almost constituting full articles in themselves. Pleased though I was to receive all of these reports over the summer, I did start to feel slightly concerned that if we continue to publish such a full record of the conference proceedings, JASMEE members may no longer feel the need to attend the conferences themselves!

While this issue is devoted largely to conference reports, it also contains two original articles, both of which delve deeper into a topic their authors presented on at the July conference (flipped classroom methodology), and one of which also gives us a foretaste of the next special issue of the journal devoted to a specific topic.

The first such special issue was published exactly one year ago, and the next one is scheduled for publication in October, 2017. The topic last year was extracurricular activities, and I am pleased to announce that the topic selected by the editorial board for next year's special issue is *The use of ICT in medical English education* (ICTを活用した医学英語教育). As with the first special issue, we will be flexible on the question of paper structure, but all contributors should follow the instructions on basic formatting (double-spacing, reference style, etc.) given in our Author Guidelines (please see http://www.medicalview.co.jp/jmee/scope/index.shtml for details). We will be happy to receive submissions (in English or Japanese) for the October 2017 issue from now until July 18, 2017.

Timothy D. Minton

Editor-in-Chief

Journal of Medical English Education

Effects of increased use of information communication technology on a first-year medical English course

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Background: While information communication technology (ICT) and flipped methodologies are becoming more common in medical education and in English language classrooms all around the world, no studies exist which examine the effects of flipping a medical English oral communication course in Japan. The purpose of this study was to determine the impact of ICT use in such a course over a three-year period from 2013 to 2015.
Methods: Three groups of 1st-year students enrolled in a basic medical history-taking skills course were compared. The first two groups were taught using non-flipped methodologies (n_{2013}=127) (n_{2014}=135). The course was flipped for the third group (n_{2015}=130) and total classroom hours decreased by 15 hours in 2015. For this study, four metrics were analysed and compared among the 3 groups in order to understand the nature of the impact of increasing ICT use: course evaluation data; self-perception of skill acquisition; examination results; and free comments.
Results: Data analysed over the 3-year period showed a significant progressive decline in both course satisfaction and student self-perceived skill acquisition. Qualitative analysis of student comments revealed technical issues related to Wi-Fi and infrastructure as the main reasons for the declines. The 2015 flipped class group mean performance examination results were significantly higher than those of the 2014 non-flipped group (77% vs 68%, $P < 0.001$).
Conclusions: Implementation of ICT can lead to better learning outcomes in medical English education but technical infrastructure needs to be considered carefully because of the potential to erode the learning experience for students.

J Med Eng Educ (2016) 15(3): 71–78

Keywords flipped learning, inverted learning, medical English education, information communication technology (ICT), pedagogy, student-centred learning

1. Introduction

1.1. Overview

The purpose of this study is to attempt to characterise the nature of the impact of increasing ICT use in an English oral communication course over a 3-year period from 2013-2015 by comparing various metrics for three different groups of 1st year students at a Japanese medical school. First, working definitions of *ICT* and *flipped learning* will be established for the purposes of this study. Then, context will be provided to situate this study within the existing research and identify the specific unique contribution this study seeks to make. Methods for flipping this class and obtaining the data will be explained. Then, the paper will detail the results of relevant items on student course evaluations and compare them year to year. After that, the analysis will focus on student self-evaluations and actual performance evaluation results. Qualitative analysis of student comments will follow. Finally, the findings will be summarised and compared with existing research to attempt to explain what the findings mean.

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Different parts of this paper were presented by the first author at three academic conferences: 1) the 8th Annual Moodle Moot conference in February 2016, in Tokyo; 2) the 19th JASMEE Academic meeting in July 2016, in Yokohama; and 3) the 48th Annual meeting of the Japan Society for Medical Education in July 2016, in Osaka.
This work was supported by JSPS Kakenhi grant JP15K01091.

1.2. ICT and flipped learning

Information Communication Technology (ICT) for the purposes of this study, encompasses the use of electronic media

(learning management systems[LMS] like Moodle, cloud sharing, learning objects, etc.) and devices (cellular phones, tablets, computers, etc.) for educational purposes. Examples of ICT include the use of an LMS like Moodle for file sharing and interactive content delivery and quizzes, etc. One other example of ICT for education is a method known as flipping the classroom.

"Inverted" or "Flipped" classroom methodology is quickly gaining stature as an important tool to enrich the learning environment in medical schools and related institutions all around the world.[1-5] A flipped classroom involves a refocussing off of the instructor and onto the students. Student-centeredness during the class is made possible by ensuring that students are prepared for each class by learning content on their own before each lesson using videos and associated activities. Students are quickly tested at the beginning of each class to assess their level of understanding of the pre-lesson content. Then they are empowered to engage in active learning together during class. This approach has been shown to be effective in raising the level of learning outcomes in a recent meta-analysis.[6]

One essential element defining flipped learning is that students are engaged in active learning and problem solving together with a greater focus on open-ended outcomes inside the class while the understanding of content, knowledge acquisition and close-ended outcomes are more prominent outside the class. In this model, the instructor's role of content provider is relegated to activities outside the class. Thus, during class, the instructor can become the facilitator of student activity and focus on individual and small group student support when required. Another advantage of an effective flipped classroom implementation is that as facilitators during class, instructors have a greater capacity to engage in more meaningful and holistic assessment including items such as professionalism, leadership, and teamwork.

1.3. The research question

There is a growing number of studies on the positive effects of ICT and flipped learning in medical education[3,7,8] as well as in English language education.[9,10] However, none examine the effects of flipped methods within the context of an English oral communication course for basic history-taking skills for 1st year students in Japan. The question this study seeks to answer is the following: What was the nature of the impact of increasing the use of ICT in a medical English course? To answer this question, this study examined and compared 4 types of data from 3 groups of 1st year students over a 3-year period from 2013-2015: 1) student course evaluation data; 2) student self-evaluation of perceived skill acquisition; 3) student actual performance; 4) qualitative analysis of free comments made by students.

2. Methods

2.1. Course and participant details

At Nihon University School of Medicine, a new curriculum was introduced in 2015 which resulted in lesson times being reduced in length from 90 minutes to 55 minutes for all 1st year courses. Among them was a compulsory English oral communication course for basic medical history taking which was reduced by a total of 15 hours. While ICT use in the English programme started in 2011 and slowly increased since then, a flipped methodology was introduced in this course for the first time in 2015 to attempt to compensate for the lost class time. Analysis of the effects of increasing ICT use from 2013 to 2015, involved monitoring the following metrics: student course evaluations, student self-perception of skills acquisition, actual student skills assessment, and qualitative data analysis over that time period with three different but similar groups of students. Informed written consent was obtained by each student with oversight by the Nihon University School of Medicine committee on ethics. The 3 groups included in this study are compared and contrasted below.

The 3 groups of 1st year students were similar with respect to the following: male to female student ratio (approx. 4:1); teacher to student ratio (approx. 1:64); total number of students (approx. 130). There were no major changes in university admission policies or level of difficulty of the entrance examination over the study period that could potentially result in a large disparity among the 3 groups.

While there were no resources available to measure baseline metrics precisely and objectively, baseline vocabulary level; baseline ability to conduct a medical interview in English could both be reasonably assumed to be adequately similar for the purposes of this investigation. At the beginning of the course for each year, all students in the 3 groups performed activities involving the Academic Word List[11] to gather a rough approximation of vocabulary levels which were found to be generally similar among all the students. Also, on the 1st day of the course, each student performed a short doctor role play with the instructor as a patient. The students were required to communicate in English to the best of their ability within a 30-second to 1-minute timeframe. These performances were recorded and played back for students on the last day of the course after the performance examinations to make students aware of how much they had improved over the course. These 1st day performances were

also used to gather an approximation of the students' baseline ability to perform a history taking in English. By these means, no large differences were discernible among the three groups in their baseline abilities.

The three groups differed substantially in 2 main areas: (1) the number of classroom hours (2013 = 2014 → 45 hours; 2015 → 30 hours); and (2) the amount of ICT usage in the class (gradually increasing each year). Identifying the nature of the impact of increasing use of ICT over this 3-year period is the focus of this investigation. How ICT was increased is explained more specifically below.

From 2013 to 2015, the Moodle LMS (version 1.9 in 2013 and version 2.5 in 2014 and 2015) was used for file sharing and information distribution. In 2014, a few Moodle quizzes were included sporadically throughout the course which marked the beginning of student activity involving student responses and scoring as opposed to simply downloading course files. In 2015, an extensive ICT use was implemented which consisted of a wide variety of Moodle activities including online feedback, forums, quizzes every lesson and the implementation of the flipped methodology.

2.2. How we flipped our class

A *learning object* is a collection of digitally accessible and editable educational content which has an educational objective. For this course, the learning objects were created by the instructor using, the proprietary authoring software known as NimbleAuthor (OCB Media www.nimble-ocbmedia.com) (see **Figure 1** for a sample screen shot). To flip the class, students were required to complete the assigned learning object before each lesson.

As shown on the left side of the figure, there are links for "How to use the system…", "GI: IBS & Polyp (PART I)" and "Quiz". Clicking "GI: IBS & Polyp (PART I)" allows access to three different listening activities based on one short video of a doctor taking the history of his patient. All the videos are approximately 1 minute in length. As students work to complete the learning object, they can watch the videos at their own pace and do a variety of associated activities to reinforce understanding (screenshot shown in **Figure 2**).

As shown on the left side of **Figure 1**, there is a link for "Quiz". Here, students answer questions based on the content from the listening activities to test comprehension. Students are required to score 100% on the quiz in order to complete the learning object. After answering all the quiz questions, students can see their results.

Students were allowed to try the activities and quiz as many times as required to score 100%. After completing all the activities and scoring 100% on the quiz, students exited

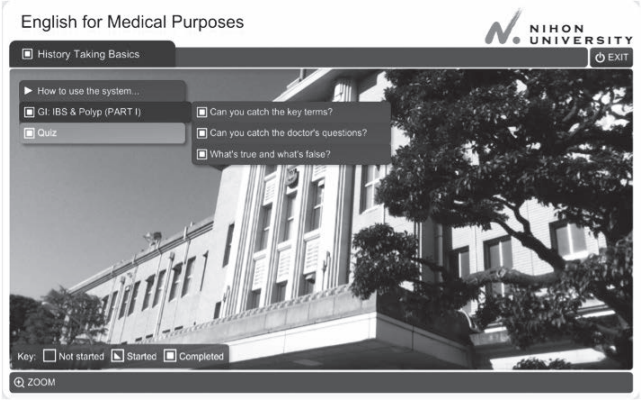

Figure 1. Online learning object top page (created using NimbleAuthor) embedded into the Moodle system.

Figure 2. Sample of one of the video activities inside the learning object.

the activity prepared for the next class dealing with the gastrointestinal system: IBS & Polyp.

All the content is based on content from the emp.tmu.net website video collection and used with written permission from the copyright holders, Tokyo Medical University Department of International Medical Communications and OCB Media.

Before students came to the class, they were required to have completed the learning object as described above in order to prepare them for communicative activities in the class. At the beginning of each class, a very short Moodle quiz accessible only to students who completed the learning object before class, was administered to check understanding of the pre-lesson learning object and to incentivise completion. During class, students were involved in group-work and pair-work to discuss and analyse the types of questions the doctor asked in the video and the reasons why. Students categorised and paraphrased questions and discussed different questions that they thought may be relevant for that particular case. Then the lesson ended in role-play time where students played both the role of doctor and patient using their creativity and imagination to attempt to maintain a flu-

ent history taking for a given period of time (2 to 3 minutes). Homework was then given to complete the next learning object on the Moodle system to prepare for the next lesson and the cycle continued as such for approximately 24 of the total 30 lessons in the course. The other 6 lessons consisted of orientation, introductory activities, review activities, special communication activities focussing on specific themes such as empathy and useful questions for patients.

As this was primarily an English oral communication course, medical accuracy was less important than the development of English communication skills. Students were encouraged to use what they learned from the learning object before the class and what they learned from their discussions during class to aid in their ability to perform a role-play of a history taking in their own way at the end of each class. During most of the lesson time, the instructor circulated around the room acting as a facilitator to address individual concerns and offer, feedback and advice to students. The flipped methodology described above was introduced for the first time in 2015. This involved the most extensive use of ICT both inside and outside the class. By comparison, in 2014, as described earlier, involved limited ICT and 2013 involved extremely limited ICT use and neither had a flipped component.

2.3. Student course evaluation questions and data collection

At the end of each year, students are required by the university to submit official course evaluation sheets which are not anonymous but individual responses are not permitted to be seen by instructors. Instructors receive a summary of the data which does not contain any information which can potentially identify students. The same sheet was used in both 2014 and 2015 (refer to **Appendix 1**) but a different sheet was used in 2013, therefore, only the data from 2014 and 2015 were included in this study because responses could only be compared directly between those two groups. The survey included 15 questions and a space for free comments however for the purposes of this study, only the data obtained for the relevant questions pertaining to the course itself were included in this study. A one-sided Wilcoxon rank sum test with Bonferroni's adjustment (CI 95%) was used for the statistical analysis of the data.

Basic Medical History Taking Skills Evaluation	
Spoken English Proficiency **SEP**	(i) listening (clearly showed understanding using appropriate cues) (ii) speaking (used comprehensible pronunciation & grammar at an appropriate pace) (iii) English usage (used understandable and appropriate terms and expressions) *1 point for each SEP item which is near-perfect or better.* *Total 3 points.*
Communication & Interpersonal Skills **CIS**	(i) demonstrated professionalism and never made the patient feel uncomfortable (ii) demonstrated at least one specific and appropriate empathetic behaviour (iii) demonstrated appropriate body language and engagement with the patient *1 point for each CIS item which is near-perfect or better.* *Total 3 points.*
Integrated Clinical Encounter **ICE**	3 pts = all questions were clearly thoughtful, reasoned and relevant 2 pts = questions seemed to perhaps be relevant but somehow deficient 1 pt = 1 clearly irrelevant question was asked 0 pts = 2 or more clearly irrelevant questions were asked
Comprehension Questions (post-interview) **Comp.**	3 pts = all comprehension questions were answered correctly 2 pts = 1 comprehension question was answered incorrectly 1 pt = 2 comprehension questions were answered incorrectly 0 pts = more than 2 questions were answered incorrectly and/or the chief concern could not be identified adequately

Figure 3. Assessment criteria used in 2014 and 2015 to evaluate history-taking skills.

2.4. Student self-evaluation of history-taking skills

Another measure included as part of attempting to describe the nature of the impact of increasing ICT use was students' self-evaluations. This data was collected anonymously at the end of each academic year with a survey asking students to rate the impact their English courses had on their English skill development in a number of areas (refer to **Appendix 2** for the complete survey). Only the one question regarding medical history-taking skill acquisition (Question 1) was relevant to this study. The survey shown in **Appendix 2** is a modified version to fit on one page. In actuality, students responded to these questions and added their free comments digitally using Google Forms through the Google for education system to which the university has subscribed to. For the purposes of this study, only the responses to Question 1 (medical interview skill acquisition) and the free comments from this digital survey were included for analysis.

2.5. Student performance assessment

All three groups were individually assessed using a USMLE Step 2 CS inspired model with the 2014 group and the 2015 group being assessed using the criteria shown in **Figure 3**.

The evaluation sheet shown in **Figure 3** was created specifically to assess history-taking skills of Japanese medical students in their early pre-clinical years. It was adapted from USMLE Step 2 Clinical Skills Scoring.[12] Regarding the evaluation of student performances in 2013, a different evaluation sheet was used[13] therefore, those results were not included in this study. Only, actual student performance results from 2014 and 2015 using the evaluation sheet shown in **Figure 3** were analysed using the Mann-Whitney test with a *P* value of < 0.001 considered to be significant (CI 95%).

2.6. Qualitative data collection

In addition to the three quantitative measures described above, student free comments were also examined for any revealing trends. At various times through the course, students had numerous opportunities to express their opinions and thoughts in various ways. Some anonymous, some not,

some electronic, some not, some English only, some not. In order to uncover possible trends over the 3-year period, it was thought that the utilization of the same free comment collection method for each of the 3 years in digital form would be consistent enough to justify comparison. For the purposes of this investigation, only the anonymous free comments left by students on the student self-evaluation of medical English skills form (**Appendix 2**) were included in this study. The comments were categorised into either positive, negative or neutral for each of the three groups of students. The comments were then analysed to attempt to uncover any revealing trends.

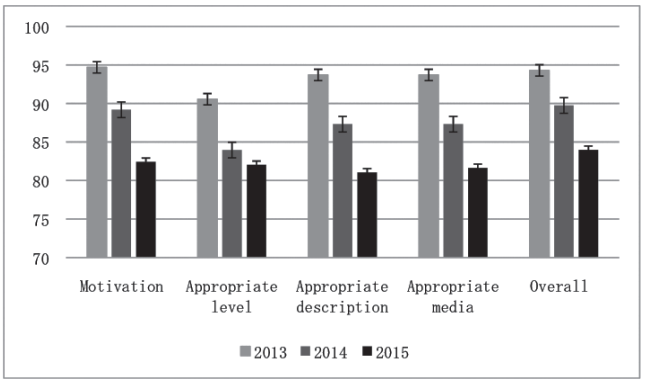

Figure 4. Student course evaluation responses from 2013 to 2015.

3. Results

3.1. Overview of results

Results of this analysis show that for the 1st year Japanese medical students included in this study, increasing ICT use led to statistically significant decreasing student perceptions of course quality and decreasing student self-perceptions of skill acquisition. Flipping the class resulted in significantly better student performance in achieving learning outcomes. Qualitative data analysis indicated that problems with Wi-Fi, and other technical issues were the main reasons for the increasing negative perception of course quality. No clear evidence could be seen to explain the declining self-perception of skill acquisition despite improved actual performance.

3.2. Student course evaluation results

What effect did increasing ICT use in this course have on students' perception of course quality? This is the question that this section will answer by examining and comparing student course evaluation results from 2013, 2014 and 2015. Among the 16 questions on the end-of-year evaluation, only the 5 questions that pertain to the course itself were analysed. Those questions, translated from the original non-anonymous Japanese form, appear below (see **Appendix 1** for the complete original form):

1. Did the course content increase my motivation for self-study? (Motivation)
2. Was the difficulty level of the course appropriate? (Appropriate level)
3. Did the assessment criteria stated in the syllabus match what was actually assessed in the course? (Appropriate description)
4. Were the learning materials appropriate (videos, voice, slides, handouts, etc.)? (Appropriate media)
5. What is your overall evaluation of the course? (Overall)

Student mean responses to each of these questions over the 3-year period from 2013-2015 are shown in **Figure 4**.

Results of this analysis showed that there was a significant decline in student perception of the course quality as measured by the student responses to the 5-point Likert-type scale ranging from *5 – Very Good* all the way down to *1 – Substantial Improvements Required* for these 5 questions. This indicates the possibility of an inverse correlation between the amount of ICT use and course satisfaction during the period from 2013 to 2015 for these 5 measures.

3.3. Student self-perceived impression of skills acquisition

In addition to the official student course evaluation described above, an anonymous survey was used to data collect for students' self-evaluation of English skill acquisition (**Appendix 2**). Among the 6 questions, only the responses related to medical history-taking skills were included in this study. That one question translates to English as follows: On a 5-point scale (*5 - large improvement, 4 - small improvement, 3 - no change, 2 - small decline and 1 - large decline*), how would you characterise the transformation of your ability to perform a medical interview now as compared with your ability in April at the beginning of the academic year? The means of the responses expressed as a percentage (CI 95%) for each of the three years in question are shown in **Figure 5**.

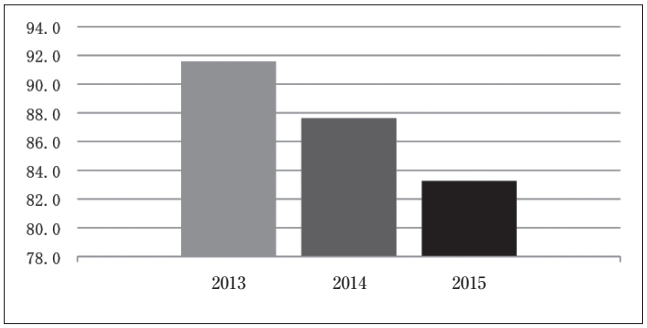

Figure 5. Means of students' self-perceived skills acquisition

These data reveal a pattern which is similar to that seen in the course evaluation data. There was a significant decline through the 3-year study period which may be further evidence in support of an inverse correlation between increased ICT use and students' perceived impression of their own history-taking skill acquisition.

3.4. Student actual performance results

Student actual performance was measured using the evaluation sheet shown in **Figure 3** for the 2015 group as well as for the 2014 group. The evaluation sheet used for the 2013 students was different resulting in data which could not be used in this study to compare with the other 2 groups. The mean score for the 2014 group was 68% (± 3% CI 95%) while that of the 2015 group was 77% (± 3% CI 95%). Mann-Whitney statistical analysis revealed a significant improvement ($P < 0.001$). These data show that compared with the performance results of the 2014 group, those of the 2015 group were significantly better despite a reduction of 15 hours of class time and the fact that students judged the course to be of lower quality and their skills to have improved less than those of the 2014 group. These confounding results were all quantitative measures. What follows is an analysis of qualitative data.

3.5. Qualitative data results

At the end of the course for each of the three years, students filled in an electronic survey (**Appendix 2**) which allowed students to leave a free comment if they desired to do so. The following student entries will be used to explain how all the comments were categorised and quantified.

1. 良かったところはクイズレットの方式で自ら調べて学ぶことができたこと。悪かったところはインターネットの問題で宿題がうまくできない時があったこと"(2015)
2. It was great that we could try the part of a doctor and a patient in every class. I think internet trouble was only the problem. But I think it is good to use PC in the class. We could practice making presentation and know how to use PC efficiently. (2014)

Each student entry was categorised and quantified so for example, for the two entries above, there are a total of 6 different comments. Among these 6, there are 2 categorised as "Complaints about Wi-Fi"; and 4 categorised as "Other comments". Examples of "Skill improvement comments" included *"I think my communication skill was promoted"* and *"the practice of medical interview had improved my medical interview skill".* Complaints related to internet issues were included in the "Total no. of complaints" category. Among the other complaints included in this category were the following paraphrased comments: *"I want you to explain homework more clearly"* and *"conversation among classmates tends to be in Japanese"*.

The analysis of all the anonymous student comments included in this study are shown in **Table 1**.

Results showed that from 2013, the total number of comments decreased from 263 in 2013 down to 86 in 2015. The percentage of the total number of comments related to skill improvement in 2013 was 18%. Interestingly, this number dropped to 8% in 2014 but then increased to 11% in 2015 coinciding with the introduction of the flipped methodology. Among all the complaints, those related to technical issues such as poor connectivity due to Wi-Fi problems, made up the large majority of the complaint types every year.

4. Discussion

4.1. Flipped learning: better outcomes and more course dissatisfaction

The increasing use of ICT in the form of flipped learning in the course resulted in better learning outcomes as shown by the results of the performance examination. Also, students seemed to view their educational experience more negatively as the use of ICT in the classroom increased. This study showed that there was a discrepancy between student perception and achievement of learning outcomes in a flipped classroom. Another similar study found that at an American university mathematics course employing a flipped methodology, students also judged their skill acquisition as relatively lower despite relatively higher performance outcomes.[14]

Table 1. Qualitative analysis of student comments from 2013-2015

Year	Total no. of students	No. of students who wrote comments	Total no. of comments	Skill improvement comments (%)	Other comments (%)	Total no. of complaints (%)	Complaints about Wi-Fi (% of Total)
2013	127	125	263	17.9	74.9	5.3	57
2014	135	87	148	8.1	80.4	10.1	67
2015	130	54	86	10.5	68.6	18.6	67

Given this discrepancy, we argue, it is incumbent on institutions to implement measures to deal with issues relating to lower course evaluations after implementing learner-centred methods like flipping the class. For example, if an instructor would normally face consequences for a poor student course evaluation results, considerations could be made if the instructor implemented increased use of ICT for the first time that particular year the course evaluation was carried out. In this investigation, findings emerged indicating that Japanese 1st year medical students performed better despite rating the course as lower and their skill acquisition as lower after flipping the class so a more holistic view of an instructor's performance may be more appropriate.

4.2. Problems with this study and future directions

Among the difficulties encountered which could have had an adverse effect on the data, the three which were deemed to have had the most influence are explained here. First, there was only one evaluator to evaluate the performances of all the students so objectivity cannot be assured with respect to the actual performance data. Second, although a number of factors were considered in making the assumption that the groups are equal for the purposes of this study, it is not possible to be certain that the 3 groups were sufficiently similar. Third, because the free comments were student responses to their entire English course experience during 1st year, it was not always possible to ascertain whether comments were indeed related to the basic history-taking course that this study investigated. This quantitative analysis is not meant to be a definitive identification of the reasons for the declining self-perception of skill acquisition and course quality. It was merely a method to attempt to illuminate possible explanations.

In the future, the development of a more robust evaluation tool which is validated and reliable to evaluate students more objectively with a larger number of evaluators would be substantial progress. Studies involving the use of such an evaluation tool longitudinally by monitoring history-taking skills development progress of a particular group over a number of years would also be a potentially large contribution to the field of medical English education. In that way, flipped learning could be more robustly studied in terms of its effect on oral communication courses for basic medical history-taking skills for medical students in their early years of study. If a standardized evaluation tool could be developed and adopted by various medical schools in Japan, inter-institutional studies could be carried out to help to illuminate the degree of effectiveness of the various educational methodologies employed throughout Japan with varying degrees of ICT usage.

5. Conclusion

This study found that over a 3-year period from 2013-2015, increasing the use of ICT resulted in improved skills in the final year as compared with the previous, more dissatisfaction and more student complaints. It is suggested that for a successful implementation of ICT and flipped methods, measures to mitigate the negative student perceptions which erode the educational experience should be carefully considered. The importance of taking measures such as insuring robust infrastructure for easy access and providing technical support with remedial e-learning systems training should not be underestimated.

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Appendix 1

一般教育授業評価表　2015年(前期・後期・通年)

授業に関する調査・評価表：(学生番号：　　氏名：　　)

授業科目　：＿＿＿＿＿＿＿＿＿＿

授業担当者：＿＿＿＿＿＿＿＿＿＿

■授業に対する自分の学習態度・達成度について

以下の質問について、該当する番号を丸印で囲んでください。

1. 授業にどの程度出席したか。
　⑤100-90%台　④80-70%台　③60-50%台　②40-30%台　①20%台以下
2. 授業に積極的に取り組んだか。
　⑤大いに取り組んだ　④少し積極的に取り組んだ　③普通　②あまり積極的に取り組まなかった　①全く取り組まなかった
3. 授業内容への関心はどの程度高められたか。
　⑤大いに高められた　④少し高められた　③変わらなかった　②少し下がった　①かなり下がった
4. 学習要項に記載された一般教育目標と行動目標はどの程度達成されたか。
　⑤100-90%台　④80-70%台　③60-50%台　②40-30%台　①20%台以下
5. 自分の学習態度・達成度の総合評価はどの程度か。
　⑤非常に良い　④良い　③普通（特に問題はない）　②悪い（少し改善する必要がある）　① 非常に悪い（大幅に改善する必要がある）

以下のⅠ～Ⅲの各項目を、非常に良い:5、良い:4、特に問題はない:3、少し改善する必要がある:2、大幅に改善する必要がある:1、の５段階で評価し、(　) の中に評価段階を記入してください。特に２と１を付けた項目は、内容を具体的に "Ⅲ" の自由記載欄に記述してください。

Ⅰ. 授業について
1. 自ら学ぼうとする意欲を高める内容であったか。　(　)
2. 授業の難易度の設定は適切であったか。　(　)
3. 学習要項に記載された成績評価基準と方法（試験、レポート、口頭発表、出欠等）は適切であったか。　(　)
4. 教育媒体（板書、動画、音声、スライド、教科書、配布資料、等）は適切であったか。　(　)
5. 授業の総合評価はどの程度か。　(　)

Ⅱ. 教師について
1. 教師の話し方、説明の仕方はわかりやいものであったか。　(　)
2. 教師は学生が授業内容を理解できるように工夫をしていたか。　(　)
3. 教師は質問や発言に丁寧に対応していたか。　(　)
4. 教師の教育に対する準備や熱意は十分感じられたか。　(　)
5. 教師の総合評価はどの程度か。　(　)

Ⅲ. その他、授業、教師に関して感じたことを自由に記載してください。

Appendix 2

2015-2016　医学英語アンケート（1年生）（後期後）

ずばり５段階で評価してください。
1. かなり落ちた　2. 落ちた　3. 変わっていない　4. 伸びた　5. かなり伸びた

1）４月からの医学英語の授業をうけて、医療面接をする力はどのように変化したと感じますか？

2）４月からの医学英語の授業をうけて、医学用語の語彙力はどのように変化したと感じますか？

3）４月からの医学英語の授業をうけて、医学英語を聞いて理解する力はどのように変化したと感じますか？

4）４月からの医学英語の授業をうけて、医学英語を読んで理解する力はどのように変化したと感じますか？

5）４月からの医学英語の授業をうけて、医学英語で説明する力はどのように変化したと感じますか？

6）４月からの医学英語の授業をうけて、自分の医学英語力は総合的にどのように変化したと感じますか?

医学英語の授業で「良いところ」「改善した方がいいところ」や講師などへの感想や要望、また今後、自分が英語にどう取り組んでいくかなど自由に書いてください。

ご協力ありがとうございました。

Development and testing of a flipped classroom method for training medical interpreters in a university setting

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There is a growing need in Japanese medical settings for professional interpreters, especially as Tokyo has been selected as the host city of the 2020 Summer Olympics. The goal of this study was to design and test a medical interpreter training program using the flipped classroom method. An intervention program was developed to improve interpreting skills and cross-cultural communication skills. Interpreting skills were evaluated by counting errors, and cross-cultural communication skills were evaluated via scores on a written test. Pre-tests and post-tests were conducted with participants aged 20-22 years (n = 10). Results of the tests showed a significant improvement in interpreting skills in the post-test compared with the pre-test, and the number of errors in interpreting was significantly decreased in the categories of omission and false fluency. The reason for this could be an extensive input of frequently used expressions in the medical settings of the program. The average percentage of correct answers on the written test on cross-cultural communication also increased from 60% (pre-test) to 95% (post-test). Additionally, the video viewing before the post-test could have accounted for the increase. The post-test assessment showed that the training program utilizing the flipped classroom method could be useful in improving the cultural competency and professional skills of medical interpreters, and could thus serve as a powerful educational tool.

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Keywords Flipped classroom, medical interpreter training, Moodle, blended learning

1. Introduction

1.1. Background

There is a growing need in Japanese medical settings for professional interpreters to help overcome language barriers,[1] especially as Tokyo has been selected as the host city of the 2020 Summer Olympics. Gany et al[2] highlighted the importance of professional interpreters and suggested that they were less likely to make clinical errors than ad hoc interpreters. Several training systems have been developed in Japan to meet this need.[3,4] For example, Tokyo University of Foreign Studies planned and implemented a medical interpreter training program in 2010.[5] Although several medical interpretation training programs are in existence, these training programs have not used evaluation methods to determine the effectiveness of the training.

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1.2. The problems of training medical interpreters in Japanese universities

Since the 1990s, a number of training systems for medical interpreters have been implemented, mainly by local government and non-profit organizations. Programs implemented by educational institutions include: lectures and workshops in medical interpreting at Tokyo University of Foreign Studies (established in 2010) and Osaka University (2015), and lectures on medical interpreting at Nagoya University of Foreign Studies (2015). Most of the courses for medical interpreters are conducted as postgraduate programs, or short, continuing education courses for adults with live lectures, workshops, and role-plays.

Several studies have shown that cross-cultural communication skills are indispensable in the field of medical interpretation. Cross and Bloomer[6] examined the communication mechanism used by mental health clinicians to explore how

they modify their communications to reconcile cultural differences and promote self-disclosure. Fifty-three clinicians assembled 7 groups of culturally and linguistically diverse patients and asked them about their perceptions in communicating. Two particular areas of concern emerged from the results: respect and cultural understanding. This study was mainly concerned with clinicians, but the results are partially applicable to medical interpreters.

Norris et al[7] conducted a qualitative study with 4 focus groups consisting of 43 professional medical interpreters using grounded theory, and developed 3 frameworks for understanding high quality, language-discordant communication about end-of-life care: (1) professionalism, including emotional support capability; (2) communication skills and cultural sensitivity; and (3) the role conflict between strict interpretation and acting as a cultural broker. Furthermore, results of the study by Karliner et al[8] indicated that when medical practitioners lacked knowledge of a patient's culture, it hindered their ability to provide quality medical care. These studies indicate that it is important for learners to study cultural competency in medical interpreting, but few courses in universities include this in their curriculum. Furthermore, these training programs are implemented only in classrooms, are not focused on self-directed learning, and have few interactive aspects.

1.3. Flipped classrooms

To encourage self-directed study and interactive discussion in the classroom, the authors of the current study decided to adopt a flipped classroom model. The flipped classroom is a reversal of the traditional teaching model. According to Lage et al,[9] students acquire knowledge outside of class via reading or videos, while class time is reserved for the higher-level work of applying knowledge through interactive activities such as problem-solving and discussion.

There is no set formula for the flipped classroom, as each case of implementation will differ due to differences in class size, teaching style, available technology, and resources. Still, the common theme of flipped classrooms is the focus on active learning, which encourages students to take an active role in their learning while reflecting on the process. Moreover, it emphasizes concept exploration, meaning-making, and demonstration, with greater opportunities for discussion and feedback than typically exist in the traditional teaching model.

1.4. Objectives

The current study consisted of designing and testing an intervention interpreter-training program using the flipped classroom model.

2. Methods

2.1. Development of the program

We designed a training program based on the 6-step approach presented by Kern.[10] The approach consisted of a general needs assessment (step 1), a targeted needs assessment (step 2), goal setting (step 3), educational strategies (step 4), implementation of the intervention (step 5), and evaluation of the intervention (step 6). In practical training for interpreting in-hospital conversation, the participants experienced a typical conversation in a hospital. The participants were asked to attempt to translate doctor-patient speech. If the participant could not, then a model translation was given and then practiced by repetition. A webinar about incompetent versus competent cultural care provided examples regarding customs in specific ethnic groups and the potential for misunderstandings, followed by examples of competent cultural care.

2.2. Recruitment of participants and data collection

The eligibility criteria were as follows: Japanese ethnicity, age > 18 years, International Communication (TOEFL-ITP) score of 500 or above, enrollment in a university interpreter-training course, no previous experience of taking part in medical-interpreting training, and availability to attend all components of the study. Students were given a link to the video material and web-based training material 1 week prior to the commencement of the flipped classroom program. Then, they took a pre-test. After completing the flipped classroom program, the students took a post-test. If participants were unable to take the pre-test, they were excluded from the study.

2.3. Designing the pre-test and post-test

We evaluated participants' interpreting and cross-cultural communication skills using the same test for the pre-test and the post-test (**Table 1**). In this multiple-choice test, participants were asked to assess their reaction to observing a potentially confusing cross-cultural medical situation.

We incentivized participation by providing a special lecture by a conference interpreter after the post-test. In addition, the full texts used in the intervention and control programs were made available after the post-test. All students were asked to interpret sample conversations and their performances were recorded. To evaluate interpreting skills, the interpreting errors identified by Flores et al[11] were used to

score the main measures.

The 5 types of errors were as follows: omission (not interpreting a word/phrase uttered by the speaker), substitution (substituting a word/phrase for a different word/phrase uttered by the speaker), addition (adding a word/phrase to the interpretation that was not uttered by the speaker), editorialization (providing his or her own personal views with the interpretation of a word/phrase uttered by the speaker), and false fluency (using an incorrect word/phrase, or a word/phrase that does not exist in that particular language). These indexes were used because they appeared to be the only measures that could evaluate the quality of medical interpretation in a quantitative manner.

Participants were asked to interpret 37 sentences, and errors were counted. The number of errors counted in the post-test was deducted from that of the pre-test to indicate decreases in error rates. Regarding cultural competency, the knowledge of participants was measured using a written test.

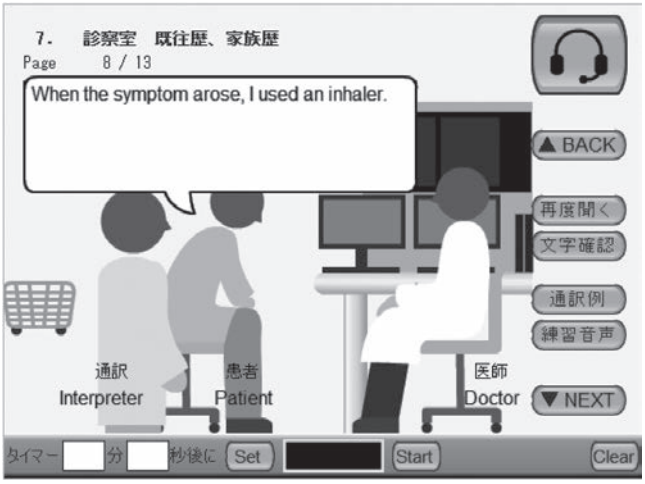

Figure 1. Contents of the web-based training programs

2.4. Data analysis

Group comparisons were not made because the groups were homogenous. For evaluating the interview test, trained, bilingual research staff conducted the assessments. All the analyses were performed using PASW Statistics 18 (SPSS Inc., Chicago, IL, USA), and $P < 0.05$ was considered significant.

Table 1. Contents of the pre-test and post-test

Script for simulated medical interview: Thirty-seven phrases in total (excerpt from the script)		
診察		
Doctor (D)	持ち物はこの籠の中に入れてください。	You can put your belongings in this wire basket.
D	これから診察に移ります。	I would like to examine you now.
Patient (P)	服を全部脱ぐのですか？	Shall I get completely undressed now?
D	上半身のみ脱いでください。	No, just take off your top.
既往歴　家族歴		
Doctor (D)	これまでに健康面で大きな問題がありましたか？	Have you ever had any serious health problems?
Patient (P)	はい。	Yes.
D	それは何の病気でしたか？	What were they?
P	ぜんそくです。	Asthma.
Written test on cultural competency		
医療通訳者の文化仲介：こんな時、医療通訳者としてどのような言動をとりますか？ 【シチュエーション】 あなたは、カンボジア人の女性の入院患者の通訳をすることになりました。医療者が患者に診察のために服を脱ぐように言い、脱いだところ、患者の背中に食器を押し付けたような丸い輪状のあざを見つけました。医療通訳者であるあなたは、とっさに、「虐待を受けているかも知れない」という印象を受けました。このような時、医療通訳者としてどのような言動を取ればよいか、下記の質問に答えてください。		
1)女性に対して、声かけをしますか？下記から１つを選びましょう。 A 「これは虐待ですよね？」と強い口調で真実を聞き出す。 B 「興味深い跡ですね。何のマークですか？」とフラットな口調で尋ねる。 C プライバシーの侵害になるので、何も聞かない。		
2)虐待ならばしかるべき部署に言わなければと思った時、どのような行動を取りますか？ A 「警察に言わなければ」と患者に伝え、すぐに警察に電話をする。 B 警察に言うということは言わずに、すぐに警察に電話をする。 C 「感染をしていないか確認して結果を連絡する」と言い、医療処置のみして警察には言わない。		

3. Results

3.1. Training implementation

The 90-minute program was conducted on May 2, 2016. The detailed program content appears in **Figure 1** and **Table 2**. A week before, homework was given to the students with instructions.

3.2. Participants

Ten of the 11 students enrolled in this course participated in this study. One student was absent from the pre-test and introduction; therefore, we excluded her from the results of the study. The average TOEFL score of the participants was 527, with scores ranging from 497 to 570. One participant did not meet the minimum required TOEFL score of 500; however, as her score of 497 was quite close and her previous school performance was deemed acceptable, the participant was regarded as eligible for participation in the study. Another participant did not have a TOEFL score, but according to their previous school performance, they were also regarded as eligible for participation in the study. The average age of the participants was 21 (SD:0.44), and since the program was conducted in a women's university, the participants were all female.

Table 2. Contents of the program

Contents of the intervention	
Day 1	Pre-test (performance test, written test)
8:50-10:20,	**Instruction**
April 25, 2016	What is a flipped classroom?
	How to use the web-based program
Students are asked to do self-learning for a week.	
Day 2	**Lecture**
8:50-10:20,	Role of medical interpreter as a cross-cultural communicator
May 2, 2016	**Discussion**
	How to engage in effective, cross-cultural communication as a medical interpreter
	Practical Training
	Medical interpreting: role-playing
	Post-test (performance test, written test)

3.3. Results of the pre-test and post-test

The detailed contents of the pre-test and post-test are shown in **Table 1**. **Table 3** shows the results of the interpreting performance test, and **Table 4** indicates changes in the quality of interpretation by the intervention status. Regarding interpreting skills, after participation in the flipped classroom program, error analysis omission (3.20 on average) and false fluency (2.30 on average) were found to be improved (omission: $P < 0.01$、false fluency: $P < 0.01$). **Table 4** shows the results for the written test on intercultural communication. The average percentage of correct answers increased from 60% (pre-test) to 95% (post-test).

4. Discussion

Three main findings emerged from the current study. First, participants in the intervention appeared to show a reduced error rate in omission while interpreting. Participants learned appropriate expressions in the program, so as to convey information without omissions. Flores et al[11] insisted that the most common error type was omission, followed by false fluency, which was partially contradicted by the findings of the current study: in the pre-test, the most common error type was omission, followed by false fluency; however, in the post-test, the most common error type was false fluency, followed by omission. Thus, the intervention program of the current study was effective in reducing omissions. Further, participants were able to reduce false fluency. The reason for this could be the program's extensive input of frequently used expressions in medical settings.

Earlier studies have shown that self-regulation can provide motivation for certain kinds of behavior.[12] The design of a

Table 4. Results of the pre-test and post-test (written test)

Percentage of correct answers	Pre-test (%)	Post-test (%)
Question 1	50	90
Question 2	70	100
Mean (SD)	60 (14)	95 (7)

Table 3. Results of the pre-test and post-test (interpreting performance)

Variables	Pre	Post	(Post) – (Pre)	min	max	p-value
Errors in interpreting: omission	3.40 (1.80)	0.20 (0.40)	3.20	0.00	8.00	< 0.01
Errors in interpreting: substitution	0.80 (0.75)	0.00 (0.00)	0.80	0.00	2.00	0.01
Errors in interpreting: addition	0.00 (0.00)	0.10 (0.30)	–0.10	0.00	1.00	0.34
Errors in interpreting: editorialization	0.00 (0.00)	0.10 (0.30)	–0.10	0.00	1.00	0.34
Errors in interpreting: false fluency	3.10 (0.94)	0.30 (0.64)	2.30	0.00	5.00	< 0.01

Pre/post-test (Unit: number of times for each error)*

* The number of errors counted in the post-test was deducted from that of the pre-test to indicate decreases in error rates (Unit: the number of times for each error).

A lower score is better than a higher score.

Mean (SD)

virtual environment allows the execution of complementary, experimental exercises for students of medical interpreting. Since this system adopts a self-directed learning style that requires self-regulation, it could serve to overcome the restrictions of time and lack of teaching materials commonly faced in the traditional classroom model. Our interactive, e-learning system could have been a positive factor in motivating the participants, as they felt they could exercise control over their own learning.

Our second main finding is that the intervention appeared to increase the mean total scores on the knowledge test. This could have been caused by the video viewing before the post-test. The third finding was a significant improvement in participants' understanding of cross-cultural communication revealed by the post-test.

There are some limitations of this study. First, the sample size (10) was small. Second, the training time (90 minutes) was short. With more time and more participants, more significant results may have emerged. Third, we did not analyze differences between the scores of individuals owing to the small sample size. Despite these limitations, the training program was significantly effective in improving both the knowledge and skills needed for effective medical interpreting.

Our training program is novel in that it has an interactive style of learning. The flipped classroom system used in the study allowed us to provide e-learning materials to the students, giving them remote access to the program, and enabling them to participate in interpretation training without being physically present in the class. Moreover, a web-based, virtual environment empowers students by granting them access to e-learning materials according to their own schedules. The web-based training program for medical interpreters could bridge the gap between medical professionals and patients with limited English proficiency while being amenable to integration into clinical settings.

5. Conclusion

The results of our study suggest that the use of the flipped classroom model could be useful in improving students' knowledge and abilities in the field of medical interpreting. The data showing the impact of the present program may be a useful starting point for future studies toward developing a revised program; however, further research is necessary to determine the most effective type of medical interpreter training program.

Acknowledgements

The authors would like to acknowledge the students at Tsudajuku University who participated in this study.

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Symposium

Working together: Clinicians and English Teachers

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Keywords symposium, cooperation, team-teaching, clinicians and English teachers

Introduction

On July 16th, 2016, the authors participated in a 1-hour panel symposium at the 19th JASMEE Academic Meeting to discuss the issue of how to foster better cooperation between clinicians and English teachers to improve medical English education in our universities. Our panel consisted of four English teachers (Hauk, Hobbs, Davies, Ashida) and one clinician (Shibuya). The panelists were chosen based on their experiences working in situations involving educational collaboration between clinicians and teachers.

1. Presentation of panelists' experiences

The symposium began with short PowerPoint presentations by the panelists outlining how they got started in their respective collaborative efforts and what kinds of cooperative educational activities they are conducting. Each panelist had a very different story to tell.

First, Davies talked about working relationships and making the most out of chance encounters. Davies works in the Foreign Language Research and Education office in Higashi Hiroshima, while the medical faculty is based in Hiroshima City, which is an hour away. However, good relationships within his applied linguistics group, and also between a senior member of the group and the dean of the medical faculty, created the opportunity to teach a medical English course. This was aided by a chance meeting with the dean through getting a car ride from a professor. Davies outlined the resulting 4-day intensive course that he teaches with three other experienced instructors from his group.

Davies noted the difficulties of building up working relationships with the members of the medical faculty because of the geographical distance between the medical faculty and his campus. Although the medical faculty are supportive, the distance has made it challenging to develop the understanding needed both to teach the course and to develop teaching materials. This was partially overcome, however, through teaching an evening class at a local hospital where he was treated for a sports injury. Help and advice from doctors at the hospital were used to supplement information gained from email exchanges with medical faculty members, and from visits to the medical faculty for research purposes during vacations. He also noted the importance of writing articles for his group's journal, which he could pass to senior members of the medical faculty.

Second, Hobbs described a team-teaching class that he has taught for 7 years at Iwate Medical University in cooperation with Professor Tomoyuki Masuda, a pathologist. This is an English-only class taught to small groups of 5–10 1st-year medical students in the skills lab. The students learn three medical procedures through English: performing cardiopulmonary resuscitation (CPR) and using an automated external defibrillator (AED), endotracheal intubation, and measuring blood pressure. Students are taught the procedures in English only and later present what they have learned to an audience of students and teachers. In the presentations they must explain what the procedure is and why it is performed, introduce the equipment used, and demonstrate how to perform the procedure while simultaneously explaining it step-by-step in English.

Hobbs emphasized that one of the keys to the success of this class was that he and the clinician are always working together at the same time in the classroom, and that they each have clearly designated roles—the clinician teaching the medicine and the English teacher teaching the language,

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This is a report on the symposium held at the 19th JASMEE Academic Meeting held at Keio University, Hiyoshi Campus, Yokohama, on July 16, 2016.

with equal emphasis given to each. The class works well because both partners stay within their respective fields of expertise and work to support each other.

In subsequent years, students who have taken this course are invited back to join a voluntary extra-curricular class, run by the same two teachers, in which they learn how to give oral case presentations in English. This has also been a great success, and continues to grow. To date, more than 50 students have been regular participants in one or more of these seminar groups.

Next, Shibuya gave a short presentation about his activities to promote medical English education at Toho University. Shibuya's situation is unique among the panelists in that he does not teach medical English classes himself but takes a supervisory role in getting clinicians, English teachers, and administrative staff to work together. Shibuya described how he established the Medical English Steering Committee (医学英語運営委員会) in 2013 to provide direction to medical English education at Toho University and to administer the English OSCE (Objective Structured Clinical Examination) practical examination of medical history taking given to all 4th-year students. Shibuya explained that his goals are to increase the students' medical knowledge through English and to make students attain a practical level of English for communication.

One additional and very important goal is to make clinicians at the university and hospital more interested in medical English education. According to Shibuya, English education is just as important for clinicians as it is for students. Therefore, he uses his position in the university to involve clinicians in medical English classes by assigning them to work as assessors on the 4th-year medical history-taking examination and by asking them to give short lectures on clinical topics in English in the 4th-year medical English classes.

Next, Hauk followed up on Shibuya's presentation by outlining both his own activities working with clinicians to gain medical knowledge for teaching medical English classes, and his more recent efforts in carrying out team-teaching classes in the 4th-year program. He described how he and the clinicians who had been assigned to give English lectures worked together to create a model for the new collaborative classes.

Since the lecturing clinician changes with each class, it is important to have a clear template so that classes are consistent and fulfill specified educational goals. Even with such a template in place, each class still required several meetings and lengthy discussions between Hauk and the respective clinicians in order to plan the lesson content and prepare materials, and to organize the participation of several part-time English teachers who assisted with the lectures.

Finally, Ashida reported on her experience with three-way collaborations between clinicians, English teachers, and English-speaking simulated patients (ESSPs), which she has been developing since 2012. Her goal was to give students the opportunity to use English to take a patient history in an authentic environment, and then to give case presentations and discuss their differential diagnoses in English.

Ashida described how the first ten scenarios used for these OSCE-style examinations were made in collaboration with a clinician from Tokyo Medical University, where the program first began. The clinician involved worked on the scenarios from the viewpoint of the students' medical knowledge, while Ashida adapted the contents to the students' English level. She also drew upon her background in the humanities to provide a human element to the scenarios—adding the effects of the disorder on the patient and family and also adding pertinent cultural elements.

In 2014, Ashida introduced this program at The Jikei University for 5th year students going abroad for their electives. Residents and young clinicians fluent in English at The Jikei Hospital are cooperating in this program and write the history-taking scenarios based on their real experiences. Through this program, the cooperating clinicians have also better realized the importance of English.

In addition to working with clinicians at her university, Ashida also takes her English OSCE program to other universities to help them achieve their program goals. To do this, she must collaborate with clinicians at these other universities to rework the OSCE scenarios and to establish the educational objectives. Ashida spends a lot of time training the ESSPs to give effective feedback to the students.

She also engages in extensive debriefing sessions with clinicians, English teachers, and ESSPs to discuss student performance and to further develop the program. These collaborations have allowed the students who participate in these programs to experience as close as possible to an authentic encounter with an English-speaking patient. Ashida concluded that her goal is to increase the number of clinicians participating in medical English education.

2. Discussion of issues

After each panelist presented on their individual experiences, the symposium turned to a panel discussion of the various issues involved, with audience participation encouraged.

2.1. Who is best suited to initiate cooperative educational efforts?

One important issue discussed was that of who is best suited to initiate cooperative educational efforts, clinicians or English teachers. In most cases, the initiative for the collaboration came from clinicians who were enthusiastic about medical English education and wanted to recruit English teachers to create a medical English course.

Hauk mentioned that after the medical English program started at Toho University in 2011, he often initiated contact with clinicians to ask their opinions about what topics and vocabulary they thought would be most useful to cover in the classes. He also consulted clinicians to expand his own medical knowledge. For the most part, the clinicians that he contacted were quite happy to help and lend their knowledge, and some accepted his invitation to observe his classes. However, this collaboration was rather minor and mainly involved preparing materials for the classes. It was not until Toho University created its medical English steering committee that real collaboration between English teachers and clinicians occurred. Therefore, the conclusion was that while it is possible for English teachers to initiate collaboration with clinicians, it seems to be much easier and more effective if the initiative for cooperation comes from the clinicians.

Hobbs added that the percentage of English teachers interested in getting involved in such collaboration is probably much higher than the percentage of clinicians, hence a clinician taking the initiative is likely to find it relatively easy to find an English teacher to work with.

2.2. Who should be in charge?

A related issue is that of who should be in charge. Hobbs stated that it is important to clearly define the respective roles and duties of the clinician and language teacher. Roles could be established as leader and follower, or as joint leaders with separate areas of responsibility, but whatever is decided must be clear and understood by both parties to avoid leadership conflicts. While no conclusions were reached about the ideal situation, it was generally agreed that a clear understanding of roles is essential for successful collaboration.

2.3. Why is it difficult to establish cooperative efforts?

The symposium also briefly covered some of the problems involved in establishing cooperative efforts between clinicians and teachers. One such problem is the reluctance of many clinicians to involve themselves in medical English education. Some of this reluctance can be put down to the time and energy involved in organizing a collaborative English class. For the English teacher, creating and running English classes is part of the job description, but for the cooperating clinician such classes are quite separate from their regular duties. Clinicians are already very busy, and it is a lot of work to add English classes on top of what they already do. Even when English teachers decide to create English classes outside of their regular duties, they still probably have more time available for such endeavors than clinicians do.

2.4. How can we maintain continuity of collaboration?

Several of the panelists mentioned that their collaborations with clinicians were based on a personal relationship with a particular clinician or clinicians. Oftentimes, the collaboration between teacher and clinician starts because individual clinicians who are enthusiastic about English want their students to learn medical English, so they seek out English teachers to help establish a class. Having a close personal relationship is very advantageous for creating a productive learning environment, but it also gives rise to the issue of what happens when one of the members of the team retires or is no longer available.

Hobbs mentioned that his team-teaching class is very successful as a two-man operation, but wondered if he would be able to continue it after his clinician colleague retires a few years from now. The case of Toho University seems to offer a possible solution to this problem by turning collaboration between clinicians and English teachers into something that is built into the curriculum. The Medical English Steering Committee was established at the order of the dean, with Shibuya as its first chair, as a way to institutionalize cooperation between clinicians and English teachers. The committee is made up of English faculty, clinicians, and office staff, who together decide the direction of medical English education.

This also resolves the issue of who takes the leadership role in cooperative activities—the committee is in charge. While this may make personal relationships less likely, it prevents collaboration being dependent on such personal relationships and difficult to continue when one of the colleagues is no longer there. Some members of the medical English education committee have changed, but the directive of the committee remains to ensure collaboration between clinicians and teachers. Of course, this type of situation can only exist if the management of the university decides that medical English education is a priority. Nonetheless, the committee set up by Toho University does provide one model for how better cooperation can be provided.

3. Unfinished topics

The hour allotted to the symposium was far too short for the panelists to discuss all of the relevant issues related to promoting better cooperation in medical English education. One key issue that was touched on only briefly was what form cooperation between clinicians and English teachers can take. The experiences of the panelists ranged from working together to create teaching materials to fully collaborative team-teaching classes, and several points in between. In some cases the clinician and the English teacher take care of different parts of the class, while in others they are working together at the same time. This is an area that deserves further exploration in the future.

4. Conclusion

The five panelists have all had very varied and unique experiences in collaborative projects for medical English education, yet we were able to come to some similar conclusions.

First, collaborative efforts generally work better if the impetus comes from clinicians, since clinicians or the school administration usually have more power to implement decisions and see that things get done. Several panelists mentioned the necessity of getting more clinicians to realize the value of English and getting them involved in medical English classes.

Also, it was agreed that it is important to establish who should be in charge of any joint classes, so as to avoid leadership conflicts. In addition, the issue of how to keep up cooperative efforts that are based on personal relationships was explored. It should probably be mentioned that the idea of whether or not cooperation between clinicians and English teachers was worthwhile was never really questioned. The fact that all of the panelists are already involved in collaborative efforts meant that we were already in agreement on that point.

The discussion concluded with the observation that, although the symposium had been limited to the issue of collaboration between clinicians and English teachers, the same issues apply to collaboration between English teachers and the many other kinds of healthcare specialists.

JASMEE now and in the future

A novel textbook based on JASMEE's medical English education guidelines

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To meet the growing need for globalization in the medical field, and to promote high-quality medical care, the World Federation for Medical Education (WFME) issued a document entitled "WFME Global Standards for Quality Improvement, Basic Medical Education" in 2003. A revised version was issued in 2012, and the Japan Society for Medical Education produced a Japanese translation, with various additional Japanese specifications added as annotations; this document was published under the title "Global Standards for Quality Improvement, Basic Medical Education: Japanese Specifications" in 2013. As the domestic accreditation procedures for medical education programs laid down by the Japan Accreditation Council for Medical Education are based on the these standards, all Japanese medical schools are obliged to meet them in their medical education programs.

In response to these moves, The Japan Society for Medical English Education (JASMEE) proposed a set of guidelines for medical English education in Japan, "Medical English education guidelines corresponding to the Global Standards for Medical Education".[1] The aim of these guidelines is to help Japanese medical students achieve a level of proficiency in medical English appropriate to the global standards of medical education. However, there has been little consensus on what materials are appropriate for achieving "effective" medical education, and no textbooks based on the medical English education guidelines had been published. To address these problems, JASMEE published a novel textbook, *English for Medical Purposes, Step 1*, in July 2016.

JASMEE's guidelines specify the competencies in medical English (referred to as "minimum requirements") that all students should acquire before graduating from medical schools, and the aim of this textbook is to ensure that students achieve these minimum requirements. The main features of the textbook are listed below.

1. Easy to incorporate into Japanese university courses

The textbook has 12 chapters, each of which is designed to be covered in one 90-minute lesson so that the book can be completed in one university semester. Every chapter includes exercises that require answers in English, which allows instructors to assess the comprehension level of students.

2. High quality

Each chapter deals with a common symptom and was written by a medical doctor specialized in the area together with a specialist in English education. All authors are JASMEE Council or Executive Board members, and all manuscripts were reviewed by the members of the Textbook-editing Committee, which is made up of Board members.

3. Provides multi-skill training

The JASMEE guidelines divide English language proficiency into four skill areas: vocabulary, reading, writing, and communication. Each chapter starts with a medical interview (providing training in communication skills, i.e. listening and speaking). This is followed by a word study section (vocabu-

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lary), and a reading comprehension section. Each chapter concludes with a section designed to provide training in writing, and to encourage self-directed learning.

4. Easily understood contents

So far, only Step 1 has been published, but Step 2 will be published next year. Step 1 is suitable for first- and second-year medical students, and for students at nursing schools or other co-medical schools. Step 2 will assume a higher level of medical knowledge and will be suitable for medical students in the higher years, and even for medical doctors. The topics covered are common symptoms (Step 1) and diseases (Step 2) listed in the Model Core Curriculums for Medical Education in Japan and will, therefore, be familiar to users.

5. Enhances motivation

Motivating students by catering to their needs is an important consideration in compiling instructional materials,[2] and we have recognized this by including anatomical and physiological figures in each chapter, not only to aid understanding of the topic but also to enhance motivation. For the same purpose, we have also included short columns dealing with clinical medicine, e.g., the mechanisms of disease or injury, clinical findings, and treatments.

As Kennedy said at the 5th annual meeting of JASMEE, "a textbook must have interesting activities for the students, but those activities must support the teacher's objectives".[3] We hope that the JASMEE textbooks will meet these requirements, and that they will be widely used throughout Japan to support and develop medical English education.

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JASMEE now and in the future
日本医学英語検定試験1級の現状

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日本医学英語教育学会理事長の伊達　勲です。本学会の最も重要な活動の一つが，日本医学英語検定試験(医英検)の実施ですが，2015年に1級を開始することができ，これで1級から4級までがすべて揃いました。本日はこれまでの医英検の実施状況と1級試験の現状について，お話し申し上げます。

1. これまでの実施状況

医英検はまず3級，4級試験から2008年に開始されました(**スライド1**)。そして，2012年には2級が，2015年に1級が開始されたわけでございます。これまでに医英検を受験いただいた方は，全国で約3000名に達しています。特にこの数年は受験者数が劇的に増加しております。会員の皆様のご協力に深謝申し上げます。

2. 難易度と受験資格

スライド2には，2級と1級のレベルについて記載しています。2級は，英語での論文執筆，学会発表，討論を行えるレベルとし，1級は医学英語教育を行えるレベルと定義しています。2級受験者を指導できるレベルが1級，とお考えいただくとわかりやすいかと思います。

スライド3に1級の受験資格を書いています。1級合格者には本学会で医学英語教育活動をしていただく必要がありますので，1級受験者は本学会会員であることを条件とします。また，1級を受験するためには，2級に合格していることが条件となります。2級を受験するためには3級に合格していることが条件となりますので，3級，2級，を受験し，合格した方が1級を受験できる仕組みです。1

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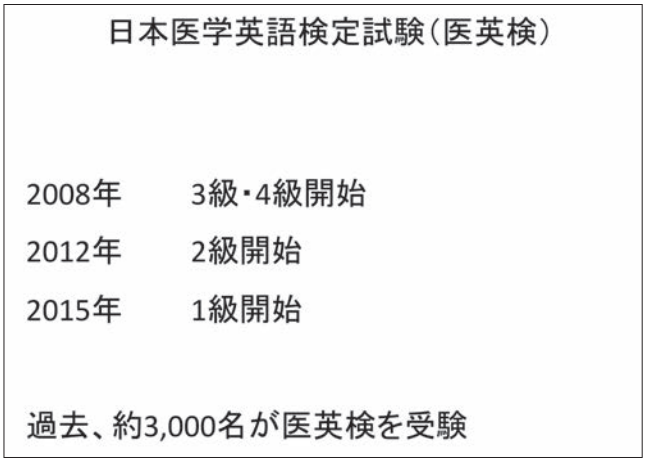
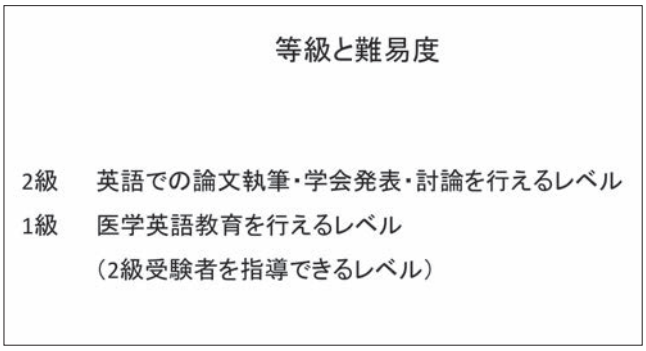
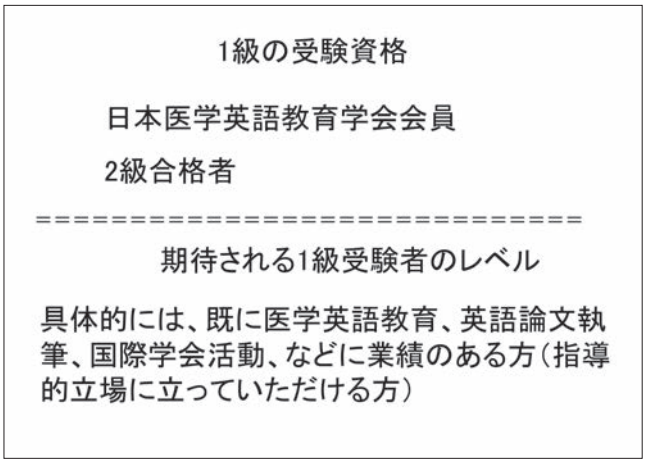
本稿は第19回日本医学英語教育学会学術集会（2016年7月16・17日，慶應義塾大学日吉キャンパス）における活動報告（JASMEE now & in the future）として口頭発表した内容を元に文章化したものである。



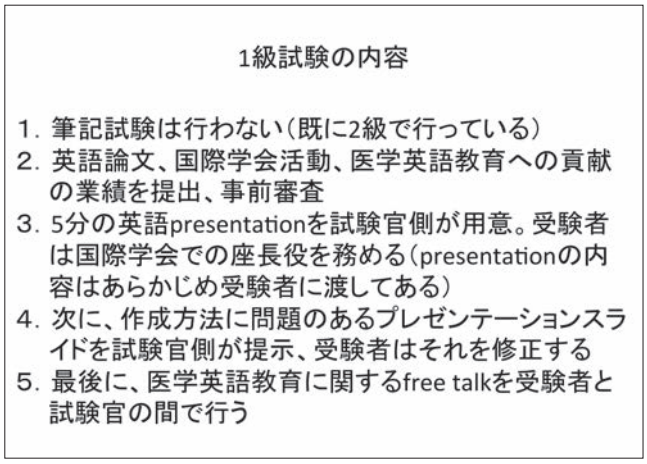
スライド1　これまでの実施状況



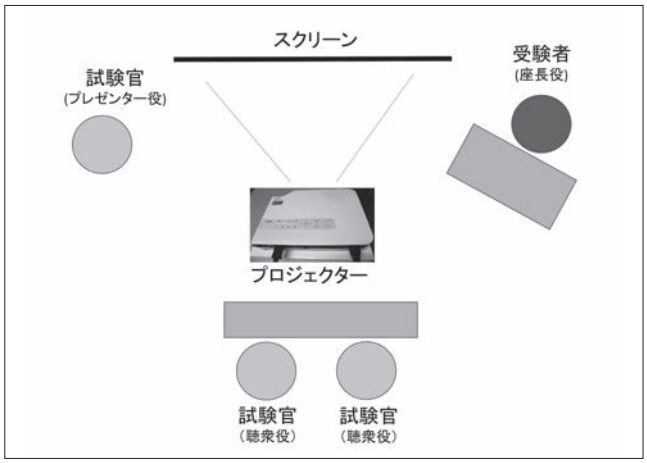
スライド2　等級と難易度



スライド3　1級の受験資格と期待されるレベル



スライド4　1級試験の内容



スライド5　1級試験の会場イメージ

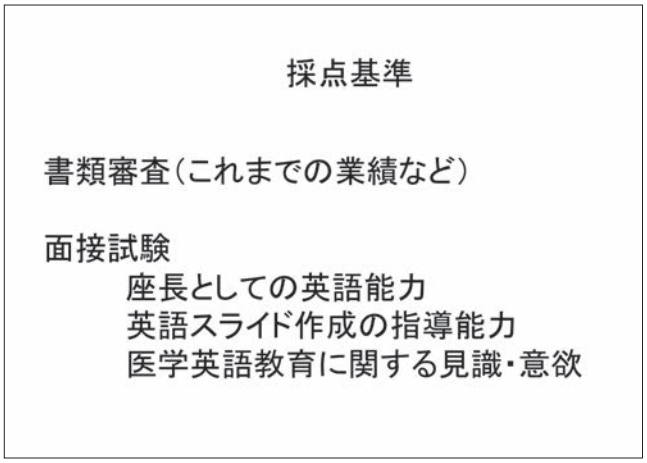
級の試験では，ご本人のこれまでの医学英語あるいは医学英語教育に関する実績と，医学英語を指導・教育できるかどうか，を主に審査いたしますので，ペーパーテストやプレゼンテーション能力はそれまでの3級，2級でチェックし，合格した方が1級を受験する仕組みにしています。

スライド3の下半分には，期待される1級受験者のレベルについて，もう少し具体的に記載しました。その方のこれまでの実績・業績を重要視しています。1級に合格した方には本学会で活動し，医学英語教育に貢献していただく必要がありますので，これは当然のことといえます。2級までは英語の能力自体を一番重要視して判定いたしますが，1級は教育・指導，という面からの能力を重要視して判定します。

3. 1級試験の内容

1級試験をどのように行うかについて**スライド4**にお示しします。

1級試験では筆記試験は行いません。それは2級試験で既に筆記試験を行っているからです。受験に際して，英語論文，国際学会活動，医学英語教育へのそれまでの貢献について，業績を提出していただきそれを事前審査いたします。



スライド6　採点基準

受験者の国際学会での座長能力を見るために5分の英語presentationを試験官の方で用意します。受験者は座長役を務めます。なお，presentationのスライドはあらかじめ受験者にお送りしますので，座長として予習ができるようにしてあります。試験官は3名ですが，1名がプレゼンター役をし，2名は学会場での聴衆役を行います。その様子は，**スライド5**に示します。国際学会で座長をしているといろいろなことが起こりえます。その対応能力も審査の対象となります。

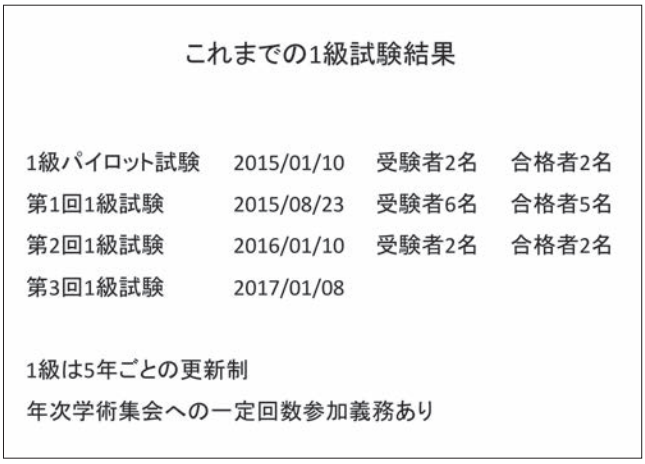
その次に，スライド数枚を用いて受験者の「スライド修正能力」を審査します。意図的に問題のあるスライドを提示しますので，どのように修正すると良いスライドになるかを指摘してもらいます。医学英語教育に携わる者にとって，若手のプレゼンテーションスライドを適切に修正し，よいプレゼンテーションを行うよう指導することは非常に重要な能力であり，それを審査いたします。

最後に15分間のfree talkを英語で行います。医学英語教育に関するトピックが中心となることはいうまでもありません。

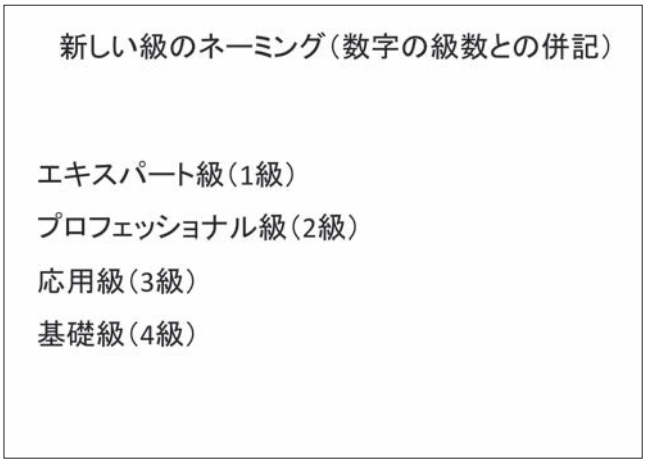
4. 採点基準

何を採点基準とするかについて，箇条書きにしました（**スライド6**）。

個々の点数は，今後変わる可能性があり記載しませんが，まずは書類審査でこれまでの医学英語に関する業績を採点，ついで30分の面接試験で，座長としての英語能力，英語スライド作成の指導能力，医学英語教育に関する見識・意欲について採点をいたします。



スライド7　これまでの1級試験結果



スライド8　新しい級のネーミング（数字と級数との併記）

5. 1級の受験者数と合格者数

これまでの1級試験の受験者数と合格者数を**スライド7**に示しました。合格者は，本学会の会員として，年1回の学術集会に参加いただき，医学英語教育活動に貢献くださることを期待しています。1級は更新制になっており，5年ごとに一定条件を満たした方を1級合格者として更新いたします。

6. 新しい級のネーミング

これまで医英検では級のネーミングとして，1級～4級，という数字での名称を用いてきました。どのようなレベルかをわかりやすくするため，今後は**スライド8**のネーミングとし，1級～4級の表記についても併記することにいたしました。エキスパート級(1級)，プロフェッショナル級(2級)，応用級(3級)，基礎級(4級)という名称は数字だけの名称に比べてイメージがしやすく，この数年劇的に受験者が増えている医英検をさらに普及させるための広報活動もやりやすくなると期待されます。

会員の皆様には，医英検のさらなる普及にご協力くださいますようお願いして，医英検1級の現状報告を終わります。

ご静聴，ありがとうございました。

付記

日本医学英語教育学会では，2016年8月以降，日本医学英語検定試験の各級の名称を下記のように変更(併記)したが，本稿では発表時の表記のまま記載している。

旧　→　新

1級　→　エキスパート級(1級)
　　Expert level (Level 1)

2級　→　プロフェッショナル級(2級)
　　Professional level (Level 2)

3級　→　応用級(3級)
　　Advanced level (Level 3)

4級　→　基礎級(4級)
　　Basic level (Level 4)

JASMEE now and in the future

日本医学英語検定試験2級の実施状況：「スピーキング能力」と「やりとり能力」の向上に向けて

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日本医学英語検定試験(医英検)は日本の医療・医学の国際化を普遍的に推進することを目的として日本医学英語教育学会が主催する医学・医療に特化した英語検定試験である。医学・医療の現場で必要とされる実践的な英語運用能力(医学英語運用能力)—(1)医学・看護・医療技術の書籍・文献を英文で読む，(2)医学・看護・医療技術等に関する情報を英語で聞き/話し・伝える，(3)医学・看護・医療技術等に関する情報を英文で書き・表現する—を総合的に評価している。試験は難易度に応じ次の４つの等級からなる。(1)４級 (Level 4): 基礎的な医学英語運用能力を有するレベル，(2)3級 (Level 3): 英語で医療に従事できるレベル，(3)2級 (Level 2): 英語での論文執筆・学会発表・討論を行えるレベル，(4)1級 (Level 1): 医学英語教育を行え，2級受験者を指導できるレベル，の４等級 (Level) である。2級は第5回まで実施されおり，本稿ではこれまでの試験実施状況について報告し，口頭試験の学習，指導について若干の考察を行った。

1. 試験の実施状況

第6回(2017年)から試験内容および実施要項が一部改定されるので，これを含めて記述する。

1.1. 2級受験資格と医学英語運用能力レベル

日本医学英語検定試験3級取得者に受験資格がある。英語での論文執筆，学会発表，討論が行えるレベルが要求されている。

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本稿は第19回日本医学英語教育学会学術集会（2016年7月16・17日，慶應義塾大学日吉キャンパス）における活動報告（JASMEE now & in the future）として口頭発表した内容を元に文章化したものである。

1.2. 事前提出書類

事前に事務局に送付する書類は以下の通りである。①事務局で用意した受験申請書，②英文履歴書，③英文業績リスト(1. 英語での論文発表，2. 英語での学会発表，3. その他 英語・医学英語の研究や教育における実績や業績)，④口頭発表の英文抄録(300 words以内)，⑤英文発表原稿，⑥スライド原稿(PowerPoint，KeyNote等)を提出する。

1.3. 試験内容

①筆記試験(筆記2問と小論文・エッセーで80分)および②口頭試験(英語プレゼンテーションで10分，質疑応答とフリートークで15分)で行われる。筆記試験では英語の論文執筆に準じた自由筆記問題に加えて，2017年からは小論文・エッセー作文が出題される。解答にあたっては自分のPCで作成して提出する。辞書アプリケーション等の使用，インターネッへの接続は許可されていない。口頭試験の英語プレゼンテーションでは事前に用意した原稿を読み上げることはできない。PowerPointやKeynoteなどプレゼンテーションソフトの「発表者ツール」機能は使用できない。

2. 試験評価法

2.1. 筆記試験

筆記試験は3名の試験官で2項目について5段階評価を行う。
①論旨・構成 (Logic and Structure)
②英語力 (English ability, Grammar, Spellings)

2.2. 口頭試験

口頭試験は3名の試験官で5項目について5段階評価を行う。
①論旨・構成 (Logic and Structure)
②英語力(文法・構文力)：Pronunciation, Grammar, Rhythm など
③発表技法(マナー)：Presentation manner, Passion など
④発表技法(スライド)：文字，略語，図，配置，行数，フォント，個人情報保護など
⑤質疑応答

第6回(2017年)より採点基準が変更され，質疑応答の配点に重きが置かれる。

3. 試験結果

第1回から第8回までの3級合格者は579名である。このうち2級受験者は37名(6.4%)であり，その合格者数は21名，合格率56.8%であった。筆記試験が合格レベルに達っしていても口頭試験で不合格者となる受験者が少なくなかった。

4. 考察

4.1. 2級の口頭試験

日本医学英語検定試験2級受験資格は3級試験に合格した者に与えられる。したがって，「読む」「聞く」医学英語運用能力が「英語で医療に従事できるレベル」に達しているとみなされた者が受験する。筆記試験部門で，図表を含む医学論文を「読んで」かつ「理解」して，論文の結論を「作文する能力」「書く」能力を評価しているが，その運用能力は備わっている者が多い。一方，筆記試験は合格レベルに達しているが，口頭試験(口頭発表，質疑応答，フリートーク)で合格レベルに達することができずに不合格になる傾向が示されている。また，スライドプレゼンテーションではうまく発表できても，試験官との質疑応答，フリートークでは「やりとり・interaction」がうまくできない例も少なくない。3級試験の成績を見てみると，筆記試験で「読む」能力が十分でも，リスニング能力は乏しい例が多い。

4.2. 英語教育の5技能

英語教育では4技能 (4 skills) の学習・指導が提言されている。すなわち，受容能力としての「聞く」「読む」，発信能力としての「話す」「書く」の4技能である。欧州評議会 (Council of Europe) では「話す」は「口頭発表 oral production」と「やりとり interaction」に分けられており，4技能にこれを加え5技能 (5 skills) として**表1**に示した。

「読む」「書く」タスクは時間的余裕があり，自分のペースで辞書を使用でき，脳内でoffline的に言語処理がなされる。一方，「聞く」「話す」「やりとり」は脳内で即座にonline的に言語処理をする必要がある。母語話者は長期記憶内のmental lexicon(脳内データベース)内の適切な語彙，センテンスを高速処理で検索しながら理解し発語(150語/分)したり，書いたりするといわれている。[1]

欧州評議会は2002年1月に決議としてヨーロッパ言語共通参照枠 (CEFR; Common European Framework of Reference for Languages [セファール]) を利用することを公式に推奨した。欧州評議会はヨーロッパで外国語を学ぶ人の到達レベルを示す指標を示しており，EU圏内の外国語学習のレベル判定基準に採用されている。近年はヨーロッパ以外にも広がっており，日本でもNHK英語講座がレベル分けの基準としてCEFRを採用している。[2]

CEFRでは各技能にListening/Reading/Spoken Interaction/Spoken Production/Writingの5技能の英語を使って何ができるかという形での言語力を表す「CAN DOリスト」が整備されており，文部科学省も新しい言語到達指標としてCAN DOリストの利用を検討し，CEFR-Jを参考資料として用いている。[3] 日本語版CEFR-Jの開発が実際に行われ

Skills	1	2	3	4	5
4 skills	Reading	Writing	Listening	Speaking	
5 skills				Oral production	Interaction /Communication
input or output	receptive	productive	receptive	productive	receptive +productive
processing	offline		online		
difficulty of acquisition	lower	moderate	higher	higher	highest
EPEMP level	level 3				
	level 2				

表1. Five skills in learning English

Language can be processed offline in the brain for reading and writing, and online for listening and speaking. One can use a dictionary at one's own pace offline to read or write words, phrases, and sentences. Instantaneous processing of language is required online for listening and speaking. Reading and writing are not particularly difficult to learn or teach, but listening and speaking are difficult.

processing: language processing in the brain

EPEMP: Examination of Proficiency in English for Medical Purposes

たのは2008～2011年であり，開発に先立ち，まず日本人英語学習者のCEFRレベルを推定したところ，大学生までの日本人学習者のおおよそ8割程度がAレベル，2割程度がBレベル（日常生活での身近なことがらについて，簡単なやりとりができるレベル）に留まっており，Cレベル（ほぼすべての話題を容易に理解し，その内容を論理的に再構成して，ごく細かいニュアンスまで表現できるレベル）はほとんどいないということがわかっている。

2014年のTOEFL iBT「スピーキング」スコアランキングにおける，日本の順位はアジア31カ国中31位であり，日本は，非英語圏の国々が多くあるアジアのなかで，最も英語を話せない国であるというデータが出ている。[4] スピーキングの得点が最下位であるというだけでなく，日本人の得意なリーディング・ライティングを加味した総合スコアでみても，日本は東ティモール，タジキスタン，ラオスに続いて下から4番目という結果である。本試験受験者が英語を必死で勉強したのはいつだろうか―大学受験のとき，単位のかかった英語試験があったとき，TOEIC, TOEFL, USMLEを受けた時など直前勉強だったのではないか。そのなかで，スピーキングの試験を受けた経験は何回あるであろうか。あるいは，必死に英語を話す練習をした経験は，何回あるだろうか。英語圏の国への留学では，留学直後には苦労するが，留学を終えた帰国時にはある程度スピーキング，やりとりができるようになり妙な自信が生まれるものである。しかし，その後自律的な学習を継続しないかぎり，数年後にはその英語運用能力は錆びついてしまうことが少なくない。

読む，聞く，書く，話すは独立したタスクではない。われわれは文書を「読んでいる」ときでも大脳の運動野が活動している。[5] 音読時はもちろん運動野が活動しているが，黙読時にも運動野に活動がみられるということは，センテンスを読んでいるときに実は脳の中で音には出さないがブツブツとつぶやいていることになる。聞いたセンテンスを時間差なく即座に声に出して発語する「シャドーイング」では，この脳内メカニズムが発揮される。黙読能力は音読能力，発語能力にも影響する。英語の多読，多聴，多書，多話を並行的・持続的に実践するのが英語・医学英語学習の基本であり，統合的な指導とその工夫が望まれる。

4.3. 英語プレゼンテーションの2つの要素：プレゼン力」と「英語力」

「英語プレゼンに必要な力」は①「プレゼン力」と②「英語力」の2つである。[6] **図1**に佐藤によるシェーマをを改変してこれを示した。①「プレゼン力」はわかりやすいスライド作成，わかりやすい話の進め方，質疑応答のテクニックなどである。②「英語力」は英語ロジック力，スピーキング力，リスニング力，語彙力などである。筆者は臨床研修医，若手医師の英語プレゼンテーションの教育に携わってきたが，各担当科の指導者は自分の専門領域には精通しており経験も豊富なのでプレゼン力は指導しやすい。若手医師もプレゼンの機会を重ねると見違えるほどの上達をみることも多い。ラーニングカーブも早い。両者にとって努力しやすく指導も習得も効果が上がるので力を入れやすい。これに対して「英語力」に関しては，指導も難しく，習得

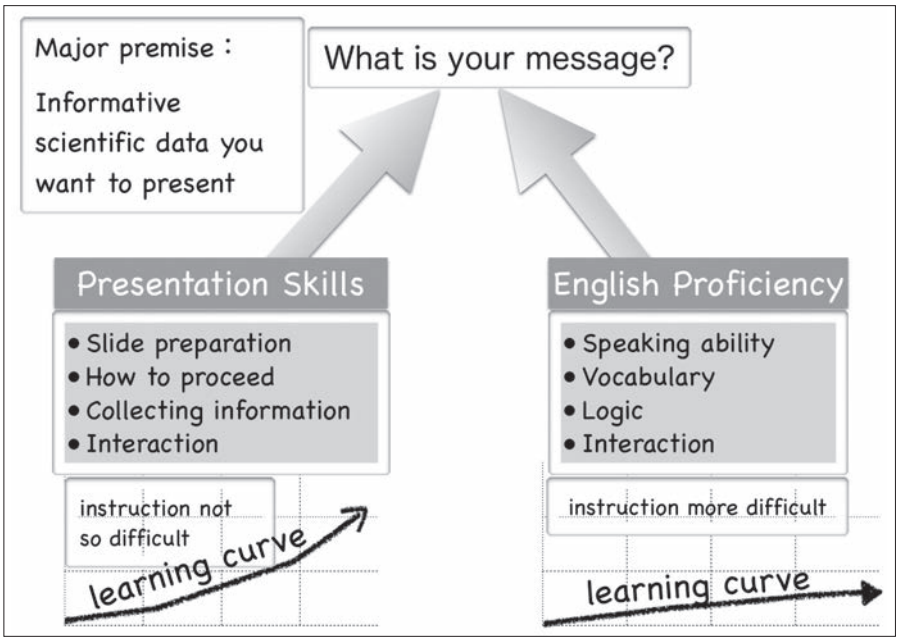

図1. Two essential skills in presenting medical papers in English

Two essential skills in presenting medical papers in English: (1) presentation skills and (2) English proficiency. One can make progress in presentation skills under the guidance of a good instructor. On the other hand, the learning curve for English proficiency in medical presentation is slow. Learners will find attaining proficiency in English challenging in comparison with attaining presentation skills.

のラーニングカーブがきわめて遅い(**図1**)。

日本の英語教育において，スピーキングの練習をする機会は現時点ではきわめて少ない，むしろほとんどないと言ってよい。むしろ，単語暗記，長文読解，訳読ばかりに力が注がれているので，単語の意味を日本語で答えたり，単語を並べ替えて文にする能力はどんどん高くなっていく。しかし実際のところ，大多数の者は卒業するとその能力を使うことは少ない。これが，日本人のスピーキング能力向上を妨げている原因の一つと言える。医学英語教育に関しても然りである。卒後教育でも，国際学会の発表の事前の予演会では内容 (context) に重点が置かれるが，日本人指導者がスピーキングの発信技能 (skill) を指導することは難しい。いわゆる医局での抄読会，輪読会ではもっぱら訳読が行われ，音読，シャドーイングが行われることはまずない。

一方的に「話す」という意味においてはスライドプレゼンテーションは英語スピーチコンテストと同じである。スピーチコンテストでは見事な発表をしても，質疑応答ではしどろもどろになる場合がある。英語力は5技能から成り立っており，話す」能力と「やりとり」をする能力は別であるとされる。[2,7] 日本人が母語である日本語での講演を聞いている場合は，内容を理解すると同時に質問したり，コメントを生み出すことは容易である。一方英語となると，かなり英語に熟達した日本人でも英語で講演を聞いて，質問やコメントをする余裕がまったくなくなってしまうことはよくある現象である。第2言語である英語を使用していると，自分自身の思考能力がすべて凍結されストップしてまうという経験はないだろうか。これは「外国語副作用」とよばれており，第2言語のリスニングに多くの認知資源を取られ，聞いて理解した内容を素材にして思考するための十分な記憶スペースが脳内になくなっているためであると考えられる。[1,8]

「やりとり (interaction)」技能の指導・習得は相手がいないとできない。国際学会で場数を踏めば自分の専門領域での「やりとり」はうまくなるはずであるが，ラーニングカーブは遅い。質疑応答の能力がつくまでに国際学会での発表機会頻度がないのが通常である。海外からの留学生が多い環境下では毎日のカンファレンス，講義，回診などの日常業務の中で自ずと「やりとり」の訓練ができる。ネイティブの講師を招いてワークショップを行う方法もある。しかし，これらは学習者サイドの問題ではなく指導者と周囲のサポートの問題であるとの指摘もある。

佐藤は医学英語プレゼンについて次のように述べている。[6]「よい英語プレゼンとは上手な英語で発表することであろうか。これは日本人が最も勘違いするポイントであり，英語プレゼンコンプレックスの源でもある。英語(英会話)が上手な人なら，世界に何億人もいる。われわれはその one of them になることを求めているのではない。英会話力≠英語プレゼン力だと認識しよう。英語プレゼンをこなすことではなく，英語のプレゼンを道具として使い，あなたのイイタイコト，熱いメッセージを最大限効果的に相手に伝えることなのだ」。まさに至言である。

4.4. 今後の課題

最後に，医学英語教育において「リスニング」と「スピーキング」そして「やりとり (interaction)」能力の向上にはどのような指導法が効率的で有効であろうか。日本医学英語教育学会学術集会においてさまざまな教育法の発表がなされている。多忙な日常業務のなかで，隙間時間を利用していかに効率よく，かつ科学的に医学英語習得を実践するかは，学習者と指導者，双方の feedback，創意工夫が必須である。

5. 結論

日本医学英語検定試験2級の実施状況を報告し，口頭試験の準備に関して，学習・指導という観点から若干の考察を加え今後の課題についても述べた。口頭試験の受験にあたっては，入念な準備と何度もリハーサルを行ったうえで臨んでいただきたい。基礎,臨床の研究成果を論文として発信し，学会で発表，討議するスキルを磨くことは，極めて重要であり，日本医学英語検定試験2級試験をその一助として積極的に活用していただきたい。

付記

日本医学英語教育学会では，2016年8月以降，日本医学英語検定試験の各級の名称を下記のように変更(併記)したが，本稿では発表時の表記のまま記載している。

旧　→　新
1級　→　エキスパート級(1級)
　　Expert level (Level 1)
2級　→　プロフェッショナル級(2級)
　　Professional level (Level 2)
3級　→　応用級(3級)
　　Advanced level (Level 3)
4級　→　基礎級(4級)
　　Basic level (Level 4)

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JASMEE now and in the future

JASMEE clinical English seminars

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There is a growing need for Japanese medical undergraduates to develop their clinical communicative English competencies, including history-taking, physical examination, and case presentation skills, all of which are essential for undertaking clinical clerkships in English-speaking countries. To assist Japanese medical undergraduates and physicians improve these clinical communicative English competencies, the EMP Seminar Steering Subcommittee started a clinical English seminar series in 2015.

The first seminar was on June 7, 2015 at Keio University School of Medicine, where 25 participants (13 medical doctors, 10 medical students, and 2 others) practiced history-taking skills with 3 instructors and 4 JASMEE members who joined as simulated patients. Activities consisted of 2-hour lectures and 1-hour role plays with the simulated patients. Feedback from the participants was generally positive, but many of the participants commented that they wanted to have less time for lectures and more time for role plays.

The second clinical English seminar was on May 28, 2016 at Medical Science Hub in Nihonbashi and was held in collaboration with *VIA*, a non-profit organization which organizes cultural exchange programs in the San Francisco Bay Area for Asian students. With the sponsorship of *VIA* as well as Konica Minolta and JIGH, we invited Dr. Errol Ozdalga, from Stanford Medicine, who is a key player in promoting their "Stanford Medicine 25" program, an interdisciplinary project in which Stanford faculty members and medical students can hone their bedside physical examination skills. In our 5-hour seminar, 34 participants (4 medical doctors, 22 medical students, and 8 others), learned how to perform deep tendon reflexes, ultrasonography, heart auscultation, and ophthalmoscopy with Dr. Ozdalga as well as 4 task force members. Each physical examination skill was demonstrated by the instructor, and the participants performed the skills with the 4 task force members in small groups. Feedback was quite positive, with many participants saying that they wanted to have more opportunities to take part in this type of interactive clinical English session.

Encouraged by the success of the 2 clinical English seminars, the EMP Seminar Steering Subcommittee plans to continue the clinical English seminar series and cover case presentation skills in 2017.

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The English needs of doctors and nurses at hospitals in rural Japan

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It is often claimed that doctors and nurses in Japan need to know English, and countless medical and nursing English textbooks, covering a broad spectrum of skills, have been published. However, needs analyses of Japanese medical professionals have not been sufficiently conducted. Whether needs vary in different types of hospitals (e.g., large or small hospitals) and settings (e.g., urban versus rural) also remains unknown. This paper reports on preliminary results from a three-year study that aims to ascertain the English needs of doctors and nurses at different types of hospitals in Japan. A questionnaire survey was conducted for all nurses and doctors at two different hospitals: a university hospital and a large prefectural hospital in Kagawa prefecture. A total of 1,274 complete responses were received (1,007 from nurses and 267 from doctors; a response rate of 77%). Results indicate that most respondents have used English at least once in their work. Nurses primarily use English for speaking to foreign patients, while doctors use English to search for information, write papers, and communicate with patients. Both nurses and doctors expressed dissatisfaction in the English education they received at university, and reported that nursing and medical students need training in English speaking and listening more than for the TOEIC. Both groups indicated that having to use English was a source of stress. This study shows the importance of needs analyses in order to develop informed and effective EMP curricula and materials.

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Keywords curriculum development, doctors, English education, Japanese hospitals, needs analysis, nurses, questionnaire

1. Background

Many papers in ESP education begin by stressing the need for professionals to possess English skills in an increasingly globalized world.[1] The same holds true for the EMP field, and in classrooms and in conferences educators often state that medical and nursing students in Japan need English skills in order to meet the demands of this age of globalization. Of course, ESP and EMP education are predicated on the premise that groups of students need specific English skills in their futures. For this reason, a crucial issue in ESP education is needs analyses of working professionals in specific fields, in order to identify the skills most needed by these professionals.[2,3] Such analyses have been conducted and described for diverse fields and in different countries across the world.[4,5]

Surprisingly, however, comprehensive needs analysis have, to the best of the authors' knowledge, not been conducted for medical professionals in Japan. It seems reasonable to assume that doctors and nurses in Japan do require English skills, and many textbooks, covering numerous topics and emphasizing a variety of skills, have been published for medical and nursing students in Japan. Recognizing a lack of unity and consistency in EMP courses and curricula in universities across Japan, the Japan Society of Medical English Education (JASMEE) proposed guidelines for medical English education in Japan, grounded in guidelines established by the World Federation for Medical Education (WFME); an examination was also developed to assess the implementation of these guidelines.[6] This effort as well, although laudable in its intentions, has not, to the authors' awareness, been guided by comprehensive needs analyses of medical professionals in Japan.

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Two English needs-related studies can be mentioned here. In one survey of evidence-based medicine (EBM) workshop participants, which included doctors and nurses, it was found that the participants had a low opinion of their own English skills, and that poor English reading skills can make it difficult for them to practice EBM.[7] Similarly, Sakata et al. surveyed medical faculty at Japanese universities, and noted that these faculty tended to emphasize a need for receptive skills (reading and listening) over productive skills (speaking and writing), and that they also valued medical English vocabulary.[8] It should be noted, however, that Sakata et al. surveyed teachers who were also medical professionals. The majority of medical and nursing students will move on to find work outside of academia, where a "publish or perish" mindset may not exist.[9] English needs outside of medical faculties, in hospitals or clinics, may thus be very different. Moreover, English needs may also vary depending on the location of the medical facility (i.e., in urban or rural settings) as well as the size of the facility (large or small hospitals or clinics). The authors of this paper are based in Kagawa, a mostly rural prefecture on Shikoku island, where there may be fewer foreign patients than in major metropolitan areas such as Tokyo. Needs analyses that look beyond large cities, and at different types of medical facilities, are thus needed.

2. Study overview

Our research team consists of two English teachers and two medical professionals (a pediatrics doctor and nurse) working as professors at the same institution. This study emerged from our desire to understand the English-language needs of medical doctors and nurses working at different kinds of hospitals in Kagawa prefecture. We hoped that knowledge gained from this study would help us to design more informed English curricula for medical and nursing students at our university and at other universities in rural areas, as well as aid in the creation of faculty and staff development programs at our university hospital and at other medical settings in rural areas.

The study follows a three-year plan. During the first year, we planned to administer a questionnaire survey at four large hospitals in Kagawa prefecture. During the second and third years, we will administer the same survey to at least 10 small hospitals and clinics in Kagawa prefecture. In the third year, semi-structured interviews will also be conducted with medical doctors and nurses working at both large and small hospitals. This paper will report on our current progress, and describe only findings gained from two large hospitals.

3. Research questions

Although several research questions guided this study, this paper will only report findings that relate to the five main questions:

1. Have doctors and nurses working at hospitals in Kagawa prefecture actually used English in their work?
2. For what purposes have these doctors and nurses used English?
3. Which English skill (reading, listening, speaking, or writing) do doctors and nurses working at hospitals in Kagawa prefecture feel is most important for their work?
4. Are doctors and nurses working at hospitals in Kagawa prefecture satisfied with their tertiary-level English education?
5. Which English skills do these doctors and nurses think that medical and nursing students should spend the most time developing in their tertiary education?

4. Method

First, a questionnaire in Japanese was drafted and piloted with 45 doctors and nurses working at our university hospital. Based on responses and feedback from several participants, minor adjustments were made to the wording and format of the questionnaire. Aware that doctors and nurses are busy, we aimed to keep the questionnaire as brief as possible, and included only 12 items (including Likert-scale, yes/no, multiple choice, and open-ended items) that fit within two sides of one A4-sized sheet (excluding one page for instructions, etc.). In order to ensure a high response rate, we also developed a plan for one or two of the authors to meet with the director, head nurse, and office chief of each hospital and ask for their cooperation before administering the questionnaire survey. The hospitals surveyed so far have been highly cooperative, receiving all questionnaires in one large box and distributing them to staff. Each hospital handled the collection process as well, and the authors picked up the results in one large box at the end of the survey. No postal fees were required.

To date, data collection and analysis of questionnaires from two large hospitals has been completed (one university hospital and one prefectural hospital, with 587 and 531 beds, respectively). In October, 2015, 902 questionnaires were distributed to all doctors and nurses employed at this university hospital. 688 valid responses were received: 185 from medical doctors (hereafter, MDs) and 490 from registered nurses (RNs), for a total response rate of 77%. Next, in February, 2016, 730 questionnaires were distributed to all MDs and

RNs at a large prefectural hospital. 586 valid responses were collected (69 from MDs and 517 from RNs), a response rate of 80%. General information about participants from each hospital is shown in **Table 1**.

Students were hired to input questionnaires into Excel files, which were then analyzed in SPSS 19 (IBM International). Open-ended responses are undergoing a thematic coding using procedures described in Saldaña.[10] In this paper only quantitative findings will be described, as qualitative analysis is still in progress.

5. Results and discussion

5.1. How MDs and RNs use English in their work

The first content-related item on the questionnaire concerned whether or not the MDs or RNs had, until the date of the questionnaire survey, ever used English in their work. For the MDs at both hospitals, the response was overwhelmingly in the affirmative, with 97% indicating that they had used English while at work. This number was considerably lower for the RNs (at over 60% for both hospitals), but still represented the majority. These findings are shown in **Table 2**. Clearly, the answer to the first research question posed for this study—"Have doctors and nurses working at hospitals in Kagawa prefecture actually used English in their work?"—is "yes" for the MDs at both hospitals, and approaching "yes" for the RNs. For those of us involved in EMP education, these numbers provide some reassurance: our students, especially the medical doctors, will be using English after they graduate (at least at these two hospitals).

If these MDs and RNs have used English at work, for what purposes have they used English? This was our second research question, and the next question on the questionnaire. Only participants who had used English in their work were asked to respond. Participants were given several options and told that they could select more than one. For MDs, the option selected most was to get information from the Internet or journals, etc., at 68% and 65% for the university and prefectural hospitals, respectively. For RNs, the primary reason by an overwhelming margin was to communicate with patients and their families, at 89% and 100% for the university and prefectural hospitals, respectively. **Table 3** shows the four most common purposes for using English for MDs and RNs at both hospitals. It thus seems that these doctors are using English for a variety of purposes, whereas nurses are using English almost exclusively for communica-

Table 1. General information about participants

	University hospital				Prefectural hospital			
	Total	Gender		Mean years working (SD)	Total	Gender		Mean years working (SD)
		M	F			M	F	
MD	185	123	57	13.0 (8.2)	69	52	17	15.0 (12.8)
RN	490	29	442	12.8 (10.3)	517	37	463	15.1 (11.7)

Table 2. Have these MDs and RNs used English in their work?

	University hospital			Prefectural hospital		
	YES	NO	N/A	YES	NO	N/A
MD	179 (97)*	6 (3)	0	67 (97)	2 (3)	0
		n=185			n=69	
RN	314 (64)	173 (35)	3 (1)	324 (63)	185 (36)	8 (1)
		n=490			n=517	

* Values are number (percentage)

Table 3. Reasons for using English at work

	University hospital		Prefectural hospital	
MD	1. to get information	126 (68)*	1. to get information	45 (65)
	2. to prepare manuscripts	121 (65)	2. to talk to patients and their families	40 (58)
	3. to prepare for international presentations	78 (42)	3. to prepare manuscripts	31 (45)
	4. to talk to patients and their families	76 (41)	4. to prepare for international presentations	23 (33)
	n=185		n=69	
RN	1. to talk to patients and their families	281 (89)	1. to talk to patients and their families	324 (100)
	2. to communicate with staff	68 (22)	2. to get information	25 (8)
	3. to get information	53 (17)	3. to communicate with staff	19 (6)
	4. to prepare manuscripts	18 (6)	4. other (e.g., to read chart)	12 (4)
	n=314		n=324	

* Values are number (percentage)

tion with patients and their family or other medical staff.

These same participants (who reported having used English in their work) were then asked which English skill they considered to be the most important for their work—reading, speaking, listening, or writing. They were asked to choose only one of these options. Responses to this question matched well with the MDs' and RNs' reported purposes for using English; MDs at both hospitals indicated reading to be the most important skill (at 50% and 45% for the university and prefectural hospital, respectively), followed by speaking and listening (**Table 4**). For these RNs at both hospitals, speaking was the most important skill (at 51% and 58% for the university and prefectural hospital, respectively) followed by listening and reading (**Table 4**). Interestingly, writing was the skill least needed by both MDs and RNs, perhaps indicating that many MDs and RNs at these hospitals are not writing reports or papers in English. These findings partially support Sakata et al's finding that receptive skills are considered more important than productive skills, as reading was considered most important by these doctors; however, speaking was also considered important, more so than listening.

5.2. How MDs and RNs feel about tertiary-level English education

Next, all questionnaire respondents were given four Likert-scale questions about the English education they received in college or university, whether 1) it was useful to their present work; 2) they were satisfied with it; 3) using English gives them stress; and 4) they believe English is necessary for medical professionals. Findings reveal that the MDs are ambivalent about the usefulness of their college English education and are largely unsatisfied with it; English also gives them stress and they strongly agree that English is necessary for them. Responses from RNs roughly follow the same pattern as that of the MDs, though they are even less positive about their college English education, and agree slightly less that English is necessary for them (though clearly they still agree) (**Table 5**). Again, these results confirm that English appears to be a necessity to MDs and RNs (at least at these two hospitals), something that should be heartening to EMP instructors. However, respondents' lack of satisfaction in their previous education is much less heartening. The fourth research question for this study, concerning MDs' and RNs' satisfaction in their tertiary-level English education, can be answered with a qualified "no," acknowledging respondents' ambivalence.

The last question relevant to this paper concerns what these respondents think that medical and nursing students should study in their college-level English education. All participants responded to this question, and they were given several options; they could select more than one option. It was expected that responses to this question would mirror responses to the "most important skill" question described

Table 4. The English skill most needed for work

	University hospital		Prefectural hospital	
MD	1. reading	93 (50)*	1. reading	31 (45)
	2. speaking	41 (22)	2. speaking	16 (23)
	3. listening	23 (12)	3. listening	15 (22)
	4. writing	20 (11)	4. writing	2 (3)
	5. no response	4 (2)	5. no response	4 (6)
	n=181		n=68	
RN	1. speaking	164 (51)	1. speaking	217 (58)
	2. listening	89 (28)	2. listening	102 (27)
	3. reading	45 (20)	3. reading	31 (8)
	4. writing	6 (2)	4. writing	7 (2)
	5. no response	19 (6)	5. no response	16 (4)
	n=325		n=373	

* Values are number (percentage)

Table 5. How MDs and RNs feel about their college English education

Question	MD		RN	
	University	Prefectural	University	Prefectural
1. English education useful to work	2.9	2.9	2.4	2.3
2. Satisfied with English education	2.4	2.6	2.2	2.1
3. Using English stressful	3.8	3.6	3.8	3.6
4. English is necessary	4.7	4.6	4.3	4.1
	n=183	n=68	n=485	n=512

Note. 5=Agree; 1=Disagree

above. For the MDs, however, this was not the case; the most selected subject, by a wide margin, was speaking and English conversation (at about 80% for both hospitals; **Table 6**). For the MDs at the university hospital, presentation and debate was the second most frequent choice, followed by reading and listening. After speaking, in order of frequency, MDs at the prefectural hospital selected listening, reading, and presentation and debate. Interestingly, medical/nursing English was selected less frequently than several other subjects, and the TOEIC/TOEFL was the least popular option.

Not surprisingly, RNs selected speaking and English conversation the most frequently, by a wide margin (about 85% for both hospitals). However, for RNs, medical/nursing English was the second most frequent choice, followed by listening and reading. As for the MDs, writing and the TOEIC/TOEFL were less frequent choices, as was presentation and debate, a subject considered more important by the MDs. These findings send a strong message to EMP instructors that MDs and RNs, at least at these two hospitals, perceive English speaking to be the subject that medical and nursing students should study most of all, even if, in the case of MDs, they do not necessarily feel that this skill is the most relevant one for their work. Also, MDs, but not RNs, are less interested in medical/nursing English, indicating perhaps that the MDs are able to gain medical English outside of their medical English courses. (One limitation, however, is that "medical/nursing English" was not defined on the questionnaire, and it is unclear how respondents interpreted this option). Last, respondents seem to indicate that teaching for exams, such as the TOEIC—a cornerstone at many Japanese universities—is largely a waste of time.

6. Conclusion

To some extent, findings from this study confirmed a common sense impression of doctors' and nurses' English needs: the doctors at these two hospitals are using English for a variety of purposes, though primarily to gain information, and the nurses are using English almost exclusively for speaking to patients and other staff. Moreover, both groups consider English knowledge to be important and the majority (especially of the MDs) have used English in their work. However, what surprised us was that both MDs and RNs overwhelmingly chose speaking as the most important subject that medical and nursing students should study. This study confirmed the importance of reading skills for medical doctors.[7,8] However, though reading is the English skill that was required of these doctors most in their work, they felt that medical students need English speaking skills. Perhaps one reason why they reported a lesser need for speaking English in their own work is because they feel constrained by their own English speaking skills, and either avoid or do not make an effort to speak in English (a situation familiar to anyone involved in English education in Japan). Why the MDs, but not the RNs, have less interest in medical/nursing English, and why both groups have little interest in general English exams such as the TOEIC, are also matters requiring further exploration. The planned interviews of MDs and RNs will, we hope, clarify reasons for doctors' and nurses' questionnaire responses, and until this stage has been completed

Table 6. What medical/nursing student should study

	University hospital		Prefectural hospital	
MD	1. speaking & conversation	149 (81)*	1. speaking & conversation	55 (80)
	2. presentation & debate	95 (51)	2. listening	38 (55)
	3. reading	93 (50)	3. reading	36 (52)
	4. listening	88 (48)	4. presentation & debate	33 (48)
	5. writing	65 (35)	5. medical/nursing English	22 (32)
	6. medical/nursing English	58 (31)	6. writing	21 (30)
	7. TOEIC/TOEFL, etc.	33 (18)	7. TOEIC/TOEFL, etc.	13 (19)
	8. other	2 (1)	8. other	0 (0)
	n=185		n=69	
RN	1. speaking & conversation	423 (86)	1. speaking & conversation	54 (86)
	2. medical/nursing English	257 (53)	2. medical/nursing English	255 (49)
	3. listening	232 (47)	3. listening	203 (39)
	4. reading	129 (26)	4. reading	88 (17)
	5. writing	58 (12)	5. TOEIC/TOEFL, etc.	54 (10)
	6. presentation & debate	56 (11)	6. writing	32 (6)
	7. TOEIC/TOEFL, etc.	40 (8)	7. presentation & debate	28 (5)
	8. other	4 (1)	8. other	3 (1)
	n=490		n=517	

* Values are number (percentage)

we can only speculate as to why both MDs and RNs feel a need for English speaking skills, and more importantly for those of us involved in EMP, why they are unsatisfied with their tertiary-level English education.

Having gained data from two large hospitals, we will continue to gather data from smaller hospitals and clinics; this additional data should enrich our understanding of the English-language needs of doctors and nurses in Kagawa prefecture. At the very least, we hope that this study will demonstrate the importance of needs analyses, leading to further analyses by EMP professionals in different areas of Japan, and consequently to the development of better-informed and meaningful English curricula for medical and nursing students in different contexts across Japan.

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Using comedy sketches to learn medical English

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Research suggests that the incorporation of humor into the language classroom aids the learning process. In this report I will introduce a group project to help medical students learn medical English vocabulary and phrases through the medium of comedy. The project involves students working in groups to create short comedy sketches based on doctor-patient interactions. Through a multi-step process of studying, discussing, script writing, practicing, filming, editing, and viewing, students are able to internalize essential vocabulary and acquire basic clinical communication skills. The comedy element adds an extra layer of difficulty to the subject of clinical communications, but overall makes the project extremely motivating and enjoyable for the students. So far, this project has been used with classes of up to 50 students. Approximately 3 teaching hours are devoted to the project for explanation, script writing, and viewing of the finished sketches, with the filming and editing of the sketches done as homework. I will explain the rationale for the project, provide details of the procedures, and share some of the students' reports written after the project.

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Introduction

There seems to be an interesting relationship between comedy and medicine. In both American and British English there is an entire category of jokes based on doctor-patient interactions that begin with the phrase "Doctor, doctor!" like this one:

Patient: Doctor, doctor! I feel like a pair of curtains.

Doctor: Pull yourselves together, man!

Laughter, we are told, has a number of health benefits, as well as improving our job performance and human relationships.[1] Moreover, a significant body of research points to the usefulness of humor in a second or foreign language-learning context. Bell, for example, describes humor as being "socially and psychologically beneficial to learners, helping to relax them, to create a comfortable classroom atmosphere, to create bonds among classmates, to raise student interest, and simply to make learning more enjoyable."[2] In this report I will introduce a group project that I have developed to help medical students learn medical English vocabulary and phrases through the medium of comedy. The project involves students working in groups to create short comedy sketches based on doctor-patient interactions.

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At the University of Tsukuba, all medical students have compulsory English classes in their first and second years of study. While these classes are not specifically for teaching medical English, I have used the comedy sketch project with first-year medical students as a way to introduce them to the topic of communicating with patients in English. The comedy sketch project is done mainly as a homework assignment and requires only 3 hours of dedicated classroom time, but follows a series of classes in which students study doctor/nurse-patient conversations. This capstone project serves to consolidate some of the learning objectives of those classes. The project involves the students working in groups to write a script for a comedy sketch based on a doctor-patient interaction which they film and edit as homework and finally watch in class.

1. Comedy sketch project procedure

Before introducing the students to the comedy sketch activity, we first spend 2 weeks studying some basic medical dialogs and related vocabulary for common symptoms and diseases. Many textbooks for teaching medical English contain model doctor-patient dialogs, and student role-plays seem to be a common way for training in clinical communication. I introduce the comedy sketch project to the students by first showing some clips from medical-themed comedy sketches such as Mr. Bean or Monty Python. After showing

the clips, I give the students a brief explanation of the project. Next I demonstrate to the students how to edit a video using iMovie (http://www.apple.com/mac/imovie/) software. iMovie is a very easy to use and intuitive video editing software, and while not every student will have an Apple device, video-editing software generally follows a similar design and layout. iMovie concepts and the basic principles of video editing are therefore the same whichever software the student uses. I also inform students about some free online video editing software, such as WeVideo (https://www.wevideo.com) and YouTube Editor (https://www.youtube.com/editor). The next step of the project is to randomly put the students into groups of 4 or 5 and task them with writing the script. At the end of the class, I explain that they have to film their sketch, edit the video, and bring the finished videos to class. I usually give students 2 to 3 weeks to complete the project and offer to help them if they have difficulty.

On the allotted day, each group brings their video to class on a USB flash drive. We sit and watch the videos together. I give the students an evaluation sheet to assess the other groups' performances. After watching the videos, I award a small prize to the members of the group that make the best video.

2. Leaning objectives

This exercise has a number of learning objectives: firstly, to consolidate basic medical terms related and basic doctor-patient communications; secondly, to encourage the students to work cooperatively in groups; thirdly, to encourage the students to improve their spoken English; and finally, to teach the students how to use video editing software, which is a very useful skill. Additionally, the peer evaluation step ties directly into the modern concept of flipped learning, where peer criticism is used to improve skill and the teacher serves more as a facilitator than an omnipotent pedagogical authority.

3. Student opinions

At the end of the 2015-16 academic year, I took a survey of 2 first-year classes (94 students in total) in order to get feedback about my teaching activities throughout the entire year-long course of study. I asked them this question: "What was the most interesting or useful part of this English class for you?" Out of the 94 students, 44 answered that the scientific presentation activity, which was the final activity of the year, was the most useful and/or interesting activity. The comedy sketch project was the second most popular, with 39 students. The results suggested that the comedy sketch activity was more popular among the higher-level students than the lower-level students, but my direct observation saw that the comedy aspect of the assignment spurred ALL students at ALL levels to be more creative, explore new language not taught in class and otherwise attempt to excel by pushing the envelope of their total language skillset.

In 2015, to gauge the students' opinions about the project, I asked a class of 48 students to individually write reports about their experience. In their reports, the most commonly occurring adjectives used to describe the project were: difficult (n = 28), fun (n = 20), enjoyable (n = 20), and interesting (n = 13). As an educator, I am glad that this activity was not only fun and enjoyable, but also challenging for the students. Interestingly, 26 of the students specifically mentioned that it was difficult to make a humorous script. This is not purely an English language issue as one student expressed: "It was difficult to think of a funny script in English because it is difficult to think of it even in Japanese." However, the challenge of making something "funny" is one that the students really embraced and found interesting. Perhaps as human beings we like to be entertained and we like to entertain. One student wrote "I want to make people laugh [...] and I want to make them happy." So while the comedy element presented a challenge to the students, it was also one of the strongest motivating factors.

Another important aspect of the activity is the fact that it is a group project. In their reports, 15 students mentioned about cooperating with others in their group as being a good point of this project. One student expressed: "Although it was hard to collect the funny and interesting ideas for the video, I learned to work cooperatively with group members in order to make the best video we can." The project is an exercise in peer-to-peer instruction, working together across the various aspects of this project both technically and creatively to generate a comedy sketch movie. One student enjoyed this exercise "because all classmates can learn from each other." In a class of almost 50 students, making use of peer-to-peer learning and group activities is not only an effective way to teach, but rewarding for the students also. One student wrote: "It was the first time for me to write a script for short comedy video. It was fun to talk about ideas to make the video funny. We had a good time cooperating with each other and filming it together. It was a bit hard to memorize the script, but we could learn some medical terms."

The second point in the student's comment above regarding learning medical terms was echoed in 13 students' comments. Many of them found this exercise to be a fun or interesting way to study medical terms and learn about doctor-patient communications. In the words of one student: "I learned how to communicate with patients. I knew words

such as fever, symptom and so on, but I did not know how to use these in order to be understood by patients. Through making this movie, I understood how I, as a doctor, should communicate with patients and what the doctor should ask." The students seemed to have appreciated learning medical vocabulary and clinical communications through this project. Being first-year students, they have not yet started learning doctor-patient interactions in Japanese, so for all of the students this was their first experience and this may well have contributed to the students' enthusiasm for the activity.

Ten students also mentioned that the activity was useful for studying aspects of English speaking, such as pronunciation and enunciation. One student, for example, wrote: "When we took the movie, we tried to pronounce correctly and speak clearly. I think we could do well." I believe that this motivation to pronounce correctly and speak clearly derives from the fact that the comedy sketch is filmed and is therefore permanently recorded, unlike a role-play performed in class. In a YouTube generation, video is an extremely important vehicle for not only entertainment, but also education. In fact, 11 students mentioned that they enjoyed learning about the process of editing a video. Video editing can be a very creative and rewarding process and is an extremely useful skill to have.

4. Teaching reflections

This project is successful for a number of reasons that the students have highlighted in their reports and it certainly fulfills its leaning objectives; through this activity students can learn some medical English, learn to cooperate with their friends, improve their English speaking, and learn useful skills in video editing. From a teaching perspective, I think this project is successful in fulfilling its learning objectives as it chiefly uses what I like to refer to as a "shifted focus" approach. That is that the focus is not primarily upon studying English, rather upon producing an end product, which in this case is a videoed comedy sketch. While the end goal is to improve some aspects of the students' English language abilities, the students' focus is not upon this elusive goal, but rather on creating a video that will entertain their classmates; something far more immediate and tangible. English becomes a tool to achieve that end goal, so while the students are focused on creating their video they are using English as a means to do so. Some other examples of projects that I do with students that use the "shifted focus" approach include: creating a website, writing a blog, making a presentation, and event organizing. I have found this approach to be an effective way for students to learn English and also to keep them motivated.

The use of comedy is a standout feature of this project. Humor, comedy, and laughter are important elements of communication, particularly for establishing rapport between people. One student wrote: "We had to use medical terms and phrases and we should make other students laugh. It was difficult. But I think making good jokes in a second language is very important to learn the language." While I like to make my English classes as entertaining as they are educational, I confess that I often overlook this point that the students makes about jokes and second language learning. It is, however, a very interesting subject and can lead to some interesting conversations not only about language, but also about culture. Recently, a student recited a joke that someone had taught her and asked me to explain the meaning, because she could not understand why it was funny. The joke was: "Two Shakespearean scholars walk into a bard." In order to understand this joke, firstly you have to know that there is a genre of jokes that being with someone or something walking into a bar, secondly one must know that Shakespeare is known as the Bard, and thirdly you must understand the concept of play-on-words, in this case the similarity of bar and bard. Obviously, the humor accomplished by the students in their video was not as sophisticated as this, but they still had to engage in comedic writing or action, which again students found difficult but interesting.

5. Conclusion

Considering the students' reports about the comedy sketch project and the results of the end of year survey, I think it is fair conclude that this project is an effective and fun way for students to study medical English. The comedy aspect to this project, while making it challenging for students, also increased their enthusiasm and motivation. It also created a lively and fun learning environment and was a good team-building exercise for the groups. In the future, I plan to continue this project and develop other teaching activities that can incorporate humor and comedy not only to enliven the classroom but also to enliven the students' interest in studying English.

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Developing corpus-informed medical English materials for third-year students

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1. Introduction

1.1. Integrating corpus analysis with materials development

This article is a summary of how a group of applied linguists have approached the design of medical English materials for third-year students at Hiroshima University. In the article, a key issue is the relationship between corpora, word lists and teaching materials. Corpus analysis involves the use of software programs to analyze texts (corpora) which have been converted into an electronic format; while such analysis is often used in the preparation of dictionaries and other reference books, it is less clear how it can be combined with classroom approaches. The project that we describe in the present article addresses this issue. The reason for using a corpus-informed approach stems from the high value that students have placed on word lists as part of course materials; our aim has been to use corpus analysis in developing a set of classroom materials with an accompanying word list that contains the words embedded in them.

1.2. Background

The materials described here were designed for an intensive medical English course for third-year students,[1] which has been taught annually since 2012 with the primary aim of improving students' productive skills. Over the years there has been a set of stages in its development: exploratory, piecemeal research and development, consolidation and syllabus development. These have been summarized in previous articles.[2,3] The focus here is on the consolidation and syllabus development stage, in which a new set of materials was created. The intensive course itself involves a teaching team of four, and a research team of three; the authors are members of both teams, one primarily working on corpus analysis (Fraser) and the other primarily working on materials development (Davies).

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2. The structuring of the new materials and corpus building

The new materials have been built on the basis of previous research, through interaction with medical faculty staff. In 2012, research in the form of interviews was undertaken with three senior medical faculty members.[4] In relation to possible course content, all three placed a strong emphasis on anatomy. Other suggestions were physiology, biochemistry, medical examinations, and common diseases. This led to an initial research focus on anatomy, with a corpus being built using *Gray's Anatomy for Students*,[5,6] and some trial anatomy teaching materials being constructed. Also, with a long-term aim of building a research article-based corpus, it was necessary to divide medicine into a number of categories, and so an email request was made to the medical faculty to ask for a categorization. As Fraser's Pharmacology Corpus and resulting word lists had successfully been built using ten pharmacology categories,[7] we asked for ten in medicine. Although this was a small number of categories, a senior member of the medical faulty supplied us with the following list: cardiovascular medicine; digestive medicine; respiratory medicine; neuromusculoskeletal medicine; infectious diseases and immunology; oncology; developmental medicine; nephrology and endocrinology; critical care and anesthesiology; sensory organology. While this division was oriented towards corpus building, from the materials side it was apparent that a number of the categories offered opportunities for building coherent units of classroom material. The anatomy materials had been modelled on diagrams and words from a medical terminology textbook,[8] and these fitted relatively easily into some of the categories. For example, anatomy materials on the circulatory system fitted easily within the cardiovascular system, and materials on the uri-

nary system fitted reasonably well within nephrology and endocrinology.

Given the interview recommendations of the senior medical staff, it seemed possible to build from anatomy into a medical area such as cardiovascular medicine, and the challenge was to create materials that incorporated the suggestions of the medical professors. A further complication was the question of the different registers between the technical medical English that is used within the medical community, and the more everyday English that is common in doctor-patient interactions. For example, almost no patient would use words such as *hematuria* or *dyspnea*, but these more technical terms would be used in a doctor's notes, articles, and doctor-doctor discussions. The final construction of the materials was a synthesis, building from anatomy into diseases, and from technical terms to lay terms through two different types of discourse: essays and doctor-patient interviews. The decision was made to use American English spellings as these would be more familiar to students.

At the same time that materials were being designed, corpus analysis was being undertaken and a link between materials design and corpus analysis was being established. The initial link was as a straightforward check on the new materials. At a very early stage of materials development (2013), in which basic anatomy materials were being trialled, insights from the corpus analysis were used to edit the materials.

In 2014, a second corpus was built using *Harrison's Principles of Internal Medicine* (18th edition)[9] in order to examine the vocabulary used in the description of diseases.[10] With both corpora, there was a similar process of analysis. In describing the value of using corpora we focus on the analysis of *Harrison's*.

3. Corpus analysis of *Harrison's Principles of Internal Medicine*

3.1. Creating the corpus

The print version of the book is split into two volumes, totalling 4,012 pages and comprising 18 parts such as *the Cardiovascular System* and *the Gastrointestinal Tract*. It was identified as a very useful reference book in the 2012 interviews. In a subsequent meeting with senior members of the medical faculty, in which the research team suggested it as a possible book for analysis, the senior medical staff felt it would be a good choice. They considered it more relevant to medical students in their early years of study than an article-based corpus.

The book was prepared for scanning using an electric paper cutter to remove the binding and separate the pages. Individual pages were then fed automatically into a scanner and saved in digital (PDF) format. *Adobe Acrobat* OCR recognition software was used to convert the PDF files into text format ready for editing and corpus analysis. Separate files were created for each of the main 18 sections of the book.

3.2. Identifying the most important medical words (frequency and range)

One of the key questions that drives the research is "What are the most important medical words for students to learn?" It is towards answering this question that the corpus analysis has been undertaken with a particular focus on the technical language used within the medical profession. As a first step in this process, *AntConc 3.4.3* corpus analysis software[11] was used to produce word lists according to frequency and range. The unit of counting was the individual word form. For example, the singular form and plural form were listed separately (cell, cells). This gave more information on the most appropriate forms to include in the materials. The lists were then edited to exclude articles, prepositions, pronouns, and the most common conjunctions.

A frequency list shows the number of times an item occurs in a corpus (**Table 1**). For example, the word "patients" occurs 17,102 times in the *Harrison's* corpus. The range of an item shows in how many sections of the corpus the item occurs. As the *Harrison's* corpus has 18 parts, the maximum range is 18 (the range for "patients" is 18, showing that it occurs in every part). Words which have a high frequency and high range are clearly items that need to be considered. Once identified, the individual instances of a word's occurrence can be viewed to see how it is used in context at the sentence level.

3.3. Multiword terms

If multiword units occur with sufficiently high frequency in the corpus, then they should be treated in the same was as single-word terms (**Table 2**). They function in the same way, though they may consist of two or more words (often noun-noun or adjective-noun combinations). In many cases they cannot be split, and have a meaning that is often not discernable even if the individual words making up the unit are known: *growth factor* and *gram negative*, for instance. However, there are also collocations which constitute a syntactic unit, but are not "fixed" (e.g., *liver transplantation* can be replaced by *transplantation of the liver*, and *blood flow* by *flow of blood*).

Within the multiword units, there is an important category of terms that might be labelled "correlating noun pairs." Each unit consists of a pair of closely related medical terms that

frequently occur together. They include *signs and symptoms, morbidity and mortality, head and neck*, *manifestations and presentation,* and *diagnosis and treatment.* Sometimes, as with *signs and symptoms*, the words in the combination are so closely linked that their individual meanings have become almost indistinguishable.

3.4. Text-structuring phrases

If the analysis is expanded to three- or four-word items, then phrases appear that can be considered to have a role in structuring the discourse of the text (**Table 3**). Such discourse-structuring expressions can be thought of in terms of lexical chunks or lexical phrases: prefabricated language units that can be used as wholes, rather than being composed through the use of syntactic rules.

4. Applying the corpus findings to materials development

4.1. Filling gaps and adding words

There are two main ways in which the corpora have been used to improve the materials. The first has been to identify large gaps in the materials. The second way has been to edit the materials to include key words that emerge from the corpus analysis but are not currently in the materials.

From the analysis of the anatomy corpus, we identified one large gap in the materials, which related to important positional terms. The frequency of such items as *anterior* (2,325), *posterior* (2,280), *inferior* (1,512), and *superior* (1,604) indicated the need for a unit on these terms that paralleled the opening section of *Gray's Anatomy for Students*; although some positional terms did appear in the materials, there was a need to give them greater prominence and coverage.

The main work on improving the materials has been to edit the existing units of material, with the *Harrison's Principles of Internal Medicine* corpus being used in this capacity. Some of the 18 parts of the textbook are broadly equivalent to the key medical areas identified by the medical faculty (**Table 4**). Each unit of the medical materials can be checked using the relevant part of *Harrison's*; for example, Part 10 (The Cardiovascular System) can be used to review the Heart unit, and check for usage of terms as well as important omissions. In this article, we examine the Heart unit and make comparisons in terms of the frequently occurring lexical items found in the relevant sections of the corpus.

4.2. The Heart unit as an example

One of the ways in which the materials have been checked for editing is by contrasting words occurring in the materials against the words in the corpus, examining range and frequency. For example, the words below occur frequently in Part 10 of *Harrison's* (i.e., with a frequency of 100 or more), and were all found in this unit of the materials:

heart, disease, pressure, risk, blood, pulmonary, associated, myocardial, artery, arterial, clinical, acute, severe, patient, symptoms, chronic, function, infarction, diagnosis, cardiovascular, angina, stenosis, venous, ventricle, aorta, atrium

Table 1. Top 10 words in the internal medicine corpus (frequency/range)

1.	PATIENTS	17,102/18
2.	DISEASE	10,858/18
3.	TREATMENT	5,931/18
4.	ASSOCIATED	5,413/18
5.	CELLS	5,204/18
6.	THERAPY	5,014/18
7.	RISK	4,982/18
8.	CELL	4,708/18
9.	CLINICAL	4,671/18
10.	INFECTION	3,893/17

Table 2. Top 10 multiword terms in the internal medicine corpus (frequency/range)

1.	ET AL	2185/18
2.	BONE MARROW	623/15
3.	BLOOD PRESSURE	580/16
4.	RISK FACTORS	578/15
5.	HEPATITIS B	564/11
6.	T CELL	563/15
7.	HEART DISEASE	547/16
8.	HEART FAILURE	547/14
9.	T CELLS	535/12
10.	SIDE EFFECTS	519/16

Table 3. Examples of key text-structuring collocations

as well as (the)	in addition to
in the presence of	a number of
in the absence of	a variety of
(is) the most common	as a result (of)
(is) associated with	is characterized by

Table 4. Units of materials and the corresponding sections of *Harrison's*

Unit of materials	Section of *Harrison's*
The Heart	Part 10: Cardiovascular System
The Brain	Part 17: Neurologic Disorders
The Digestive System	Part 14: Gastrointestinal Tract
The Endocrine System	Part 16: Endocrinology and Metabolism
The Pulmonary System	Part 11: Disorders of the Respiratory System
The Urinary System	Part 13: Disorders of the Kidney and Urinary Tract

A check could also be made to determine the importance of the words we considered to be key terms, and which have been highlighted in the materials. Each unit of the materials includes a "word box" containing the most basic anatomical terms (**Figure 1**). The words in the Heart unit were all found to occur frequently in the corpus, and particularly in the Cardiovascular System section. Also, in each unit students are given a word-matching task to introduce the key vocabulary (**Figure 2**). Most of these words also occurred frequently in the corpus, although the use of *consume* in the materials was an unusual one, and may need to be changed.

In addition to checking the existing words in the materials, words or multi-word terms considered to be high value in the corpus could be searched for in the materials. For example, a number of important words were not found, and these include *cardiac, coronary, hypertension, block, blocker(s), systolic, diastolic, failure, vascular, fibrillation,* and *pulse.* Also, several high-frequency combinations did not appear in the materials, including *(congestive) heart failure, coronary artery, pulmonary hypertension, beta blocker(s), blood flow, smooth muscle,* and *SA (sinoatrial) node.*

On the basis of the corpus findings, it has been possible to make amendments to the Heart unit (**Table 5**). Most of these changes are minor, but the resulting text is a more accurate reflection of the ways in which medical conditions are actually described, and contains the most appropriate terminology to use in these descriptions. The text can be revised relatively easily to include a good proportion of the terms that have been identified as being important in cardiovascular medicine: *SA node, coronary artery, cardiac, flow, systole, diastole, hypertension, cholesterol, heart failure, stroke, atrial fibrillation, contribute to,* and *pulse*.

Figure 1. Word box from anatomy section of the Heart unit

right ventricle	left atrium	aorta	inferior vena cava	systemic circulation
tricuspid valve	pulmonary vein		pulmonary circulation	
superior vena cava	pulmonary artery		right atrium	
mitral valve	pulmonary valve	aortic valve	left ventricle	

5. Discussion

In this section we consider how the use of word list development might act as the spine of a more coherent and open English language curriculum, and consider the issue of the challenges of teaching materials that are a synthesis of some already extensive areas of medicine.

One of our problems as applied linguists from a group outside the medical faculty is that our knowledge of the details of medical English learning within the curriculum is limited. Students study general English in their first two years of English language courses. However, this is not the only English that they receive. At a recent meeting with medical professors we learned that students are often given English terms in the form of glossaries, which are related to the medical studies that they undertake in Japanese. It is difficult to gauge both what the students are taught, and what they actually learn while they are studying medicine. One use of corpus analysis, and particularly word list development, is as an aid to medical English curriculum development. From the perspective of a communicative approach, vocabulary learning needs to take place in a process that allows students to see and use words in context. While the provision of glossa-

Figure 2. Word-matching task in the Heart unit

Vocabulary

Match the words in the box with their definitions.

consume	sternum	sweating	anxiety	obesity
germ	fatigue	edema	angina pectoris	
fainting	pounding	palpitation		

1. the production of liquid (mainly water) on the skin to cool the body

_____

2. the condition of being fat or overweight

_____

12. the feeling of uneasiness or distress of the mind

_____

Table 5. Examples of changes made to the Heart unit

Original Text	Revised Text
Anatomy section, heart diagram	
No "SA node" in diagram	"SA node" added to diagram
No "coronary artery" in diagram	"coronary artery" added to diagram
Circulatory System passage	
From it the blood *passes* into other arteries...	From it the blood *flows* into other arteries...
The blood returns to the heart through venules and veins, entering the heart through the two venae cavae.	The blood returns to the heart through venules and veins, entering the heart through the two venae cavae. The contraction phase of the *cardiac* cycle is known as *systole*, and the relaxation phase as *diastole.*
Cardiovascular Medicine passage	
This was a major advance in the understanding of the function *of the heart* and the *movement* of the blood.	This was a major advance in the understanding of *cardiac* function and the *flow* of the blood.
There are a number of ways in which the heart can suffer from problems, including the following: myocardial infarction, endocarditis, chronic mitral valve regurgitation, and aortic valve stenosis.	There are a number of ways in which the heart can suffer from problems, including the following: myocardial infarction, endocarditis, chronic mitral valve regurgitation, and aortic valve stenosis. Conditions such as kidney disease and *diabetes* can also contribute to *heart failure* or *stroke.*
... sweating, *nausea, vomiting*, abnormal heartbeats, and anxiety.	... sweating, *nausea and vomiting*, abnormal heartbeats *(atrial fibrillation),* and anxiety.
There are a number of risk factors *associated with* myocardial infarction, the biggest being smoking, obesity, and lack of exercise.	There are a number of risk factors *contributing to* myocardial infarction, the biggest being smoking, obesity, lack of exercise, high blood *cholesterol*, and *hypertension*.
Doctor-patient conversation	
Doctor: I see. Have you noticed anything else?	Doctor: I see. Let me check your *pulse*. Have you noticed anything else?

ries to students is useful, it is not sufficient from an applied linguistics perspective. Consequently, although students may have encountered anatomy terms in the form of glossaries, for safety, the materials have been designed to cover such terms, and to contextualize them as much as possible. The future direction of the research is to develop online materials, particularly in relation to physiology, gross anatomy and microscopic anatomy in a way that parallels the studies of second-year students in order to give them a strong foundation on which to build.

A key issue arising from the process of building the corpus-informed course relates to the synthesis, within the pedagogic units, of already extensive areas: anatomy, physiology, and diseases, along with a consideration of both technical medical English and the everyday language of medical interviews. Is this a case of taking on too much? One of the reasons for building the new units of material in such a way was the concern that, with a focus on productive skills, students might be able to undertake some basic doctor-patient conversations without developing the resources to explain underlying medical problems or talk about them in English. This is a potential risk for some communicative methodologies, where a student may learn some stock phrases but lack the ability to construct many of the sentences she/he needs. With the new materials the aim has been to provide students with sufficient linguistic resources to give simple descriptions of body systems and diseases, as well as to practise some basic doctor-patient communication. While the essays and conversations in the materials are not on the level of complexity of actual medical texts, and the conversations are not as extensive as real doctor-patient interactions, they are stepping stones to help students build their English skills and abilities.

6. Conclusion

In this article, we have described the process of building corpus-informed materials. In it, we have highlighted the role of corpus analysis in improving materials so that they contain as many high value words as possible. A word list emerges from the process by using corpus software to extract key vocabulary. A central aim in the process is to help clarify the medical English curriculum. The concrete nature of lists of medical terms allows both teachers and students to get a good sense of what they need to learn. From a pedagogic perspective, the key issue is what terms should be learned and how this learning should be structured. This has required the development of teaching materials in parallel with corpus

analysis, so that terms can be grouped and seen in context.

A further issue for building medical English materials relates to the teaching of medicine itself. Meetings with medical teaching staff suggest that there has been much debate over this: While a more traditional approach focuses on separate courses such as anatomy, biochemistry, and physiology, there is clearly now a consideration of more integrated approaches to teaching medicine. Given this uncertainty, online materials may offer the opportunity to create links across fields should there be a change in curriculum design in medicine itself.

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Initiating further training in communication skills in pre-clerkship pharmacy education through English

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1. Introduction

English classes are the perfect opportunity to use English as a tool to support the learning of other specialty classes. When I was first assigned to teach Clinical Pharmacy English at Daiichi University of Pharmacy, it was suggested that I use that time to improve the students' English reading and writing skills. It did not take me long to realize that the students wanted a class that was related to what they were actually learning at the time in the other pre-clerkship classes. I then decided to use this English class to teach the students about communication in the community pharmacy and how to improve their communication skills while using English as a tool for learning. I believe that the communication class has had positive outcomes, such as 100% class attendance, interest from the students, and greater motivation shown in class.

2. Background

The pharmacy students have a year of pre-clerkship studies in their fourth year, with courses that range from knowledge based learning to prepare for the Computer Based Test (CBT) to classes that prepare them for their clerkships and the practical Objective Structured Clinical Exam (OSCE). In the first few months of this fourth year of study, they have a compulsory Clinical Pharmacy English class, team-taught by a Japanese professor, who is a pharmacist, and myself. The other professor focuses on specific disease states and their related medications, while I focus on communication of those topics between pharmacists and patients. Because the students learn initial interview skills and prime questioning in dispensing throughout the practical pre-clerkship training classes, this English class focuses on researching specific medications on English websites, and how to talk to patients about those specific medications as a pharmacist. The class covers dosing questions, how to include empathy in their conversations, giving instructions, and describing medications, all in English.

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3. Class objectives

There were seven objectives of the communication class. The first one was to explore English through various topics for communication in a pharmacy, such as over-the-counter (OTC) medications, influenza versus colds, the heart and blood pressure, food allergies, and type 2 diabetes. From these topics, the students then researched related medications. The second objective was to improve vocabulary and reading skills, so every class included a short reading from a variety of sources to help the students in their understanding of the topic. (**Appendix 1**) The third objective was to train the students' ears to listen to English speech, both male and female, with my voice and the CD/video audio voices. Videos were used to reinforce the learning by adding in a visual component. In learning to think as a pharmacist and how to talk to patients, the students worked with a partner or group throughout the eight weeks to practice speaking and sharing their thoughts. This led to the fourth objective, which was to learn self-expression and to prepare for their part in discussions by reading and researching the topic and medications. As a pharmacist, they should know the related terminology, which was reinforced through a prepared worksheet called Drug Research Guide (**Appendix 2**). The objective to understand the basic drug information included searching on the Internet to find the brand names, generic names, indications, contraindications, dosage, directions, side effects, and warnings. The students then needed to know where to search and find information on the Internet, which was the next objective of helping students read particular English websites.

From building this knowledge, the students could then meet the last objective of effectively sharing their knowledge with patients, including empathy and how to talk to patients with empathy by "standing in another person's shoes."

4. Class expectations

I had two main expectations of the students in this class. The first expectation was that they learn to work with others, regardless of how they personally felt about them. They sat in assigned pairs or groups throughout the eight weeks, and worked on the research and participated in discussions together. The reasons for this pairing or group work were to support each other in English and to expand their thinking and ideas by listening to and sharing with others, as they would be expected to as part of a medical team at work.

The other expectation was that the students use the resources and tools they have to always provide an answer to the patients. With the amount of information that can be accessed at our fingertips through mobile phones and the Internet, the students should know that it is their responsibility to search for and find the answers, if they do not know the answer at that time. Because I personally consider it unprofessional in this day and age for a pharmacist to simply answer, "I don't know" when there are so many resources available that provide the answers, the response should be "Wait one moment while I check." The students had their mobile phones and tablets on their desks, and were shown some applications and websites that would help them to answer questions in English and Japanese. As they all know how to obtain translations of the sites, knowing the answers in English can certainly help them when responding to patients in their first language Japanese, too.

5. Class procedures

Every week, the students were presented with readings on the topic, and then had to research the assigned medicines on the Internet in order to answer the proposed questions. The questions were possible questions that patients may ask about the medications (**Table 1**). They were to be answered as a pharmacist, providing an explanation, suggestions, and empathy where necessary. If they did not do the homework readings or research, they were not able to answer the questions or participate in the discussions. It took time for some of the students to realize that the focus was on participation in these class discussions and the out-of-class study and research. Since the class work was worth 80% of their final mark, and only 20% was assigned to the final test, the students were required to be in class to participate.

In order to build confidence in speaking English, the textbook was a conversational handbook for pharmacists (**Figure 1**), and the conversations from that handbook were listened to, practiced with their partners through role-play, and then used in answering questions about the topic. Reviewing the English phrases and terminology was important in class and providing the opportunity to use them immediately was a way to reinforce the learning. The handbook provided the conversations in both English and Japanese. The students were to use this handbook as another useful tool to be used when communicating with patients.

For example, when practicing a dialogue on a diabetic medication, the students were able to use the phrases in that dialogue to answer a question about the lifestyle of a patient to control sugar glucose levels. The dialogue gave the opportunity to discuss sulfonylureas (SU medications) and possible side effects, like hypoglycemia. In North America, SU medications are often taken with Metformin (a first-line diabetic medication), and on occasion can cause the blood sugar to drop too much, so we discussed hypoglycemia and eating patterns, as well as the differences in "first-line" diabetic medications between countries. The students had not yet

Table 1. List of Patient Questions

1. I missed a dose of my medicine. Is that okay?
2. Can I take acetaminophen with a beer?
3. I'm scared to give my child Tamiflu because of what I heard on the news about it. What should I do?
4. What is the difference between a heart attack and a stroke?
5. Can I take my Lipitor© medication with juice?
6. What should I do if I have a peanut allergy?
7. What is an EpiPen©? When do I use it?
8. What does 6.2 mean on my recent HbA1c test?

Figure 1. Handbook

considered the "human side" of diabetes or the reality of the medications on patient lifestyle. For communication about the medication, it was important for them to understand how medications could affect or be affected by the lifestyle of the patient and how that information is necessary in patient education.

6. Drug Research Guide

The Drug Research Guide (**Appendix 2**) was a worksheet I prepared for the students to use when researching the medications on the Internet using websites like rxlist.com, drugs.com, and rad-ar.or.jp/siori/English. This worksheet was explained in class and completed together as a class, focusing on how to fill it out, where to find specific information on the website, and what the applicable information was. Once the students were familiar with the sites and how to retrieve specific information, they were expected to do it for homework. The students, who did the homework for practice, reported that it became easier to use and that they could find the necessary information quickly. The students who refused to do this homework soon found that they were unable to answer specific questions about the medications and did not gain any confidence in using these sites to retrieve information.

7. Class evaluation

The students were evaluated on their attendance and participation in the pair and group activities, as well as the mini-tests, which covered the potential patient questions. The mini-test questions were reviewed in class to aid in the English answers and to provide support for the written final exam. The homework included readings about the disease states or medications, which were provided in advance of the discussion and research. The final class project was to create a pamphlet that would provide visual communication in print and pictures/images to aid in communication with patients. The topic given was about the EpiPen© (epinephrine injection), but the students could decide within that topic to explain how to use the EpiPen©, in what cases it is used, or about anaphylaxis.

I often get asked why I include this pamphlet-making activity, but I feel it is important that the students try creating visual tools in class, so that they have some experience doing this later in their future jobs when communicating with patients. When observing community pharmacies overseas, pharmacists were making their own pamphlets to assist in counseling and educating patients. The provision of a visual tool helped the pharmacist to recall previous discussions with the patient, and also helped the patient with drug adherence and lifestyle changes to improve health outcomes. Just like learners in school, some patients are stronger in visual memory, so the aid of a pamphlet or poster can be an important tool for drug adherence and self-management. Another theory behind providing a pamphlet is adding the sense of obligation to the interaction, which encourages the patient to follow through with the education received in the pharmacy. Seeing the pamphlet on the fridge, for example, would encourage adherence and remind the patient of the discussion or advice received from the pharmacist (**Figure 2**).

There were surprising results from this pamphlet activity because the students worked effectively with their partners in the limited time to produce the product and then showed pride in the final product they produced. I observed thought

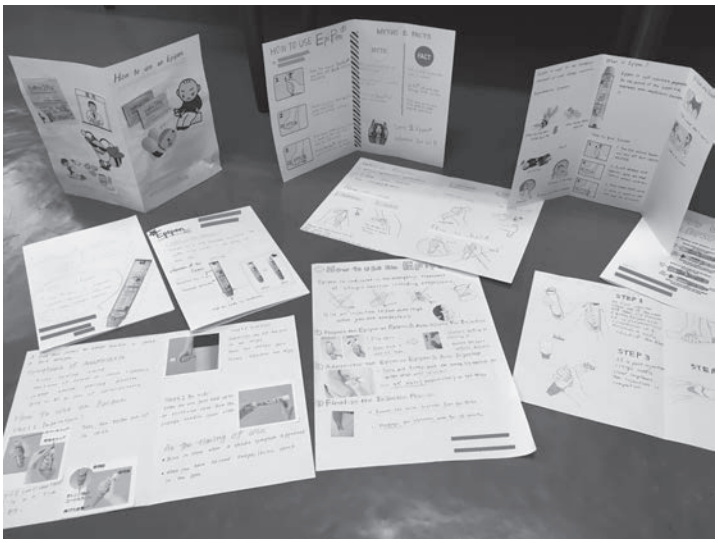

Figure 2. EpiPen® Pamphlets

and effort put into the content and presentation of the pamphlet. They planned and discussed the pamphlet with their partners, and then were quite happy with the final product they produced. They understood the reasoning behind using a pamphlet for patient education and communication.

I used a simple rubric to evaluate the student work. They were required to follow specific instructions and were given a specific time limit for working on the project (45 minutes in class). They were evaluated on following through on the topic and not getting sidetracked with unnecessary details. The English had to be simple and clear. They had to have a title, an introduction, visuals (photos, diagrams, pictures), and correct English spelling. The design had to be organized and clear in presentation. Finally, they were evaluated on their behavior and attitude when working with others on the task.

8. Future considerations

In the future, I would like to have a whole semester to explore more topics and medications with the students. Because it is their second language, time is required for processing the English along with the topic of study. With more time, I could also work on the English mechanics in writing and speaking, like focusing on correcting mistakes in the pamphlet and in their mini-test answers. Of course, having a communication class earlier in the first to third year of pharmacy study in combination with the other compulsory English studies would provide the opportunity for the students to learn the communication skills together with their pharmacology studies, although the argument for having it in the fourth year of study in conjunction with other practical studies could also be debated.

9. Conclusion

This was the second time to teach this Clinical Pharmacy English course as a training class in communication skills. The entire pharmacy education program has been moving towards the practical and clinical side of pharmacy, so the students seemed to have a greater interest in learning about how to communicate about the medications with patients as they have more exposure to this practical mindset. The role of pharmacists is moving away from mere dispensing to patient-oriented care, so it is essential that the students are equipped with specific skills to work with patients as health care providers in their clerkships and later as working pharmacists. Of course, these practical English skills will be an advantage in the medical field as Japan approaches the 2020 Summer Olympics.

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Video/YouTube Resources Used in Class:

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2. YouTube: Diabetes made simple <https://www.youtube.com/watch?v=MGL6km1NBWE>
3. Video: (2016 Mylan Specialty L.P.) How to use an EpiPen©: <https://www.epipen.com/about-epipen/how-to-use-epipen>

Appendix 2: Sample Drug Research Guide worksheet

Drug Research Guide

＊***Fill this out in English.***＊

Name of Drug: Generic 一般名- _____

Brand 商品名- _____

Dosages available 用量: _____

Kind of Medicine: (circle) 剤型

tablet capsule liquid/syrup injection drops patch

powder suppository lotion cream ointment inhalant

Indications 効能効果: _____

Directions 用法: (i.e. take with water, do not chew, take 2 times a day, etc.) _____

Missed dosage or overdose: (what should you do?) _____

Active (Medicinal) Ingredients 主成分: _____

Inactive (Non-medicinal) Ingredients: _____

Interactions 相互作用: (with food or other medications, supplements) Avoid:

Side effects 副作用: (may cause…) _____

Contraindications 禁忌: (who cannot take this: pregnant woman, children, etc.) _____

Warnings/precautions 注意: (safety information) _____

Other comments: _____

The underappreciated art of teaching and developing discussion leadership skills

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Keywords discussion skills, leadership, speaking classes, medical topics, tutorials, curricula

Introduction

Although many ESP and EMP curricula include sections on developing or practicing presentation skills in English (and indeed it is not difficult to find research papers, books, conference presentations and/or workshops addressing such skills) relatively little attention is paid to the development of discussion leadership skills.

This is surprising in light of the fact that medical professionals will more likely be required to lead some type of academic or research discussion than give a formal academic presentation. Based on a series of informal interviews with doctors and medical researchers based at the University of Miyazaki Hospital, almost all full-time physicians and researchers queried report multiple experiences of being required to lead seminars, workshops, or tutorials for undergraduate students, trainees, and/or fellow clinicians. These may be conducted in the form of interdepartmental 'confas' (group discussions), in-house faculty development (FD) workshops, as part of the formal curricula for upper-grade students, or as seminars held within the local community sponsored by regional health organizations or pharmaceutical companies. However the critical factor is that such events appear to be more common than academic or professional conferences requiring formal presentations.

It appears then that the ability to effectively lead such discussion-based events is tacitly assumed. But should it be? Not all medical professional are equipped with the skills to lead and manage such events any more than we might expect them to immediately master the art of giving academic presentations.

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Noting the apparent lack of concern for developing such skills, four years ago I created an elective course for 2nd year medical students entitled 'Medical Discussion Skills in English.' If the responses from the standard post-course student questionnaires and the subjective experiences of teachers can be trusted I would have to say that this has been one of the most successful, memorable, and effective courses that I have developed in twenty years of EMP teaching.

This special report outlines, first, nine areas of pedagogical considerations, content points, and skill targets that I typically address in managing the course, followed by a brief explanation as to how to organize such a course, and finally concludes with a list of the pedagogical and clinical benefits derived therein. It should be noted that the development of such skills or any course created to inculcate such skills, need not be applied, taught, and practiced only in English, nor is it limited to medical topics, but can in fact be adapted to any language or academic field.

1. Pedagogical considerations, content points, and skill targets

1.1. Distinguishing discussions from formal presentations

Without explicit instruction otherwise, students may approach discussion leadership as if it were identical to giving a formal presentation. In fact these differ in many basic respects. Among the differences that should be made clear to students are:

a. The physical setting of a discussion is generally not that of an individual standing in a prominent position before an audience of 'listeners' but, more often, among them.
b. A presentation is essentially monologic, whereas discussions are primarily dialogic.
c. In a presentation it is normal to view listeners as an audience who are relatively passive, whereas a discussion involves participants who should be active.
d. A presentation is essentially exclusive, with focus almost completely upon the presenter, whereas a discussion is

essentially inclusive.

e. Presentations tend to involve the transmission of knowledge or opinion in one direction, while discussions are more open-ended and require negotiation in real time.

1.2. Topic Selection

a. Discussion leaders should always give priority to the potential relevance, meaning and interest for participants when selecting a topic.

b. Leaders should be highly conscious of the length, breadth, and depth of the topic they choose. If the allotted discussion period is 20 minutes, discussion leaders should be acutely conscious of choosing a topic that can be introduced, absorbed, and discussed within that period of time.

c. Leaders should have a real interest in the topic they choose and should conduct enough research to be more aware of the contents of the topic than the participants, but not to the extent in which it actually inhibits input from the participants.

d. When teaching topic selection considerations to medical students, the teacher would do well to warn students against utilizing sources or resources that are too dense or technical (such as specialist journals) or too vapid and facile (as with supermarket tabloids). Non-native English speakers may have some trouble gauging the reliability of sources.

e. The importance of staying on topic and avoiding the temptation to meander into sub-topics should be inculcated from the beginning of the course and is an essential part of the monitoring process to be carried out by the teacher.

1.3. Engaging the Participants

a. Maximizing interest among participants at an early point in the discussion is paramount. In fact the central factor in turning listeners/audience into active participants in a discussion is to quickly develop a knowledge of who the participants are (not a difficult task if they are current classmates) and to quickly gauge to what degree they are aware of or knowledgeable about the topic.

b. Discussion leaders should aim to maintain a balance between the informative, the persuasive, and the entertaining. A lack of any one of these critical factors may reduce participant interest significantly.

c. Discussion leaders should maintain a 'comprehensible input plus one' formula when both introducing and managing the topic. Content should be sufficiently challenging so that the interest of participants is piqued, such that new input be easily added to the participants' existing knowledge or understanding schemas.

1.4. Opening the Discussion Session

a. Discussion leaders should avoid opening the session using stock phrases such as, "Today's topic is…" or "I'm going to talk about X" which may mark the approach not only as somewhat juvenile (being reminiscent of a primary school show-and-tell session) but also may place participants in a passive 'audience' mode from the outset.

b. Attempts should be made to initially personalize content, to make it relevant to the participants' lives. For example, a focus on sleeping disorder treatments may be prefaced by personally directed questions such as, "How long do you sleep on average?" or "What do you do to ensure a good night's sleep?" before launching into the topic proper.

c. Openings that only indirectly address the topic but create interactive platforms that involve participants and activate cognitive schemas are more likely to pique participant interest in the actual topic.

1.5. Directing Questions

a. To stimulate active participation, leaders should address questions to participants (questions need not be thought of only as follow-up 'testing'). Content is often better elicited through questioning participants rather than immediately transmitting information or simply 'telling'.

b. Questions should be directed to individuals, as general questions offered to a whole group often do not generate responses in many East Asian cultures, in which impromptu responses and opinions may violate norms of collective politeness.

c. All participants should be targeted when giving questions. Leaders should not focus inordinately among the more confident or outgoing personalities.

d. Leaders should not hesitate to ask for further explanation, expansion, or examples from participants.

e. Mechanical or formulaic questions to which the answer is pre-ordained ("Do you like sleep?") should be immediately discouraged by the teacher as they will likely inhibit, not enhance, interactions.

1.6. Using handouts and props

a. If the leader has produced a handout, they should give very strong consideration to the practice of NOT distributing the handout at the beginning of the session, which will likely turn the spoken interaction into an individualized reading session.

b. Any handout or print distributed by the leader should be edited in advance for quick and easy reference. The leader should highlight key points of interest through underlining, color changes, or the use of bullet points. Long texts

unedited from their original forms should be highly discouraged.

c. The leader should be an active guide in directing any reading activity, with specific, clearly marked reading foci selected.

d. The use of realia or physical props should be encouraged where feasible as they add a physical dimension that not only maintains the attention of participants but can give greater substance to more abstract discussions.

e. Every effort should be made to avoid turning the discussion into a session in which either the leader or participants are primarily engaged in 'report reading'.

1.7. Introducing new vocabulary

a. Leaders should have some idea in advance regarding vocabulary items essential to the discussion that may not be well-known among participants.

b. Leaders should also have a sense as to whether such items (including lexical phrases, chunks, and multi-word expressions) hold an intrinsic English-learning value (wherein it is believed that these should be learned for the long-term) or instrumental value (wherein the item need be understood only to decode the topic or text under discussion but holds little long-term retention value).

c. New vocabulary need not be pre-taught. Leaders can check comprehension of such items during the discussion, before explicitly 'teaching' them (if needed). Offering definitions or explanations if and as need arises may help maintain the flow of discussion better.

1.8. Including a task

a. The inclusion of a task during the discussion will more likely enhance participant interest and attention.

b. The task need not merely be comprehension questions asked by the leader at the end of the discussion. It could be a student-student (peer) task which could appear at an intermediate point in the discussion and used as a means to enhance cognition of the discussion topic.

c. The task could be written explicitly on a handout or it could be stated verbally, before, during, or after the session. Asking for 3-point summaries of the discussion, 'What have you learned from this?', or personal extensions and/or impressions of the topic add to the participants' sense of active inclusion.

1.9. Closing Strategies

a. Leaders should avoid ending on popular, but overly curt, phrases such as "Finished" or "That's all."

b. Leaders should always consider leaving participants with something of take-home value (beyond a few new vocabulary items). The 3-point summary question mentioned above in particular can serve to consolidate key points or to re-establish these points if it appears that they have not been duly grasped.

c. Regularly asking participants if they have any further comments or questions at the end of a session is a good practice that should be encouraged.

d. Care should be taken to avoid finishing with glib or otherwise obvious, foregone conclusions: "So, sleep is necessary for your health."

2. Managing a course for teaching and inculcating discussion leadership skills

Using a course of 15 weeks' length and an ideal number of 24 students as our model, such a course can easily be arranged in the following fashion (the manner in which I have conducted it over the past four years):

Week 1: The teacher models a good discussion (using many of the techniques and principles listed above) and elicits key points on discussion leadership skills from the students. The teacher also lays out the weekly responsibilities of both leaders and participants and explains how a typical class will be organized. The first set of leaders is named (ideally, 6 of the 24 students).

Weeks 2–13: Using a model of 24 students, 6 will serve as leaders each week. It is their duty to prepare to lead the discussion as homework. This means that over a period of 4 weeks, each student will have been a leader once. Over twelve weeks this means that each will be a leader three times. It is wise to select the more proficient and competent students to be the leaders in week 2, the first week in which students are actually leading discussions.

Within each class (assuming 1 class per week) there will thus be 6 separate groups, each containing the designated leader and 3 participants (minimum 2, maximum 4). Each discussion should be scheduled for about 25 minutes (assuming a 90-minute class), with time closely managed by the teacher. Once each discussion ends, the 3 participants rotate to the next leader.

This means that each leader leads the discussion 3 times per class, while participants will engage in 3 separate discussions. 3 is a significant number because during the first discussion the leader may encounter problems which can be ironed out or rectified during the next 2 sessions. Four sessions however can easily become repetitious and tiresome. A simple algorithm can also be developed by the teacher to

ensure that, over the course of 12 weeks, all students will have engaged with all other class members, both as participants and as leaders.

The teacher's primary role in the discussion sessions is as timekeeper, managing student movement between discussions, monitoring for breakdowns or other interactional issues, and occasionally jumpstarting discussions that are less than robust. General comments on improving the quality of the discussions or other salient content points can be raised just before the end of the class.

Weeks 14-15: These final classes can be used for review or summation. Students can share significant medical or linguistic findings or points of interest developed during the course (I require the taking of both clinical and language notes before the end of each class). This could also be an opportune time to allow students to visit leaders and/or attend discussions that they were unable to join during the regular sessions.

Further, having students individually meet with and tell the teacher what they learned in the course, and also whose discussions they found most stimulating and why, can help meet grading necessities (although I would argue that the bulk of grading should be based on attendance and effort in both leading and actively participating in discussions on a week-to-week basis).

3. Ten simple benefits arising from such a course

Other than the obvious benefit that students should develop better discussion leadership skills as a result of this course, several other beneficial by-products emerge:

1. Giving students the autonomy to choose topics and create/manage their own discussions is intrinsically motivating.
2. The discussions maximize student-talk time, much of it interactional and negotiated in real-time, which may not be feasible in other courses.
3. By leading the discussion three times in one session, and leading three distinct discussions over the course period, students can improve upon performances gradually, resulting in increased senses of skill development, confidence, and achievement.
4. The fact that participants are peers creates a relatively unthreatening 'audience' for less proficient English speakers.
5. The fact that leading the discussion serves as a type of prestige performance focusing upon output generally ensures that students are well-prepared both in terms of medical content but also in terms of the English forms necessary to lead the discussion.
6. The nature of the discourse demands negotiation and active cooperation with others.
7. Although the discussions are managed in English, these skills can easily be applied to the students' L1, thus having a washback effect on their Japanese interactive speech skills.
8. By carrying out the discussions, students become more aware as to how good education works, gaining a heightened sensibility as to how new information is best absorbed by learners.
9. Creating a discussion topic and managing its contents demands self-discipline and creativity in equal balances.
10. Both medical content and linguistic forms can be readily absorbed, as they appear in meaningful contexts generated by the communicative wishes and/or needs of the students themselves.

Summary

Developing discussion leadership skill classes has been a rewarding experience for both the students participating in the courses and for myself as a teacher. Given the degree to which discussion leadership is demanded within the medical community, combined an apparent lack of existing courses addressing such skills, EMP teachers would do well to add a similar course or lesson to their own curricula.

*The slides associated with the presentation given at the 2016 JASMEE Conference are available from the author at mikeguest59@yahoo.ca

The Medical English Communications Center at the University of Tsukuba

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1. Background of its establishment

Medical communications centers provide an array of support services to the staff of the medical institution to which they belong, including, primarily, editing of English-language manuscripts, as well as education in English for Medical Purposes (EMP), assistance with responses to comments from journal editors and reviewers, translation of institutional materials, health care interpreting, and facilitation of international academic collaboration and exchange.[1]

The first medical communications center in Japan, the International Medical Communications Center (IMCC), was established in 1990 by Professor J. Patrick Barron at Tokyo Medical University. At the University of Tsukuba Faculty of Medicine, the opportunity to follow Professor Barron's lead presented itself in 2009, when the university became one of the participant universities in the Global 30 (G30) Project. The aim of this MEXT-funded project, which ran from 2009 to 2014, was "to promote internationalization of the academic environment of Japanese universities and acceptance of excellent international students studying in Japan."[2] In practice, this meant that G30 Project-funded universities would provide courses in English, improve their systems for admitting international students, promote international cooperation, and nurture superior personnel capable of playing an active role in the global arena.[3]

For the University of Tsukuba Faculty of Medicine, a natural consequence of this intensified internationalization of its curricular and research programs was a heightened emphasis on English, with two of the first steps taken being to increase the number of EMP personnel from one to three and to set up a medical communications center modeled after the IMCC. The center was to be called the Medical English Communications Center (MECC), and its mission would be to support the medical faculty's scientific communication in English.

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This report is based upon a presentation delivered at the 19th JASMEE Academic Meeting held at Keio University, Hiyoshi Campus, Yokohama, on July 17, 2016.

2. Two kinds of educational service

Initially, two kinds of educational service were provided: (1) editing (of manuscripts to be submitted to English-language journals, of slides and posters to be presented at international conferences, and of revisions required by the journal editor and reviewers [this latter type of editing, in MECC parlance referred to as *rerevisions*]) and (2) presentations coaching (of talks to be given at international meetings).

The keyword here is "educational": the services offered by MECC are distinct from those offered by editing agencies in that MECC editors explain the edits and provide tips to the authors on improving writing. (These explanations are given through Track Changes comments in the margins of the electronically edited files, or face-to-face if deemed necessary by the editor or if requested by the author.) Presentations coaching also incorporates advice and feedback on presentation content, structure, delivery, and design.

Despite its educational component, the volume of work involved in the editing service is such that it is considered a supplemental duty to the MECC staff's usual teaching and research duties and is therefore offered at a fee: 1500 yen per manuscript page, 100 yen per slide, and 250 yen per poster text box. These fees are paid from the author's university research budget into the MECC budget; MECC editors in turn access these monies to make work-related purchases, such as for office supplies, books, conference fees, and academic memberships. By contrast, the presentations coaching is considered wholly educational in nature and is offered free of charge.

3. Third type of educational service

The first milestone for MECC came soon after its inauguration, when, in the spring of 2010, it was asked to provide a

third type of educational service: training in history-taking in English. This training was offered through a 10-session workshop to fourth-year students as part of their Clinical Communication course taken prior to the Objective Structured Clinical Examination (OSCE).

The workshop was run in conjunction with the Ibaraki Simulated Patient Association, which provided the simulated patient, a Japanese speaker of English, to play the part of the patient in history-taking role-plays with the student-doctors; the MECC professors provided feedback on English and history-taking skills. Since that first workshop in 2010, the workshop has run every year and is now an integral part of the Clinical Communication course.

4. All-English website

Another important milestone for MECC was the launch in April 2013 of a new, all-English website. The website provides step-by-step, photo-based instructions for using the different MECC services. A list of "Conditions of Use" follows each set of "How to Use the Service" instructions and includes the following conditions: up to 3 weeks must be allowed for editing; rush deadlines are not accepted; the service is open only to University of Tsukuba Faculty of Medicine members; editing is provided primarily for the English-language aspect of the paper, not for the formatting of the paper or for the accuracy of the references; the editor's contribution must be acknowledged in the Acknowledgments section; and editing is not provided for electronically translated text. Authors apply for the service by submitting an online application form, with the zip file of the manuscript attached. To avoid an influx of editing requests from other departments of the university, or indeed from outside the university, the "How to Use the Service" section of the website is accessible only to members of the medical faculty. For readers' reference, therefore, screenshots from the section are provided in **Figure 1**.

The website also includes a Self-Study section with worksheets on scientific writing and a PDF booklet on history-taking in English; these materials are accessible to the general public, thus extending MECC's reach beyond the medical faculty (for more information, go to www.md.tsukuba.ac.jp/MECC/).

5. Current status

To date, MECC has handled 460 editing requests (**Figure 2**). The majority of requests each year has been for manuscript editing. In 2013, the number of overall requests for services more than doubled the number in 2010 (from 48 in 2010 to 122 in 2013). This increase coincided with the launch of the new website, with its easy-to-understand photo-based graphics on how to use the services and its online application system.

The number of requests has since remained steady, with 130 in 2014 and 118 in 2015. And as MECC and its EMP staff have become more familiar to and its services more utilized by the medical teaching and research staff, so has its place in the faculty become more prominent: in 2015, the MECC office was moved to a larger space, located centrally within the faculty, with office areas for the 3 MECC staff as well as a communal area. This space is due to become even more prominent as an "English hub" for use by both students and medical faculty when MECC staff move into their own individual offices later in 2016 and the present MECC office will be given over entirely to English activities: small classes, mini seminars, English conversation, journal club meetings, and so forth.

Reflecting back and comparing the pre-MECC days with today at the Faculty of Medicine, what is most striking—and perhaps most unexpected—is how interwoven into the fabric of the faculty the office and, by extension, its EMP staff have become. Whereas previously the EMP instructor's office was buried somewhere within the rabbit warren of other professors' offices, now the EMP staff are located in a prominent position within the faculty and in a space that is immediately identified with English activity of various forms. As the medical faculty teaching and research staff have returned repeatedly for editing or presentations coaching, so has the relationship between them and the EMP staff grown stronger. Moreover, whereas the EMP staff previously did "proofreading" on an unofficial basis, they now do "editing" through MECC as an official part of their work, thereby ensuring proper acknowledgment of their contribution to the medical faculty's publications.

In conclusion, then, despite the undoubtedly heavier workload for the EMP staff that ensues from being part of a medical communications center, the extra workload is offset by the many gains that accrue to them in terms of consolidating their position within the medical faculty, finding their teaching and research enriched by their editing work, and developing their careers in general. Setting up a medical communications center—all in all, it's a win-win situation for EMP and medical faculty alike.

Acknowledgements

The author would like to express her deep appreciation to Professor Koji Hisatake of the University of Tsukuba Medical

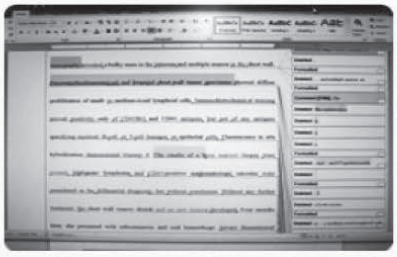
Step 1: Request for editing

Fill in the application form below and send it, with your files attached, to the MECC office.
Ample time (3 weeks) must be given. Edits will be done on a first-come, first-served basis.

Step 2: Editing of the paper by a MECC editor

Manuscripts are edited using the "Track Changes" function in MS Word.

Step 3: Edited paper returned to the author



If necessary, the responsible editor will meet with the author to explain the edits and to answer any queries the author may have.

Step 4: Response to the journal

Upon receiving the journal's response, the author must show any comments about the English of the paper to the responsible editor.
The responsible editor will check any revised sections of the paper.
For this service, please contact the MECC office first, and the office will then transfer the files to the responsible editor.
(No additional cost will be charged for minor revisions.)

Step 5: Reprint provided to the editor

The author will provide the responsible editor with a reprint of the article (printed version) as it becomes available.

Figure 1. MECC website photo-based instructions on how to use the manuscript editing service

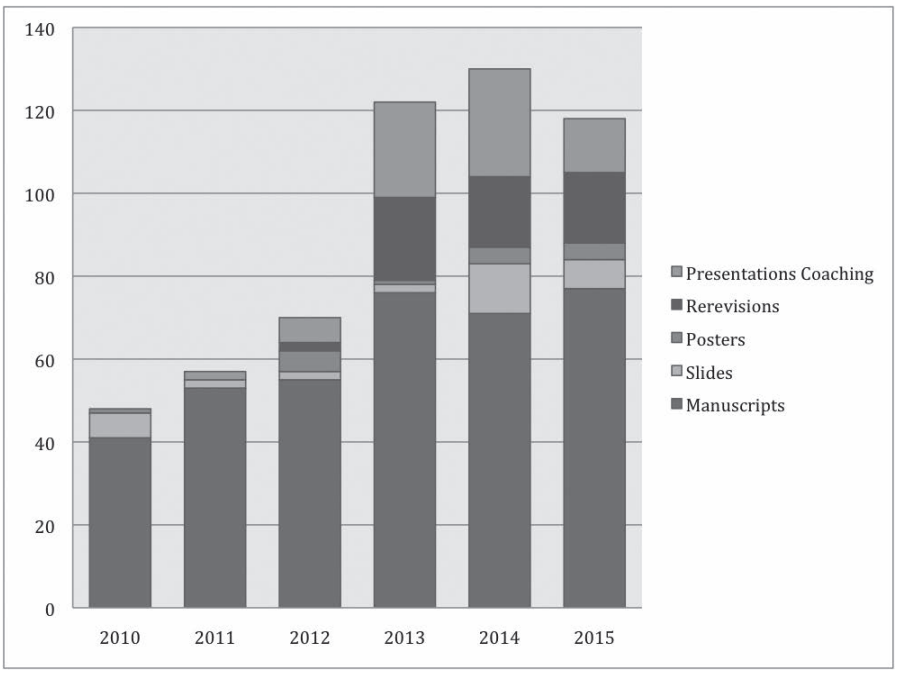


Figure 2. Number and breakdown of MECC services provided from 2010 to 2015

Faculty, under whose expert guidance MECC has been able to expand and develop its mission within the faculty. Heartfelt thanks also to fellow MECC staff, past and present—Brian K. Purdue, Thomas Mayers, and Bryan Mathis—without whose dedicated support and hard work MECC would not be possible. The author is also grateful to professors J. Patrick Barron, Ruri Ashida, and Raoul Breugelmans for their invaluable advice and suggestions on setting up a medical communications center.

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Pharmacist interviews: student-created visual aids on video

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1. Background

By their fourth year, pharmacy students will have acquired a great deal of scientific and clinical knowledge, yet have forgotten a nearly equal deal and have no idea how to apply what they have managed to retain. Surprisingly, though, Pharma English or other forms of English for Special Purposes can prove to be a good way to bring all their knowledge together. The many specialized subjects—pharmacology, pharmacognosy, medicinal chemistry, pharmaceutics, pathophysiology, etc.—may be considered the warp, or longitudinal threads. English, clinical sciences, clerkships in the 5th and 6th years, and other communication sciences will prove the woof, or transverse threads that will weave through the individual disciplines to bind them together into a coherent whole that the students can use in their professional lives once they have shouldered the full responsibility of their roles as pharmacists and scientists.

2. Our program

Foong has developed a 4-year English for Pharmaceutical Purposes program that he calls SSTSEE or Step-wise Step-up Tertiary Science English Education, beginning with basic science terms in the freshman year and slowly progressing to more challenging and applied uses of English with a focus on oral presentations and interactive activities (**Figure 1**), such as would be required in professional settings. Detailed descriptions of Dr. Foong's program have been published elsewhere.[1-3]

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3. Fourth and final year of mandatory Pharma English

During the first semester, 4th-year students in groups of 3-5 each, give presentations based on a published journal article of their choice, pretending it is their own research. During the initial few lectures, the educator teaches the basic IMRaD structure, and provides them with information on how to select appropriate articles to present.

While one group presents using PPT slides based on the material in the article, the rest of the class pretends to be the audience. They are expected to write up original summaries of the presentation, ask pertinent questions, and otherwise "participate" in the mock international conference. Although some of students did make a real effort and we were able to engage in some meaningful discussions, a large percentage of the "presentations" were actually students just reading from the text of the article.

To deal with this issue, we plan to prepare a better introductory segment next year on how to evaluate med/pharma literature and present the data effectively. Drug information, the dissemination of information based on evidence-based data, is an essential skill for all practicing pharmacists and these same skills are needed regardless of whether communication is in either Japanese or English. We will include more specifics on evaluating study design and statistical methods, teach students to root out questionable research, to check for potential bias, conflicts of interest, research quality,

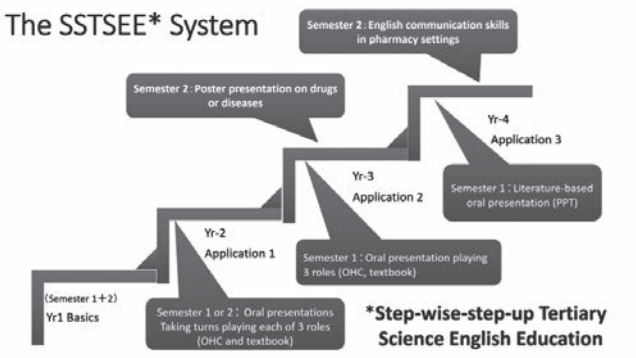

Figure 1. The SSTSEE System developed by Foong
SSTSEE: Step-wise-step-up Tertiary Science English Education

and the clinical/scientific relevance of the findings to ensure that they will be more selective in choosing articles in the future.

We also need to find ways to keep the students engaged in the content during presentations. Dr. Takayuki Oshimi reported on his journal club research at the 19th JASMEE conference, showing how incorporating editorials and letters to the editor in evaluating the original articles may be one way for students to gain a better appreciation of their studies, and to understand the implications for healthcare. Another suggestion offered by the students in a questionnaire was to better prepare the students for each presentation by giving them more time with advance material, possibly from a week before the presentation.

Ultimately, our goal will be to instill students with an awareness that this is not just some random torture concocted by the educator, but a lifelong skill that they will need to master if they hope to succeed as a medical professional in any capacity, be it in the pharma industry, as a practicing pharmacist, or most certainly if they hope to pursue further education and advancement in academia.

4. OTC interviews and counseling

In the second semester, which is the focus of this paper, we work with a textbook written by Foong (**Figure 2**). Content is separated into two broad categories, over-the-counter (OTC) products and prescription drugs. OTC drugs refer to pharmaceutical products that are sold in drugstores and other general settings without a doctor's prescription. With OTC products, the patient relies on the pharmacist's advice to decide which one to purchase, so the pharmacist bears a great deal of responsibility in correctly assessing the patient's needs and recommending the appropriate product. Most importantly, the pharmacist must make a decision. Is it safe to allow the patient to self-medicate, or should she advise the patient to visit a medical facility for a formal workup if she suspects the patient requires immediate medical care?

Figure 2. ***Basic English Communication for Pharmacists II*** **written by Foong**

For example, a recent study looked at whether pharmacists in community pharmacies were able to provide the correct emergency advice to patients who reported symptoms of stroke.[4] Researchers posing as a family member called 72 randomly selected pharmacies from among approximately 70,000 retail pharmacies in the US. Of those calls, 65 were answered by a pharmacist. The caller pretended that his 69-year-old mother had recently developed a sudden difficulty in talking, weakness, and unilateral paralysis, all signs of ischemia which had resolved spontaneously. He asked the pharmacy for advice on what to do if his mother began showing symptoms again. Only 20% of respondents answered correctly: to call immediately for an ambulance. The most common answer, accounting for about 70%, recommended that the caller drive his mother to the ER. Time is essential during a stroke, and ERs are notorious for long waiting times: only ambulance patients will be given top priority, so current guidelines and common sense dictate calling an ambulance. Previous research has shown that pharmacies are often the first place patients will call for health-related advice.[5] This is definitely not a situation in which the pharmacist can sell the patient a bottle of headache pills and advise, "Take two aspirin and call your doctor in the morning."

In order to give pertinent advice, the pharmacist must do a thorough work-up of the patient's complaints and ask about potential instigating factors, which might provide hints on whether the patient merely has a minor complaint or if symptoms suggest an impending and serious emergency. Students were taught about the types of questions they should ask, and what sort of information to look for.

The second half of the semester covered how to deal with patients who have already been diagnosed by a physician and come into a pharmacy seeking to get their prescriptions filled. Time limitations make it impossible to cover all of the major disease states featured in the textbook, but we generally try to cover at least a few of the most common chronic disease states such as hypertension, diabetes mellitus (or metabolic syndrome), and breast cancer.

The textbook provides sample skits of pharmacist interactions with patients giving students an opportunity to learn key phrases, terminology, and concepts. After practicing these skits and going over the text to review the disease state and standard treatment, the students were asked to create original skits, both in an OTC setting and in a prescription drug setting.

5. Pharmacist impact

Chronic diseases have been shown to be an area in which pharmacist interventions can prove very effective. Medical economics is a major concern as healthcare costs continue to rise worldwide, placing huge burdens on taxpayers and governments. Pharmacist interventions not only cut drug costs, but more efficient drug use leads to better control of disease states and decreases in patient morbidity and mortality which results in major reductions in healthcare expenditures.

A study in Canada[6] found in a 6-month controlled study that active interventions by the pharmacist in patients with chronic hypertension during once-monthly blood pressure check-ups had a significant or near-significant impact on multiple parameters. Active interventions involved a thorough review of the patient's medications and follow-up with the prescribing physician to optimize medications and doses when indicated, lifestyle counseling, and blood pressure measurements. Control groups received the counseling and blood pressure measurements alone. Decreases were noted in systolic blood pressures (mean 13.5 mmHg) and BMI, and all participants reported satisfaction with their in-depth pharmacist interventions. Those with previously uncontrolled hypertension attained control, so if these effects could be maintained cost-effectively in the long-term, this would have a significant impact on morbidity and mortality.

Moreover, in January 2016, the American Society of Health-System Pharmacists (ASHP) submitted a comment to the US Senate Committee on Finance asking that clinical pharmacists be recognized as a primary healthcare providers. They cited literature showing that inclusion of pharmacists in the medical team decreased drug-associated morbidity, mortality, and costs.7 Clinical pharmacy service expenditures in various practice settings returned a mean savings of $4.00 for each dollar spent.[8] that pharmacists can play a vital role in improving healthcare, not only in hypertension and diabetes, but in a broad range of diseases ranging from depression, pain management, asthma, and more.[9]

6. Drug interactions

Another area in which pharmacist intervention proves vital is drug interactions.

Imagine an average patient with chronic dyslipidemia, or high cholesterol levels. Current conditions in many Japanese hospitals barely allow the physician a minute to flip through the patient chart, check his laboratory values, and grunt, "Doing well? Any changes? Okay, see you next month." before punching in the patient's usual prescription and moving on to the next patient. Even the bravest may fail to mention those weird muscle aches he's been experiencing lately, afraid the MD is simply too busy to listen to his unfounded worries. It is only after the patient brings his prescription to a local pharmacy to have it filled, that he may feels relaxed enough to mention the pains to the pharmacist who decides to do a work-up. Fortunately, the pharmacist is up on her interviewing skills and will remember to ask about all of the products the patient may be taking, including non-prescription medications, supplements, and dietary changes.

The patient confesses, "My wife recently decided we needed more Vitamin C and began serving us a glass of grapefruit juice every morning." Ding! Food-drug interaction! Yes, grapefruit juice has a bad habit of affecting the blood levels of several classes of drugs including statins, the type of drugs this patient was taking. Muscle pains, while they may be perfectly benign, may also be a warning sign that the grapefruit juice has increased the patient's statin levels, which in turn can cause a breakdown of muscle fibers and resulting in pain. Left uncorrected, the patient could eventually develop life-threatening toxicity. The pharmacist will now contact the prescribing MD on the patient's behalf, voicing her concerns regarding a potential interaction and the physician may decide to lower the dose or just ask that the patient refrain from drinking grapefruit juice.

7. Evolving pharmacist roles in Japan

As this illustration shows, a pharmacist may be in a better position to interview and listen to the patient in-depth, uncovering information on possible adverse effects, drug interactions, or concerns regarding treatment adherence. Patients tend to view physicians with a great deal of awe and respect, but may feel more at ease during conversations with pharmacists. Even when they do have questions or concerns regarding their medications, patients may find it difficult to ask their doctor, since she or he is the one who prescribed the drug. They can be more open with a pharmacist who is a third party in the know.

Pharmacists, especially in the community pharmacy setting, are easy to access, less imposing than physicians, and together with the casual drugstore setting, have provided an ear conducive to casual health-related questions. As such, students must be prepared and trained to provide such services, not only in Japanese, but also in English to any visitors or residents who are not fluent in Japanese.

The Japanese government is now calling for pharmacists to take on a more active role in the community setting as dis-

seminators of healthcare information and services. The powers that be believe medical costs can be saved by taking advantage of this underutilized resource. Patient education is indeed a vital part of preventive disease measures, but will also require human resources and the Ministry of Health, Labour and Welfare (MHLW) seems to believe that it has found the right people to take on these duties.

8. Defining foreign language needs for pharmacists in Japan

Kyoto has been voted the *No. 1 Best City* on an internet poll run by the ubiquitous *Travel + Leisure* magazine, two years running since 2014. Many even find it so enthralling that they settle here semi-permanently. Assuming a fairly large percentage of our graduates will find employment near their *alma mater*, they will need to be prepared to deal with foreign patients, regardless of what type of profession they choose.

A 2012 MUFG survey[10] on foreigners visiting Japanese medical institutions found that most hospitals (74.6%, totaling 46000 patients) have experienced visits from patients who do not speak Japanese. However, 98.1% of these were not tourists, but rather foreign nationals (60% Chinese, 30% American, and 31% Filipino) who live and work in Japan. Medical tourism accounted for a mere 1.9%. A third of the non-Japanese residents cannot communicate well in Japanese, but roughly 61% do speak English. The annual number of tourists from abroad is rapidly approaching 20 million, with a 47.1% growth in 2014 to 2015 alone.[11]

Foreign nationals most often came from China, followed by the US, the Philippines, and India, and most spoke English. The biggest concerns of the pharmacists involved their difficulty in communicating with foreign patients. Over 90% bemoaned the lack of English language resources, and stated there were few if any references available to them.[12]

9. Available tools

Currently, various organizations are attempting to translate Japan-specific materials into English, such as *Kusuri no shiori*, a drug information sheet that can be accessed online (http://www.rad-ar.or.jp/siori/english/kensaku.cgi?mode=en&q=a). In a survey from October 2014 by RAD-AR, the organization that creates these documents, out of the 408 pharmacists surveyed, roughly a third report using these sheets to provide drug information to non-Japanese patients. However, as you can see from their website, the translation is inconsistent, contains medical terms that would be unfamiliar to most laypersons, and even the dosing instructions are a little confusing without better editing.

Osaka Prefecture[13] offers what they call "point-out sheets" where both the healthcare provider and patient can point to phrases written in several languages (English, Chinese, and Korean are currently available) on a sheet of paper to communicate various forms of medical information and drug-related instructions.

10. Why visual aids?

Most visitors to Japan are from Asia: China, Korea, and Taiwan, and the US just comes in at number 5. This means most foreigners who visit pharmacies in Japan do not necessarily speak English well. And despite all their efforts, Japanese pharmacists still have major issues with both pronunciation and correct sentence structures when trying to communicate in English. With both parties linguistically handicapped in this way, it may prove difficult to provide accurate, detailed, and easily understood drug information to foreign patients. This calls for special strategies.

The most recent Cochrane systematic review has found issues in the study designs of research into the many methods currently in place to improve treatment adherence.[14] Given the complexity of the communication, even when all parties are speaking in their native tongues, individual studies have shown that the use of visual aids or pictorial guides does enhance patient understanding and improves both drug adherence and drug safety. This is particularly true in populations for whom dosing instructions are complex (e.g., pediatric or geriatric patients), including, for example, the use of syrups, powders, or fractional doses (e.g. 1/2 or 1/3 of a packet). Combining pictures with a verbal explanations has been shown to improvepatient retention and understanding.[15-17]

11. Videos on visual aid use

With this in mind, I asked my students to create visual aids to help communicate pharmacy-related information to patients and to create skits using these aids in a hypothetical settings. Our tight schedule precluded giving students time to present their skits during class, so they were asked to record their projects on videos on their cellphones and to submit them for evaluation.

12. Student creations

The results were very impressive, showing a great deal of

thought and initiative on the part of the students. It was very encouraging to see how creative the students could be, both in the design of the aids themselves, as well as how they used these aids to convey key information. They were clearly comfortable using the expressions they had learned during class, and while these were used most frequently, they also incorporated many new phrases, and many went above and beyond in selecting topics and settings that were well-suited to pictorial support.

Some notable efforts included a colorful visual aid aimed at a pediatric population (**Figure 3**). The aid introduced a strawberry-flavored antibiotic in a dry syrup (granules) formulation with cute drawings that would most likely encourage a child to take her medicine, and included pertinent information such as potential adverse effects and warnings for use. Another "ad" featured a teddy bear that went over the dos and don'ts associated with a certain medication. In some cases, the students were slightly ambitious in their undertaking, trying to convey very complex information about a drug's mechanism of action. Although the attempt was admirable, more thought needs to go into finding ways to break down very scientific material into digestible size for the layperson, and this is something that we hope to cover this year.

One of my favorites was a video that provided in-depth guidance on taking Fosamac®, a drug used to treat osteoporosis (**Figure 4**). Instructions for its use are very complex since it is taken only once a week, and there are very specific warnings on how it must be ingested as well as detailed precautions regarding adverse effects. The video and dialog were also very well done, and it was an excellent illustration of a case in which a visual aid would be essential in providing pertinent drug information to a foreign patient.

13. Ideas for improvement

In some cases, the students did not seem to understand what a visual aid was, or neglected to ensure that the aid appeared in the video, making it difficult to evaluate their work. Better instructions will be provided this year, taking time to share the videos from last year with the new students. We should also try to create time to show this year's creations to the class. Groups should be made up of two pairs working together rather than groups of four to enhance student engagement. Submissions should also be timed better, since the students will be taking their OSCE examinations towards the end of the semester.

14. Applicability to other disciplines

This activity is not specific to pharmacy and can be used in teaching medical, dental, or nursing students. It may be easier to engage students if they know their work can be used in actual patient care, so examples may be taken from clinical care settings.

Japanese hospitals are notoriously difficult for patients to navigate and the added language barrier makes it near impossible. Most Japanese hospitals do not have signs in foreign languages, or even icon-based universally comprehensible signs. Training hospitals may even consider holding an institutional contest among clinical departments to see which one comes up with the best signs for their respective departments, perhaps led by med/pharma/nursing students on clerkships. It would be a fun activity for the staff, would enhance communication among co-workers, and get everyone thinking about how to communicate vital information using limited time and means.

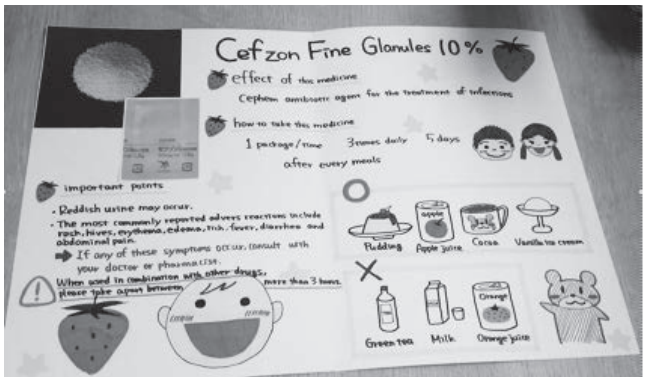

Figure 3. Visual aid on the use of Cefzon®, a strawberry-flavored antibiotic

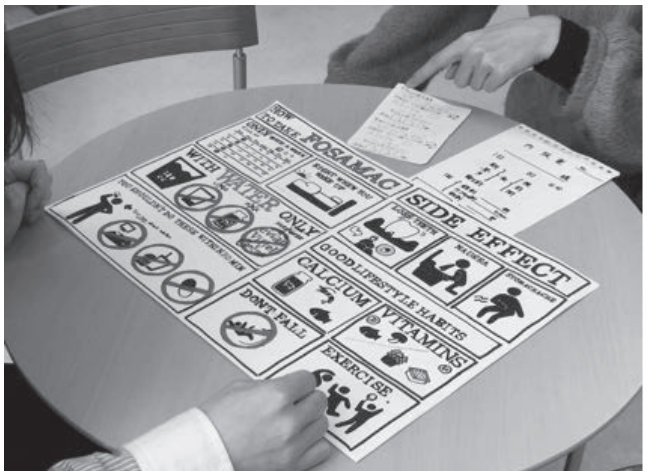

Figure 4. Visual aid illustrating Fosamac® instructions

15. Future vistas: 2016 and beyond

New pharmacy core curriculum guidelines were established by MEXT effective February 10, 2013 and are applicable to the current 2nd-year students. In clinical pharmacy practice, these guidelines call for proficiency in the pharmacotherapy of 8 disease states: cancer, hypertension, diabetes mellitus, cardiovascular disease, cerebrovascular disease, psychiatric disease, immunological disease/allergy, and infectious disease. At the end of their 4th year, pharmacy students who have passed the required exams will have completed their didactic program and go on clerkships comprising 11 weeks in a community pharmacy and 11 weeks in a hospital pharmacy. The new guidelines call for each student to experience being responsible for the pharmaceutical care of at least one patient with each of the 8 diseases during their clerkships.

Including a revision to our textbook, these changes will call for adding more practice material on patient drug counseling specific to these 8 disease states. Covering these diseases, in particular, will make the subject matter more pertinent for the students, since this material will coincide with what they will soon experience in the field. We would like to take advantage of the community provided by JASMEE to network with our peers at other medical and pharmacy universities to find better strategies and teaching materials to instill these skills in our students.

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Have you ever read a medical novel?

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Introduction

As one astute JASMEE member who attended our 19th meeting (July 16-17, 2016) pointed out after my talk on medical novels, I had promised in my abstract to give a list of recommendations, but didn't. I apologize. I wanted to, but it's complicated, as you'll see below, and I didn't have time to do the topic justice in only 15 minutes.

Having been granted kind permission to contribute to the conference proceedings in the *Journal of Medical English Education*, I'm happy (1) to summarize for those who did not attend my talk on July 16 why I believe medical novel reading can benefit Japanese medical students, (2) to remind those who did attend how to avoid pitfalls associated with book-length reading assignments, and (3) to recommend a small number of deserving titles, distinguishing between what you, the reader, might like to read (Addendum 3a) and what you as a teacher can recommend with confidence to your students (Addendum 3b).

1. Summary (with addenda) of my talk at the 19th JASMEE academic meeting, "Have you ever read a medical novel?"

Television and movies and of course podcasts and YouTube as well as the profusion of other media available through the Internet make ours the Golden Age of Communications. So why aren't our students already multilingual? For one thing, most people don't talk to their TV sets or shadow while watching DVDs or movies in theaters. Chat rooms and countless other opportunities await us on the Web, but you can't vouch for the quality of the English spoken or written there.

Reading is still the Royal Road to Knowledge, and reading *real English*, in and out of class, out loud whenever possible, increases familiarity and fluency; reading *medical English* builds vocabulary; students' *reading aloud to each other* in small groups is a useful way to practice interactive communication and improve pronunciation; and *reading independently* (especially after round-robin reading) encourages dictionary use.

Our Japanese students accrue all of these benefits by reading — which is necessary, but of course insufficient. Students need frequent opportunities to use their English actively. How do we get our students to read enough to make a difference? Based on ten years' experience, I recommend to my fellow English teachers at Japanese medical schools a program that induces students to read medical novels, aloud whenever possible.

The only way to induce reading is to require it. But it's not as simple as "assigning" a novel (and that wouldn't be so simple either: the genre is a vast jungle). And most of my students don't know the difference between a novel and a short story. (Ask yours and tell me if it's not true of them. The same goes for other generalizations I make and ballpark estimates I use in the following pages: tell me if they aren't true.)

One out of four or five of my students reports s/he has never read any books in English. Zero. Most of the rest report having read very few. If they haven't read many English books, they probably don't know how to go book hunting in English. They don't know what to look for, or where. So you have to help them with all of these things. And though you know what a novel is, if you've never read a medical novel yourself, you're almost as much of a virgin as your students, no?

Preparation should therefore begin with the definition of a "medical novel" (see the box) and telling the students where to look for one. You must also alert them to the distinction between novels and short stories, since the Japanese term 小説 (*shôsetsu*) covers both categories.

Although in theory it makes no difference whether, to improve their English, students read novels or short stories, in practice, we want them to read a novel, not short stories. Why are short stories ineligible? Because to ensure that students have read their book, you will have to make them,

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This report is based upon a presentation delivered at the 19th JASMEE Academic Meeting held at Keio University, Hiyoshi Campus, Yokohama, on July 16, 2016.

months later, write a book report in class. A book report on a dozen short stories would be a much tougher task: in effect, it would be a dozen book reports; it's impractical.

That's not all: the primary objective of this program is to achieve familiarization and fluency. Successive barrages of new words with each new short story will not serve the main purpose. Of course novels also contain many new terms, but ever fewer with each successive chapter. The perception of increasing reading speed is a confidence booster. That promotes familiarization and fluency.

What is a medical novel? The definition:
A medical novel is a book-length (200-plus-page-long) narrative written by an MD about doctors, patients, their families, and health issues; it is very important that the narrative should include *dialogue* and medical terminology correctly and intelligibly explained for the lay reader. Most reasonably good medical novels do. (Some doctors' memoirs — but not all — also meet our criteria.)

1.1. Key Number One: Reading aloud

Getting your students to read medical novels *aloud* is the best way — short of sending them overseas — to help them familiarize themselves with real spoken (medical) English, as well as medical terminology. (It will not teach them formal written English or so-called academic writing, but that should come later.) Reading a medical novel aloud can be done in the classroom, and I recommend that you start there, setting up "round-robin reading" tables where one person reads to a small group from only one copy of the book, about one-half page at a time, before passing the book to the next person after ensuring that all have understood enough of the passage to move on to the next. (The listeners must not look over the reader's shoulder as s/he reads.)

1.2. Key Number Two: Activating students' passive reading and listening

Students should be encouraged during this phase to ask each other questions; the text is not sacred, perfect comprehension is not immediately required at this stage, and discussion of the reading — provided it's all in English — is as productive as the reading itself, and it activates passive vocabulary.

I often hear it said that Japanese students can read English fairly well, they just can't speak it. My experience is that the way they read (aloud) cannot be understood by anyone, especially their classmates. That's the bad news. The good news is that when they perceive this weakness, they eventually rise to the challenge and try harder to understand and to be understood.

Reading a medical novel will expose students to terms, phrases, and situations they will encounter later in their medical careers. Priming the pump in the classroom with an I-want-to-understand attitude gets the rest of the process going. It's not the whole process, but it's a start.

The *primary* goal of inducing students to read their first novel is not new vocabulary acquisition (although that's important, too) but (as I said) *familiarization*, which is necessary to activate the student's passive vocabulary. Our students "know" (passively) many words that they've had little or no chance to use. Reading aloud, especially to a small group of classmates, is interactive, and therefore more active than reading silently to oneself.

Encouraging students to discuss what they are reading, rather than simply to read quickly and flip as many pages as possible in a race to reach the last page, has additional beneficial side effects: activation of passive vocabulary (recalling what one "knows") and better comprehension through interactive communication.

I encourage students to make eye contact and to hint at words' meanings with appropriate gestures as well as to point to parts of the body whenever organs or other parts of the body are mentioned. This helps the readers themselves to understand and remember better what they are reading, and this habit of pointing to organs and explaining their purpose carries over into better patient interviewing and public speaking skills and smoother oral presentation delivery.

1.3. The Book Report

The book report is not the primary activity. It is a summary whose primary purpose is to prove to the teacher that the student has in fact read the assigned book. It must include the full title of the book and the author's full name. It must be accurate, brief, and clear, but that is not enough: it must be objective, because a purely subjective account (*"I loved it! It made me think about my grandmother when she was in the hospital. I'll recommend it to all my friends!"*) proves nothing at all. The book report is not a 感想文 (*kansôbun*, the kind of uncritical "report" of feelings inspired by reading assigned in school, often over the summer vacation).

I have found it useful to warn students of book reports' indications and contraindications (See **Tables 1 and 2**).

It should take students no more than an hour to write their book report, provided they are prepared. In practice, however, I give my students more time if they need it after the class is officially over. The entire report must be written in class,

Table 1. Things that may be usefully included in an accurate, brief, and clear informative book report

A plot summary—OK
A small number of quotations—OK
The reader's subjective impressions—OK
The reader's background story, follow-up—OK
Analysis, comparisons—OK

Table 2. Things that do not belong in a book report

Unintelligible technical terms—Never! (I tell students: *Never use a word you don't know the meaning of.*)
Far-fetched interpretations—No!
Inaccuracies & falsehoods—Forbidden!
Plagiarism (Stealing Other People's Ideas)—Taboo!

with the book at hand, without access to electronic media (apart from the e-book reader, if the student has chosen to read an e-book).

It is useful to remind students never to use words they do not understand. It's OK (as indicated in the table) for the book report to include subjective information (such as whether the student liked or disliked the book) — provided the report also includes sufficient objective information (such as *why* the student liked or disliked it). For students who have a less-than-optimal understanding of the difference between "subjective" and "objective," a useful way to make this point to is to say, *"It's fine to tell me whether you liked or disliked the book, but if you do, you have to explain why. Give reasons and examples! Be specific."*

I also always ask students to share with their classmates lessons they've learned about medicine from the book. This can and should be done separately from the written book report, as a brief oral presentation, for example.

If all goes well, the medical novel reading project teaches students how to find, read, and talk about a book in English. Once this first step has been taken, the student, having greater familiarity, fluency, and self-confidence, is more likely to read more books in English, including medical textbooks.

2. Pitfalls

Certain snags can occur unless one is prepared to prevent them. They include but are not limited to the following.

2.1. Misclassifications

In addition to the difficulty of finding *any* kind of book in English, which I've already alluded to in Part (1), there is the difficulty of finding *the right kind* of book. Unfortunately a field trip to the library or big city bookstore is practically impossible to arrange. That leaves the Internet.

Publishers and bookstores classify authors' works, mostly for their own convenience. The categories, even if they are accurate, sometimes help, sometimes hinder correct identification. The most serious obstacle is correct identification of genuine medical novels conforming to the definition I've given above. We want our students to learn something about medicine from them, and there are scores if not hundreds of suitable works. The snag is that there are thousands of unsuitable offerings.

It's already a challenge to get students to look for the books. Telling them to accept the additional challenge of reading scores of reviews requires either obstinacy or blind optimism. Despite today's wonderful tools for finding information, sifting the wheat from the chaff is a high hurdle, especially for non-native speakers. Informing students that dozens of websites offer reviews of works of medical fiction can just aggravate the problem for many students. Very few reviews assess the quality of the author's explanations of medical terms. Amazon.com provides would-be buyers with easy access to readers' ratings and comments, but they, too, can be more a hindrance than a help for many of our Japanese students. Medical novel authors do write for the layman, but not for learners and non-native-speakers, and publishers as well as retailers like Amazon.com have an interest in selling books, not warning readers to stay away from the unsuitable ones.

Then there are authors who (together with publishers) deliberately confuse the issue by classifying their pornography, racy doctor-nurse stories, and Harlequin Hospital Romances as "medical fiction."

So it's up to us to facilitate our students' search. How do we do it? By individually assigning an appropriate novel to each and every student? (Dream on!) By drawing up lists of acceptable medical novels? (You'd have to read them first and then keep them up-to-date.) By assigning the same book to everyone? (A bad idea, for the reasons given below.)

None of these restrictive approaches is likely to succeed, and it would be tiresome to explain all the reasons, so to nip all this naïveté in the bud, I advise you not to consider any kind of rigidity or minimalist approach. The teacher's tastes and intentions must not be too easily predictable.

Being the clever imitators and diligent team workers that Japanese students are, if you consistently assigned them the same book or books, they would quickly catch on that Book X (or some subset of The English Medical Novel Canon) is always assigned, and in less than two years, model book reports would become widely available; students' coping

strategy would switch from finding ways to manage their time and actually read a whole book to customizing and memorizing a Revised Standard Book Report.

Anyway, you don't really want to read one hundred book reports on the same book or books, no matter how insightful they are, do you? So accept the inevitable and look at the bright side: the students' human wave tactics will bring interesting findings to your attention. If students cast their net wide and dredge up lots of medical fiction, you can be the arbiter. You will have to sift out the flotsam and jetsam for them. It is the only viable approach.

The makeshift method I use to maximize the chances that students will choose an appropriate medical novel is to tell them to bring a list of at least three titles and authors' names for my stamp of approval. Often I will cross off all but one title on their list. The most frequent offenders are doctor-nurse romances without a trace of medical vocabulary; next in frequency are the Bible-pushers' tales of God's ability to heal, the power of prayer, miracles of faith, etc.; be suspicious of any title containing the words "healer" or "healing." You can do what your students cannot be expected to do: check the reviews quickly on Amazon.com or a fans' website or download a sample, if it's available.

2.2. Three final major caveats

(1) You need to *teach summarization skills* before assigning the book report. I do it in the first weeks of my first-semester Medical English classes. Since most students have never summarized anything in English except to prepare for examinations, you should be prepared for some of the weirdest summaries you have ever read (in a small number of cases, to be sure...). But that's a subject for a separate paper...

(2) Some students will, despite your instructions, choose a textbook or collection of essays; just say no and persist until they find and begin reading a genuine medical novel.

(3) You must also be strict about the content of the book report. At book report writing time, the instructions must include an express requirement to *be specific and cite examples*. Unless you specify and enforce this rigorously, the Japanese propensity to use generalities, vague and ambiguous statements, and high-sounding declarations of lofty intentions will prevail over facts and every book report will sound the same: *"The third-year medical student in this story experienced many hardships but learned various things about medicine that will help me to become a better doctor. I learned many medical terms that I will use in the future when I become a doctor,"* blah-blah-blah. This kind of pap "describes" almost anything the student has or hasn't read and proves nothing.

Japanese students have learned to produce insubstantial statements of this sort as an exam survival strategy: they don't have to actually say anything on standardized exams, they just have to avoid making mistakes that lower their scores. Hence without strict enforcement of the requirement to *be specific and give examples* to substantiate every key statement, the instructor will see no evidence that the student actually read the book and unscrupulous students will learn to game the system. In the process, you're teaching them to be better scientists. *Gokurô-sama!* (Keep up the good work!)

Similarly, to prevent plagiarism and other types of cheating, it is essential to have students write their book report *in class*, with their book on the desk in front of them, without Internet access.

Lest this roundup sound callous and jarring, I hasten to say that reading the best of my students' accounts of their reading is one of my greatest joys in teaching. In fact, several students' clever ways of narrating complex plots and of relating the findings of "fact checks" they undertook when the author cited a journal article, for example, brightened my day several times during Book Report Week 2016. I hope it works the same way for you.

Addendum

(3a) Recommendations for your own reading

- ***The Year of the Intern***, Robin Cook (1972)
  A "synthetic" memoir narrating the author's own personal and shared experiences as an intern, vetted before publication by 8 young doctors recently past their internship and certified as realistic by 7 of them; a savage critique of the medical education system and its dehumanizing effects on interns.
- ***The Year They Tried to Kill Me***, Salvatore Iaquinta (2012)
  Liked by almost all readers, despite the juvenility of its tone and the amateurishness of its title as well as some poor (or absent) editing. I advise readers to skip the annexes A & B at the end of the volume. Available as a very inexpensive e-book and as a moderately priced well-bound paperback.
- ***The House of God***, Samuel Shem (pseudonym of Stephen Bergman, 1978)
  Don't be shocked by the first page, which is a soft-porn red herring that only makes sense when you reach the end of the story; the glossary is needed by the layman and by any non-native speaker to decipher the jargon; the Delta Fiction edition with a yellow cover (and perhaps other editions, but not all) has a priceless Afterword written by the

author 25 years later, a sentimental journey for a baby boomer like me.

- ***The Devil Wears Scrubs,*** Freida McFadden (2013)
  Written in girl-talk by a young woman for young women about young women-doctors' viewpoints and interests. Lighter reading and shorter than average, but it has honest explanations of medical conditions and procedures and is very entertaining. The e-book is very inexpensive.
- ***Oxygen***, Carol Cassella (2008)
  Ethical and personal issues from a woman anesthesiologist's viewpoint.
- ***Cutting for Stone***, Abraham Verghese (2009)
  Superb writing, crammed with medical lore & human wisdom, a magnum opus in many ways; caveat lector: very long 667 pages! The e-book is inexpensive.

(3b) Recommendations for your students (with caveats)

- ***The Year of the Intern***, Robin Cook (available only as a paperback)
- ***The Year They Tried to Kill Me***, Salvatore Iaquinta
- ***The Devil Wears Scrubs,*** Freida McFadden (the girl-talk and the humor will be beyond most non-native speakers, but they are a plus for students who have read English novels before; the layman's explanations of medical terms are often facetious, but accurate)
- ***Oxygen***, Carol Cassella (tells how tough life is for a woman)

What are the most effective approaches to preparing Japanese medical students for international clinical elective placements?

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Introduction

Many medical schools in Japan offer students the opportunity to go overseas for clinical elective placements in their final year of undergraduate training. In Keio University School of Medicine the number of students who have participated in such placements has risen significantly over the past four years, as shown in **Slide 1**.

There are numerous benefits for participating students, including: broadening their medical knowledge and clinical experience, increasing their level of English proficiency, developing their communication skills, and deepening their cultural awareness and sensitivity (**Slide 2**). However, there are also a number of challenges for both students and home institutions, such as a potentially high financial cost, the time and effort it requires to organise and coordinate placements, and the difficulty of adequately preparing students before they leave (**Slide 3**).

To help students prepare for their placements we developed an all-English, elective preparation course comprising short interactive lectures, online video resources, and simulated patient encounters. In this presentation I will describe the methods we utilised and reflect on which ones proved to be most effective.

1. Course Structure

The course was divided into seven main objectives, as shown in **Slide 4**. These objectives were chosen following discussion with returning students and host institutions. A focus of the course was to limit the number of contact hours

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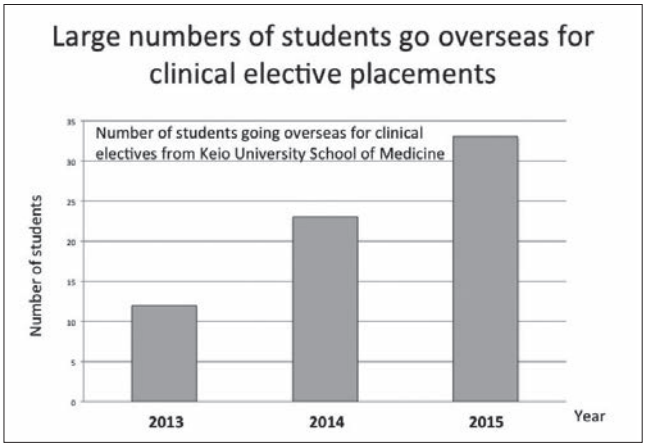
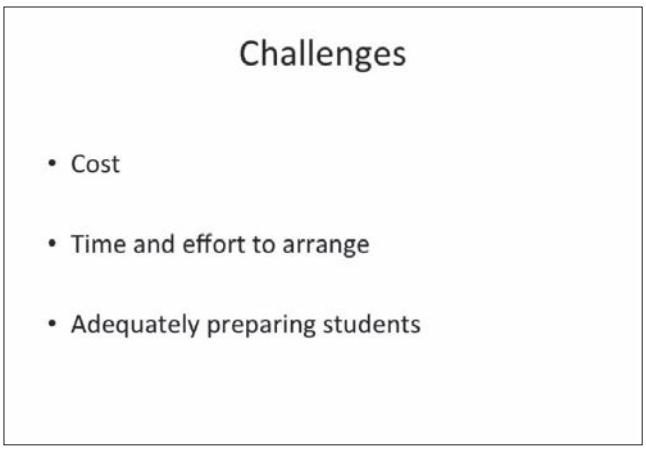
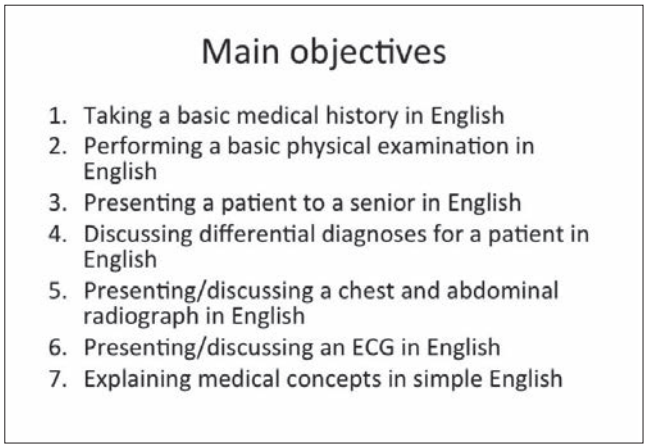


Slide 1. Large numbers of students go overseas for clinical elective placements

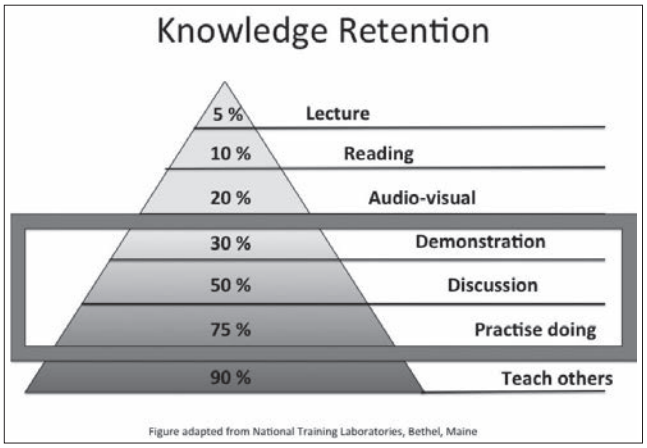
Slide 2. Benefits



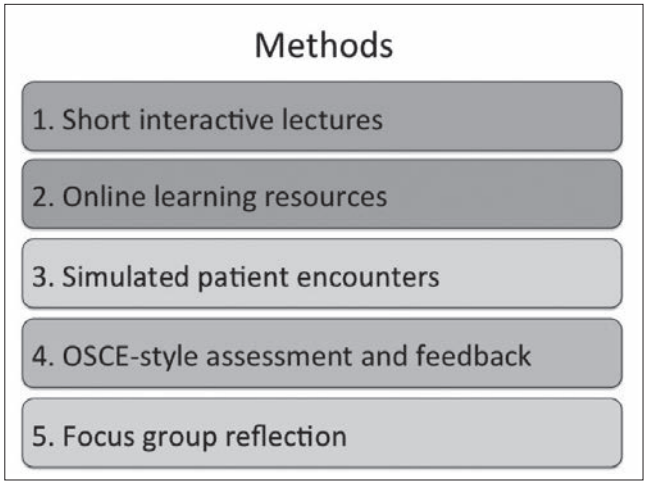
Slide 3. Challenges



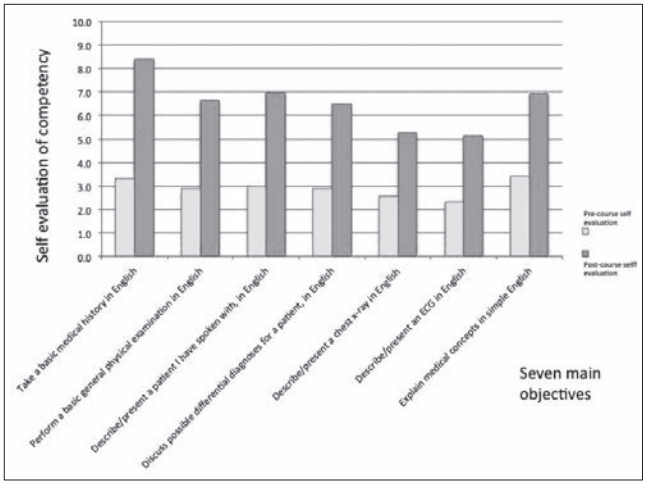
Slide 4. Main objectives



Slide 5. Knowledge retention



Slide 6. Methods



Slide 7. Subjective evaluation of the course by participating students

whilst encouraging students to take an active role in their learning by providing opportunities to observe online demonstrations, discuss cases in small groups, and practice techniques with simulated patients (**Slide 5**).

To achieve our aims we divided the course into five main learning formats (**Slide 6**). Firstly, short interactive lectures with preparatory reading were given to allow students to discuss their initial strengths and weaknesses and to provide structured examples of techniques to improve communication and medical history-taking skills. Secondly, a series of over 50 online videos were recorded and made available for students to access at any point during the course for further demonstration and reference. Thirdly, simulated patient encounters, using English-speaking volunteers, were designed to allow students to gain confidence and receive personalised feedback in a structured environment. The scenarios used in these sessions were designed to allow students to practice a wide range of realistic encounters. Fourthly, objective structured clinical examination (OSCE) style encounters were offered for more detailed feedback and to allow students to observe their peers' medical interviews. Finally, two focus group reflection sessions allowed students to share their learning experiences, receive feedback, and form an action plan for further self-directed practice before participating in their overseas programmes.

2. Evaluating the course

For subjective evaluation of the course students were asked to complete pre- and post-course questionnaires giving a self-assessment of their perceived competency across the seven main course objectives. Students completed the questionnaires anonymously and were asked to rate their ability on a scale from 0 to 10 (where 0 is not at all confident in their ability and 10 is very confident in their ability). The average scores were calculated and plotted in **Slide 7**. Students' self evaluation increased significantly across all seven domains when comparing the pre- and post-course questionnaires. Basic medical history taking showed the greatest increase. Although the data collected came from a subjective self-assessment it provided evidence that the students' confidence increased as a result of the programme.

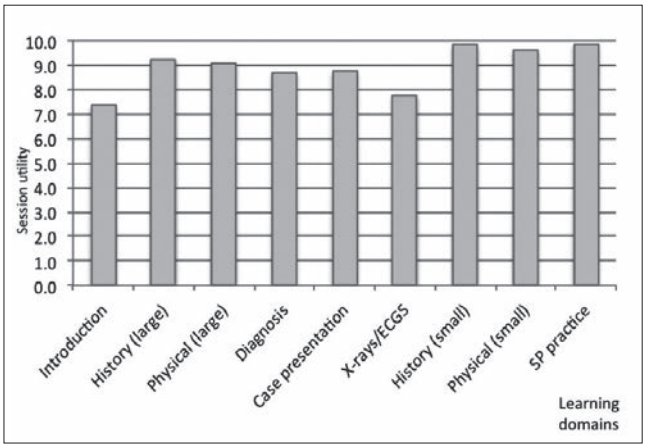
In addition to self-assessment the students rated the utility of the sessions on a scale from 0 to 10 (where 0 is not very useful, and 10 is extremely useful). All of the sessions received an average score greater than 7 (**Slide 8**). The students rated the simulated patient practice sessions and small group feedback sessions as the most useful.

3. Conclusions and future development

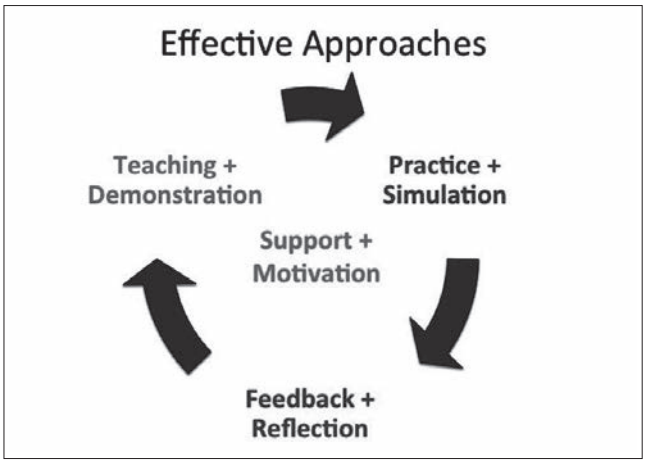
A number of different approaches were taken to prepare the students for their international placements. As time was a limiting factor a strong emphasis was placed on self-directed learning and student-led practice outside of the core sessions. After discussion with the students and direct observation, the most effective approaches were utilising a short period of teaching, demonstration and discussion, followed by providing an opportunity to practice with simulated patients, and finally giving personalised feedback and reflection in small groups (**Slide 9**).

For future development of the course we hope to work closely with host institutions in order to obtain more detailed feedback on students' needs, strengths, and weaknesses when they participate in their placements. We also plan to increase the number of online resources available for students by providing further educational videos and self-assessment quizzes. Finally, we hope to implement further opportunities for students to lead peer-to-peer teaching sessions to enhance their skills in addition to facilitating the development of junior students (**Slide 10**).

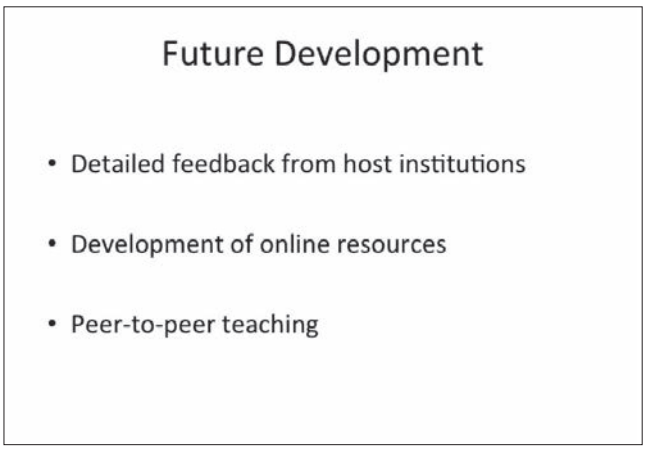
The preparation course described is still in its infancy but has received positive feedback from students, simulated patients and host institutions alike. We hope to continue to refine and develop the course to enable students to take full advantage of the educational opportunities available when they participate in clinical programmes overseas.



Slide 8. Utility of the sessions rated by the participating students



Slide 9. Effective approaches



Slide 10. Future development

医療通訳教育における反転授業

Flipped classroom model for training of medical interpreter

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1. 背景

日本における外国人人口およびその労働力人口は近年増加している。訪日外国人と日本の医療をつなぐ存在が医療通訳者であり，その重要性はますます高まっている。1990年代以来，NPOや大学など様々な団体により医療通訳者の研修が実施されてきた。大学で実施される医療通訳教育はそのほとんどが大学院や，公開講座で実施されており，大学学部での医療通訳教育はほとんどない。また，大学学部の教育カリキュラムの中で医療通訳研修を実施した先行研究も少ない。

大学学部を含む高等教育の中ではさまざまな教育手法が実践されており，反転授業もその一つである。反転授業は，従来の授業を反転したものであり，従来の授業では学習者が授業の中で講義による知識の習得をし，その後実践・応用していたのに対し，反転授業では授業の前に自主学習をして知識の習得を済ませ，授業中には会得した知識の実践・応用に重点をおくという方法で，反転授業を実施することでアクティブラーニング(参加型学習)が可能になる。英語教育などさまざまな高等教育における反転授業の研究は数多いが，医療通訳研修において反転授業を用いた試みはまだみられない。

本研究では，日英医療通訳学習用Web教材を用いて大学において反転授業を実施することにより，大学における医療通訳反転授業が通訳スキル，知識に与える効果を検証した。

2. 方法

対象は都内私立大学の英文学科の通訳コースを受講する大学3～4年生11名(女性11名)とした。組入れ基準は，日本人，19歳以上，TOEFL 500点以上の語学力，大学の通訳コースで学習中の学生，医療通訳の授業の受講経験がない者，反転授業に関するすべての授業に参加可能な者とした。反転授業の説明時に欠席した者は除外した。

対象者に授業の1週間前に医療通訳Web教材(**図1**)を提供し，範囲を指定して自習させた。Web教材は，模擬通訳の場面1～12のロール・プレイ用の練習教材の他に，解剖学のテキスト(PDFファイル)，医療英単語クイズ(Quizlet)，解剖学のゲーム(BBCサイトより)，Web問診票，倫理規定(PDFファイル)，非言語コミュニケーションと異文化コミュニケーションに関する動画2本から構成され，Moodleにログインしていれば繰り返し学習できるようにデザインした。半期15回授業から通年30回授業までを想定して作成したため，今回の反転授業では一部の教材を用いた。対象者には，「医療通訳学習システムにログインし，(1)模擬通訳(院内通訳)の7. 診察室　診察　と，8. 診察室　既往歴，家族歴　の項目を声に出して通訳し，スムーズに通訳ができるようにしておいてください。(2)医学用語，倫理，非言語／異文化コミュニケーションの11. 参考資料　異文化コミュニケーションの3. Incompetent vs. Competent Cultural Careの動画(約8分)を見ておいてください。」との指示を与えた。学習者は院内で交わされる典型的な会話を教材に学習した。授業前の自主学習では，医師患者間の会話を通訳する教材を与えられ，正しく通訳できるまで通訳例を聞いて何度も学習した。また，異文化に配慮した／配慮のない対応という題名の動画を視聴し，異文化間コミュニケーションでの典型的な誤解について学んだ。自主

図1. Moodleによる院内通訳実践演習

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本稿は第19回日本医学英語教育学会学術集会（2016年7月16・17日，慶應義塾大学日吉キャンパス）にて口頭発表した内容を元に文章化したものである。

学習の1週間後に授業を実施し，通訳演習とディスカッションを行った。

受講前後に指定範囲の通訳パフォーマンスを録音しFloresのエラー分析を用いて分析した。Floresの先行研究で用いられた5つのエラータイプは，訳抜け(話者が発話した言葉／フレーズを通訳しないこと)，言い換え，(話者の発話した内容と異なる言葉／フレーズに言い換えてしまうこと)，付け加え(話者が発話しなかった言葉／フレーズを付け加えてしまうこと)，勝手な発話の編集(話者が発話した言葉／フレーズについて自分の個人的な見解を入れて編集して伝えてしまうこと)，間違った言葉の使用(特定の言語で存在しない言葉／フレーズを使ったり，間違った言葉を使用すること)である。この指標を用いた理由は，先行研究の中で医療通訳の質を量的に測定する唯一の指標であったからである。学習者は全部で37文から成る文章の通訳を行い，そのなかで出たエラーを数え，授業受講前後でのエラー数を比較した。受講前のエラー数から受講後のエラー数を引くことで，減少したエラーの数を算出し通訳の質向上の指標とした。受講前後のエラー数平均値の差の検定として対応のあるt検定を行った(有意水準5%，両側検定)。

また，医療通訳者の異文化理解に関して，事前に動画を見せて受講前後に小テストを実施した。受講前後の平均正答率を比較した。テストの内容は，「カンボジアの患者の背中に虐待かもしれない跡を見つけた。医療通訳者としてどのような言動をとりますか。」という質問に対する複数選択の回答と自由回答であった。さらに，反転授業を受講した感想として自由記述のレポートを課しKJ法を用いて分析した。

3. 結果

2016年5月2日に，90分間の授業を実施した。授業の1週間前(4月25日)に，説明と事前学習教材を与えた。10名の学生が反転授業に出席した。1名が授業前の説明時に欠席したため除外された。受講者のTOEFLスコア平均は527(497–570)であった。1名がTOEFLスコアを受験していなかったが，それまでの授業中の通訳パフォーマンスから参加資格ありとみなされ組入れられた。女子大学で実施されたため，全員女性であった。授業では，医療者，患者，医療通訳者に分かれ，ロールプレイングし，気づいたこと，通訳をしていて難しかったことについてディスカッションした。また個人でパフォーマンスを録音し，提出した。さらに，医療通訳者の文化仲介についてディスカッション・発表をした後，再度，異文化仲介についての筆記試験を行った。授業後に，授業で気づいたことについてA4用紙1枚のレポートを作成した。

通訳パフォーマンス試験のエラー分析の結果，受講前後に訳抜け(平均3.20)，間違った言葉の使用(平均2.30)の項目で有意に改善が見られた(訳抜け: $p < 0.01$，間違った言葉の使用: $p < 0.01$)(**表1**)。文化に関する小テストの正答率は，授業前の60%から95%に改善した。レポートの分析からは，医療通訳における専門用語と背景知識の重要性の他に，言葉通りに訳す導管の役割のほかに文化仲介者としての役割等があることや自文化中心主義に陥らず相手を理解する心の重要性への気づきが読み取れた。

4. 考察

本研究結果より3つの所見が示唆された。

1つ目は，介入により通訳パフォーマンスのうち訳抜けと間違った言葉の使用というエラーに有意な改善がみられたことである。授業前試験での訳抜けは，表現を知らないことにより起こったと推測されるが，Moodle内の教材を用いた事前学習で通訳の表現を学び，事後試験で通訳できるようになったために，訳抜けが減少したと考えられた。間違った言葉の使用については，表現がわからないなかで何とか表そうとして言葉遣いを間違ったと推測され，これも教材の事前学習により正しい表現を習得することで改善された。授業では時間が限られているが，自主学習時間は1週間あったため繰り返し学習が可能になり，講義とは異なり自分で学習個所と量が選択できるため，学習者のモチベーションが刺激され学習効果が表れたと考えられた。

2つ目は，異文化仲介についての筆記試験結果が受講後に向上したことである。自主学習教材として提供された異文化理解についての動画を視聴したことによる効果であると考えられた。

最後に，受講前後の自由記述と受講後のレポートより，

表1. 事前および事後テストのエラー分析結果（通訳パフォーマンス試験）

事前 / 事後試験

平均値 (SD)*

変数	前	後	(後) – (前)	最小値	最大値	*p*値
訳抜け	3.40 (1.80)	0.20 (0.40)	3.20	0.00	8.00	< 0.01
言い換え	0.80 (0.75)	0.00 (0.00)	0.80	0.00	2.00	0.01
付け加え	0.00 (0.00)	0.10 (0.30)	–0.10	0.00	1.00	0.34
勝手な発話の編集	0.00 (0.00)	0.10 (0.30)	–0.10	0.00	1.00	0.34
間違った言葉の使用	3.10 (0.94)	0.30 (0.64)	2.30	0.00	5.00	< 0.01

*単位はエラーの個数。計37文から成る医療会話の通訳時に出たエラーを数え，学生の平均を算出し，授業受講前後でのエラー数の平均値を比較した。

医療通訳者に文化仲介者としての役割等があることや，自文化中心主義に陥らず相手を理解することの重要性への気づきがみられたのは，自主学習教材の動画，授業でのディスカッション等の複合的な要因からであると考えられた。

本研究の限界は，サンプルサイズ(10)が小さいこと，授業時間(90分)が短かったことである。サンプルを増やし授業時間を長くすることにより，より信頼性のある結果が得られると考える。しかしながら，本試験結果より，開発した医療通訳の反転授業は知識とスキルの両方の面において効果的な医療通訳学習であると言える。

本研究の意義は，双方向的な学習形式である。通常の反転授業では，自己学習教材として提供されるのは動画や文書など一方的な知識注入型教材であるが，本研究で使用した自主学習教材は，それらに加えてMoodleに設置した双方向型の通訳学習教材を使用したため，有効であったと考えられる。今後大学および大学院，ならびに各種学習機関での適用により，効果的な導入についてさらに検討することが望まれる。

5. 結論

反転授業の実施により，学生の医療通訳のスキル，専門用語の知識と文化仲介者としての役割に関する知識に改善がみられ，日英医療通訳学習用Web教材の大学の授業における有用性が示唆された。

Medical professors' rounds and conferences in English: Current effectiveness and problems

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Introduction

Discussions during medical professors' rounds and at conferences in Japan are usually carried out exclusively in Japanese. However, there is an increasing need for international contribution and collaboration not only in clinical practice but also in clinical, basic, and social research; this need extends to education, management, and social communication as well. Moreover, the number of non-Japanese medical graduates and of Japanese graduates of foreign medical schools is gradually increasing in Japan, and will increase further after the expected launch of the first international medical school in Japan. The purpose of this study was to elucidate the effectiveness and problems of using English instead of Japanese during medical professors' rounds and at conferences.

1. Subjects and methods

Medical professor's rounds and conferences were conducted in English every day from August 1st to November 30th, 2015 in the Department of Neurology, IUHW Atami Hospital. Six months later, a brief opinion survey (in the form of a questionnaire) was completed by the participants, and the effectiveness and problems of using English instead of Japanese were analyzed.

Informed consent for the survey was obtained as follows: "This is a questionnaire on medical professors' rounds and conferences in English. You have the right not to respond to this questionnaire, and you will not suffer any disadvantages if you do not respond. The results may be presented at academic meetings or used in publications as academic data. Please indicate if you do not wish your responses to be used in this way."

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2. Results

Six physicians who participated in the medical professors' rounds and conferences in English responded to the opinion survey.

Participants' profiles were as follows: three of the participants had graduated from Japanese medical schools, and the other three had graduated from medical schools overseas: one in Korea, one in the Philippines, and one in China. Four of the participating physicians were Japanese, one was Korean, and one was a Filipino. Three were in their 30s, and of the others one was in his/her 20s, one in his/her 40s, and one in his/her 50s. Two had spent 1 to 2 years in postgraduate study, two had spent 3 to 10 years, and two had spent 10 to 20 years. Four were male, and two female.

Regarding their English skills, two subjectively evaluated their English interpretation skills as satisfactory, with the other four declaring themselves at the elementary level. Only one declared satisfactory English oral skills. One participant had published more than four papers in English, one had published "a few," and the other four had published none.

Below are the questions asked in the survey, together with the responses obtained.

Q1 Were you satisfied with the rounds and conferences in English?
Very satisfied: 3, Satisfied: 3, Somewhat dissatisfied: 0, Dissatisfied: 0

Q2 Would you like the rounds and conferences in English to be continued?
Yes: 6, No: 0

Q3 What level of English proficiency do you think is necessary for a physician to participate in professors' rounds and conferences in English?
Native level: 1, A level sufficient to communicate: 5

Q4 In general, what effect does participation in medical professors' rounds and conferences in English have on the participants' work?
Good influence: 5, Bad influence: 0, Both good and bad: 0, Neither good nor bad: 1

3. Discussion

Conducting medical professors' rounds and conferences in English was welcomed by the foreign graduates, who wish to secure faculty and visiting positions, to participate in international collaborative clinical research, and to publish in English. The Japanese graduates thought that it increased motivation in clinical practice, research, and education. However, it was noted that supplementary explanations in Japanese often needed to be given to co-medical professionals. Moreover, it often raised patients' apparent trust in physicians, but some Japanese explanation was considered necessary to remove latent anxiety.

The Department of Neurosurgery at Osaka City University's Faculty of Medicine recently announced that they started medical professors' rounds and conferences in English (M3.com, 2015). The author strongly supports this trial, needless to say.

In a recent study of international cooperation in health and welfare, the author surveyed the opinions of international participants. To the question "Rank the requisites for those involved in international cooperation in the field of health and welfare," the participants' responses were personality (31.8%), technical skills (26%), communication skills (21.9%), and language skills (only 16.1%) (N=70). In response to the question "What is the most important factor in motivating local healthcare providers and overseas staff to work together toward the same goal?" the participants' responses were communication (33 persons), education (11), financial support (7), and language ability (only 1) (Masao Nagayama, et al. *Journal of the International University of Health and Welfare*, 2016). Considering the above results, we can conclude that medical professors' rounds and conferences in English can contribute to the education of physicians by promoting international cooperation and exchange, even if the participants' proficiency in English is not great. In addition, conducting rounds and conferences in English may help us meet the criteria for medical school accreditation that will be required for certification of foreign physicians by the Educational Commission for Foreign Medical Graduates in 2023. It is worth mentioning, however, that digital health records in Japan are not available in English, which can be seen as an obstacle to Japanese wishing to contribute to and cooperate in health and welfare provision internationally.

4. Conclusion

Conducting medical professors' rounds and conferences in English can contribute to the education of physicians by promoting international cooperation and exchange. Our findings may help us meet the criteria for medical school accreditation that will be required for certification of foreign physicians by the Educational Commission for Foreign Medical Graduates in 2023.

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A request for guidance from JASMEE in realizing a media platform

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Background and Introduction

The term global no longer refers to location, but to the scope of its problems, encompassing both national and transnational issues. We live in an ever accelerating world of global interconnectivity with contemporary transnational determinants such as climate change and urbanization emerging under our watch. As the velocity of travel and communication increases, cross-national economic interdependency, migration, and cultural flow augments, culminating an all-time high for the effects of globalization. The exponential increases in economic, commercial, and demographic indicators in concert with population growth are resulting in environmental effects posing potential threats to food yield, nutrition, and consequently health. In addition to these eminent risks, Japan currently faces its own issues such as the rapidly increasing aging population and low growth rate.

Furthermore, globalization is revealing Japan's weaknesses within the medical field. The updated Medical School Accreditation Requirement for Educational Commission for Foreign Medical Graduates Certification and accreditations by the Joint Commission International (JCI) (based on English ability and medical practice) are effective methods to place a global standard for medical practice; however, Japan's JCI accredited hospitals within the country (JCI = 19) are far lower than other fellow developed nations (e.g. Brazil = 51, Italy = 25), let alone Asia (e.g. China = 61, Thailand = 53).[1] In addition, the number of research publications and internationally co-authored papers has recently decreased to fifth in the world in comparison to other developed nations.[2] Both can be argued to be due to Japan's inability to effectively communicate in English.[3,4]

Despite this, Japan's innovation capacity, patents per capita, investment in R&D and amount of human resources in the field of science and technology are ranked highest in comparison to fellow developed nations.[5] Further, Japanese nationalism promotes qualities that have given their citizens the reputation for being one of the most diligent, hard-working, respectful, and responsible people of the world.[6,7] Regarding global health, this is especially apparent when the private and public sectors expediently unite in humanitarian efforts like disaster relief or vaccination campaigns.[8]

Unfortunately, these qualities alone are not enough to remain competitive in today's global market. Although globalization is inevitable, if Japan wishes to sustain their global presence, there must be collaborative effort in administering opportunities for its society to acquire English competency. Japan's Ministry of Education, Culture, Sports, Science and Technology has started several projects to increase internationalization at academic institutes in the country, for instance its "Project for Promotion of Global Human Resource Development."[9] However, the number of universities involved in these projects are limited, hence there are great disparities in students' exposure to English according to region, school type, and field of education.[10]

Considering the aforementioned, there is an urgency for Japanese medical students to possess an English competency that matches the global standard for precautionary necessity.[11] The main crux is that the current criteria at Japanese medical schools is rigorous thus time-consuming and limited resources are available to finance effective English education.[12] We thereby are in need of novel solutions providing time-efficient outlets to hone practical English skills.

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1. A media platform

1.1. The idea

As a possible solution to improve Japanese medical stu-

dents' English proficiency and for them to contribute to Japan's global presence in medicine, we propose a website-based platform for students to write and disseminate information in English. The platform would allow any student to participate regardless of their geographical location, and to acquire English communication skills at a manageable pace alongside their regular coursework and research. In addition, having students write about what Japan has to offer within the field of medicine and healthcare, and disseminating this information on an online platform, may increase the amount of interaction and hopefully collaboration between medical students in Japan and students worldwide. In summary, the platform would become a hub for students and academics within Japan and around the world that are interested in Japan's R&D, medicine, and healthcare.

1.2. The process

First, students would be assigned to write a piece on a topic of their choice, such as a general introduction about their school, a medical student-oriented group and their activities, or a professor or researcher in Japan and their area of expertise. They would draft an article and submit it to their professor (i.e. JASMEE members), who would give them feedback on its quality and contents. It would then be revised based on the feedback before being submitted and posted onto the media platform. The benefit of this process is how the workload would be divided amongst various contributors, which hopefully would lessen the burden on medical students writing for the site, while still assuring efficiency and quality.

After having gone through this process multiple times, students could challenge themselves to longer pieces for the site, such as blog entries or interview pieces. In addition, they could also send in information about upcoming events or information on how to participate in on-going projects at their school, as well as general information regarding their school. The platform could also have forums where student writers and site visitors could interact with one another, inducing collaboration beyond schools and international borders. This would stimulate conversation that would be more informal, thus making the platform more accessible.

The platform's efficacy would be evaluated by the following performance indicators: a) the number of articles contributed to the site, b) the increase in students' TOEFL scores, c) the number of times the platform is cited and referenced, and d) the number of visitors to the website. This evaluation would compare students' English abilities before and after involvement.

1.3. The benefits of the platform

First, the platform would allow Japanese medical students to have an outlet to hone their English composition and communication skills. Second, the platform would disseminate information about Japan's R&D, healthcare, and medical student life in lieu of topics commonly picked up by the media (e.g. subculture).[13,14] Such may encourage and initiate more discussion and interaction between students and academics outside Japan through the platform, which could then lead to English conferences where students and stakeholders from across the globe would gather to discuss other creative means of improving international collaboration and global health.

2. Conclusion

In this day and age of online universities and virtual classrooms, students are learning how to work remotely with others in different locations and time zones. As future global health leaders, it is imperative for Japanese medical students to attain both English competency and network literacy. By capitalizing on globalization as an opportunity to promote effective English usage, there will be a stronger propensity to maintain institutional and economic rigidity within Japan. Further, this will catalyze the implementation of global health assistance in both public and private sectors, and therefore increase Japan's contributions to the betterment of humanity. However, this platform is a simple idea from a naive and inexperienced mind, and much help and assistance is vital to solidify its intended potential. I would be honored to receive any ideas or advice to make this or something even better into reality.

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Team Medics

Ami Suzuki
Nihon University School of Medicine
Team Medics leader

Team Medics, established in 2015, is a healthcare student organization for English-speaking patients. Our vision is to contribute to the international medical community and to construct a future in which Japanese medicine leads the world. In order to achieve this, we aim to bring a paradigm shift into the field of current education and the health care students to become "medical communicators". We define "medical communicator" as a person who 1) can understand and convey information, feelings, and ideas, 2) has problem-finding and problem-solving skills, and 3) shows leadership in the medical field.

Since the launch of Team Medics, we have been organizing three major activities with 380 members.

We hosted 15 seminars and workshops from August 2015 to August 2016. In our monthly workshop, we learn practical English expressions regarding signs and symptoms, and English reasoning skills. In addition, we invited a doctor from Malaysia and learned about Islamic medical principles and ethics, and how to care for Muslim patients. We also invited a doctor from Stanford University to Japan this May, with whom we studies bedside clinical communication skills.

We volunteered at Global Festa Japan 2015, the nation's largest international cooperation event, and a charity marathon. At these events, we supported international patients when they came to the first-aid center. Firstly, we obtained the patients' medical information in English and completed medical questionnaires for them in Japanese. Secondly, we provided referrals to the nearest medical institution, if necessary. Fortunately, none of the patients required referrals during these two events.

We also participated as volunteers at hospitals and clinics for the purpose of improving healthcare access. We guided patients from the entrance to the consultation room, to the examination room, and to the reception desk. We interpreted the results of such examinations as MRI, chest X-ray, and colonoscopy, when necessary.

In the future, we intend to gain more practical opportunities for our student members.

In conclusion, we believe that our activities contribute to the development of international relations with respect to Japanese healthcare services.

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This report is based upon a presentation delivered at the 19th JASMEE Academic Meeting held at Keio University, Hiyoshi Campus, Yokohama, on July 17, 2016.

Efforts to improve the English skills of doctors at Aso Iizuka Hopital

Mari Midorikawa
Aso Iizuka Hospital

1. Introduction

Many doctors in Japan are interested in learning English so that they can broaden their academic accomplishments. However, not many of them get the chance to actually practice the language in a practical way.

Fortunately, at Aso Iizuka Hospital (AIH), we have regular opportunities to interact with English-speaking MDs invited from some partnership facilities, where we have some educational conferences and lectures. There are a lot of enthusiastic residents and staff doctors, who wish to take advantage of these opportunities. In 2015, we established Aso Iizuka Hospital Medical English Education Team (AIH-MEET) to support their language skill improvement. AIH-MEET is composed of six members who are especially interested in medical English learning and education, including junior residents, and senior residents and staff doctors belonging to different departments such as General Internal Medicine, Palliative Care, and Pulmonology.

2. Methods

Before starting our project, we discussed what the best way would be to support those who are interested in learning English. We decided to focus particularly on "case conference in English" for the following reasons. First, in order to maximize time-effectiveness of learning, our sessions should be focused on a particular communication setting. Although we could have prepared multiple types of sessions to cover many settings such as patient-doctor communication, presentation at academic conferences, and journal clubs, it would have been difficult for participants to take part in all of the sessions with their limited amount of time.

Second, it was essential to focus on the communication setting that participants encounter most frequently, so that they could actually utilize what they had learned, and realize their own improvement in the real settings.

As mentioned before our hospital has regularly invited English-speaking MDs from several facilities both inside and outside Japan, where we usually have medical case conferences facilitated by them as part of professional skill improvement. However, it is still challenging to proactively participate in the discussions for many of the residents and staff doctors. Before we start our project, those sessions used to end up with only the fluent English-speakers communicating in English with those invited doctors, and the others relying on interpreters.

For the reasons stated above, we decided to have preparatory case conferences on our own, prior to each conference with the guest doctors. We hope them to be able to grasp the contents of discussions, and address their opinions in English as much as possible. Although we AIH-MEET members are non-native speakers of English, we know how to improve skills of the second language step by step through our own learning experience.

3. Examples and suggestions

We introduced two rules to start this conference. The first rule is that they can refer to a handout on which some useful words and phrases are listed anytime during the conference. **Figure 1** shows the handout from the conference where we featured a cardiopulmonary case. Participants can choose words and phrases from this list to state investigations needed for the differential diagnosis. It is also acceptable for them to use words and phrases that are not on the list.

The second rule is that participants can use Japanese words and phrases to compensate for what they cannot say in English. We set this rule because we would like to encourage them to state their opinions, even if they cannot construct complete English sentences in their mind. **Figure 2** shows an example of utilizing this rule. A participant says "His cardiac markers are not elevated, so myocardial infarc-

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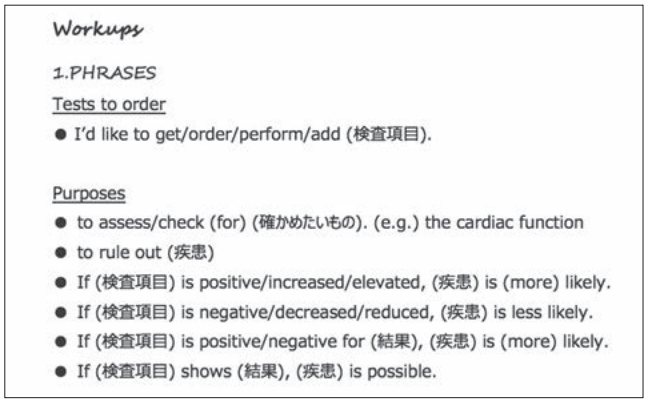

Figure 1

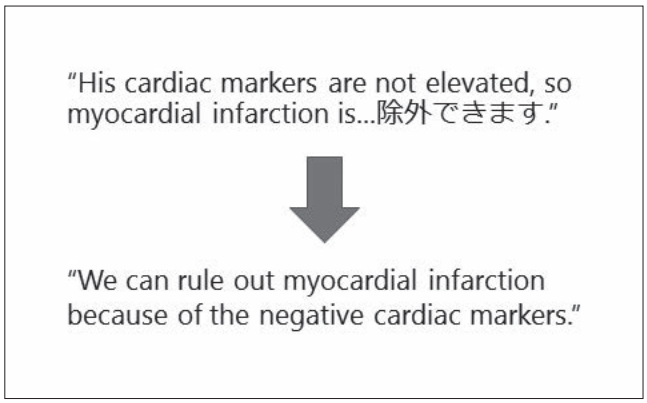

Figure 2

tion is...除外できます," because he cannot finish the complete sentence in English. This is completely acceptable in our conference. We would rephrase what he was trying to say in an easy and simple sentence "We can rule out myocardial infarction because of the negative cardiac markers." We can provide more concise ways of saying what participants are trying to state so that they can effectively learn how to form sentences without simply giving up a whole statement.

Figure 3

As shown in **Figure 3**, we obtain some feedback from participants through surveys after each conference. According to the feedback from them, it is clearly shown that they tend to get overwhelmed when they are forced to complete their sentences perfectly in English, but the feel more relaxed and proactive to join discussions because of the rules.

4. Final remarks

Nowadays, English skills are becoming more and more important even for medical doctors who work in Japan as a tool for communication in various kinds of setting. We specifically focus on "case conference," the most frequently-encountered situation where medical doctors at our hospital have to communicate in English. Although our project is not designed to cover skills for various kinds of communication settings, we would like to tell them it is never too late to start English learning for anyone, and by focusing on each specific skill, they can go up to the next step of learning through our activity.

Workshop

The top 3 issues in EMP education: a round-table discussion between EMP teachers and medical students

Takayuki Oshimi
Nihon University School of Medicine

To gain accreditation from the World Federation for Medical Education for conforming to its recently established global standards in medical education, all medical schools in Japan are changing their curricula. Many of them are planning to increase the hours allotted to English for medical purposes (EMP) education, which means that EMP instructors will have to confront the issues of 1) educational content, 2) defining the roles of EMP instructors, and 3) EMP curriculum development. This 90-minute interactive workshop was attended by 10 JASMEE members, who had the opportunity to share ideas and opinions on these 3 issues with 16 invited medical students. Discussions focused on how to approach the issues in a creative and effective manner. The procedure was as follows:

Step 1: Participants were divided into 5 groups of 4 or 5. Each group was asked to come up with as many ideas as possible on the 3 issues, and to write each of their opinions on separate sticky notes.

Step 2: Each group displayed its sticky notes on a large board so that all participants could read them.

Step 3: Working with the task force facilitators, the participants grouped similar items on the board to help them consider the following questions: "What are the most important problems?" and "How we can solve them?"

Step 4: Each group gave a short presentation on its conclusions, after which a general discussion was held with the aim of finding creative solutions. The following is a summary of the presentations:

Group 1 (1 EMP teacher and 3 medical students)

Problem 1: EMP teachers are not aware of their students' EMP levels. EMP teachers do not receive feedback from their students regularly.

Solution 1: EMP teachers should allocate students into small groups based on their EMP levels and should establish a system in which they can get student feedback on a regular basis.

Problem 2: Students find it difficult to connect the content of EMP education with their medical studies.

Solution 2: EMP teachers should collaborate with medical teachers so that students can learn EMP in parallel to their medical studies.

Problem 3: EMP courses are not diverse enough to cover a wide range of student needs.

Solution 3: EMP teachers should prepare a wide selection of courses to maximize students' autonomy.

Group 2 (2 EMP teachers and 2 medical students)

Problem 1: EMP teachers do not find out what the students need and want.

Solution 1: EMP teachers should build a system in which students can express their opinions more regularly.

Problem 2: EMP classes are too big, and students do not use English in class.

Solution 2: EMP classes should be smaller. Classes of 10 students would be ideal.

Problem 3: EMP teachers tend to speak too fast, and they are not aware of the students' level of understanding of the materials.

Solution 3: Students need to summarize the problems and inform the teachers. Evaluations need to be performed more frequently.

Group 3 (1 EMP teacher, 3 medical students, and 1 medical translator)

Problem 1: Students do not have enough chances to practice English listening and reading skills.

Solution 1: Teachers should use audio-video materials in conjunction with academic journal articles.

Problem 2: Students do not have enough chances to write medical papers.

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This is a report on one of the workshops held at the 19th JASMEE Academic Meeting held at Keio University, Hiyoshi Campus, Yokohama, on July 17, 2016.

Solution 2: Writing skills are important for students in their future careers, so EMP teachers should give students more opportunities to develop them.
Problem 3: Practicing English is difficult in Japan.
Solution 3: Students should try to use more English resources in their daily lives.

Group 4: (2 EMP teachers and 2 medical students)
Problem 1: Students do not have opportunities to practice communicating in the way they will have to as doctors.
Solution 1: EMP teachers should invite social workers and/or other healthcare professionals to classes so that students can practice communicating as doctors.
Problem 2: Students do not have opportunities to communicate as scientists.
Solution 2: EMP teachers and students should invite people from research fields by hosting student conferences.
Problem 3: Students do not have enough practice either in input or output in English.
Solution 3: Students should create materials and repeat input and output on a daily basis to enhance their skills.

Group 5: (3 EMP teachers and 2 medical students)
Problem 1: Students do not have enough time to speak in English.
Solution 1: Students need to learn EMP in small groups and engage in discussion with native English speakers (e.g. as simulated patients) so that they have to talk in English. Conducting OSCEs in English is also a great option.
Problem 2: Students do not understand why they need to study English.
Solution 2: EMP teachers need to highlight the importance of English in the medical field.

Group 6: (2 EMP teachers, 1 medical student, and 1 resident)
Problem 1: There is lack of human resources for good EMP education.
Solution 1: Medical school should be more active in recruiting competent instructors, preferably medical doctors, from English-speaking countries. Instructors with Japanese proficiency are especially valuable. Collaboration with other institutions is also required.
Problem 2: It is difficult to decide exactly how much of the medical curriculum should be taught in English.
Solution 2: We should try to cover 100% of medical studies in English.

We hope that the diverse opinions of the JASMEE participants and invited students will inspire JASMEE members and contribute to the promotion of excellence in EMP education in Japan.

Large classes and great expectations: Establishing and evaluating an integrated, comprehensive English for Medical Purposes program for first-year medical students at Akita University

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English for Medical Purposes (EMP) courses are generally desired by, and for, medical students in Japan. However, it is often an uphill struggle to establish such programs, as these have not historically been granted high priority within the medical school curriculum. There are also many other hurdles, such as endemic high student-teacher ratios for EMP, resulting in large class sizes. In addition, once an EMP program is in place, evaluating it for effectiveness and appeal to the students is not always easy. This article outlines the evolution of EMP at Akita University over the last twelve years and evaluates the program at three distinct stages both quantitatively and qualitatively. It indicates that effective EMP programs can be established and maintained in situations that are less than ideal, and offers suggestions for doing this.

Keywords Medical English, EMP, large classes, evaluation, integration

Introduction

Medical students in Japan have been shown to desire customized English lessons, and also to be more motivated to study English—and *in* English—if they see such study as relevant to careers in medicine.[1-4] However, barriers to providing them with adequate English for Medical Purposes (EMP) courses are many (e.g., limited lesson time, a lack of full-time teachers, large classes).[5,6] In addition, teaching EMP—especially to large classes—is challenging, and is often improved only through much trial and error.[7] All of this holds true at Akita University, where I have been teaching growing numbers of future physicians since 2005 (large classes) with a strong desire to help as many of them as possible become the best doctors that they can be (great expectations).

Adequate course evaluation and reflection is essential for making students more receptive to EMP and more motivated to study on their own,[8] and the former can be better achieved by combining qualitative and quantitative methods.[9–11] With the above in mind, I proceed in three steps. First, I briefly trace the evolution of EMP for first-year future physicians at Akita University over the last twelve years. Second, I evaluate—both quantitatively and qualitatively—the EAP courses since 2008. Finally, I close by suggesting some strategies for successfully teaching EMP to large classes of medical students. Evaluative data are drawn from my own records and from 2008-2015 course evaluation questionnaire forms that students filled out at the end of each term. For simplicity and maximum comparability, only spring term courses are analyzed here.

1. EMP for medical students at Akita University

Medical students at Akita University take full-scale EMP courses only in their freshman year. At one point, the classes were taught at the university's main campus by a linguistics professor based at the medical school campus. He taught the roughly 100 students, divided into two classes, as he saw fit, using textbooks of his choosing. Writing was heavily emphasized, and the lessons were fairly challenging. However, this came to an end in early 2005. Since then, the course has passed through three distinct phases.

1.1. Phase 1 — standardized EAP

In April of 2005, the English teaching faculty members established a standardized English for Academic Purposes (EAP) program for all freshmen of the university. Lessons were conducted at the main campus, and the freshmen were taught according to a common schedule. Based at the medical school, I traveled to the main campus to teach the medical students according to the standard plan. All classes used the same textbooks—two annually.[12-14] They also took the same exams on the same days. None of the textbooks dealt significantly with medical issues. Moreover, the textbooks and exams were too simple for most of the medical students; EAP failed to satisfy them. Some made efforts, but truancy was common, and many studied biology during EAP class. Many also slept.

In order to improve the situation, I required the students to write essays on why they wanted to become physicians, and taught them anatomical terms when possible to help prepare them for Gross Anatomy. I also began using an EMP textbook—*Thinking with William Osler* (hereafter, TWO).[15] This created opportunities to consider and discuss medical topics, learn words and phrases, and tackle bioethical issues. I gave short quizzes of my own making over the TWO units from 2009.

Two previously published articles point to the benefits of using TWO during Phase 1 and describe the situation from 2008 to 2010 in greater detail.[2,3] However, there were many impediments to improvement. For example, from 2009 medical students who scored highest on first-day placement tests were put into advanced classes with students of other faculties. These classes I did not teach, so the top students received no benefit from my efforts to make EAP more like EMP. Furthermore, since all of the EAP lessons took place simultaneously, I had to ask the teacher of the other group of medical students to use TWO. Some did, but others did not.

1.2. Phase 2 – EMP begins

In April of 2011, the medical course freshmen began taking their required English lessons at the medical school campus. This made it possible to remove them from EAP and instead initiate a customized EMP program. By this time, the number of freshmen admitted annually to the medical course had surpassed 120, making for rather large classes (A and B). It was arranged for Professor Nobuo Sato (the linguist who had previously taught the medical students) to return from retirement to help me launch the EMP program. We decided to share the teaching of the courses and to combine our grades for classes A and B at the end.

Professor Sato adopted two textbooks,[16,17] and I used TWO. Both of us also used materials we prepared ourselves, and I continued giving essay assignments in order to push them to improve their writing skills.[18] We scheduled four exams per term, held jointly. One benefit of the new arrangement was being able to teach the same students all year long. For this and other reasons, we were generally pleased at the end. Most of the students responded well to our efforts. Some had difficulty adjusting to the differences in our respective teaching styles, but all of them passed the courses.

1.3. Phase 3 – EMP matures

Phase 3 began in April of 2012, when I started planning and implementing the EMP courses alone, and the situation has continued with little change since then. The freshmen are divided into A and B classes, and have EMP on Tuesday mornings and Wednesday afternoons (B followed by A, for 90 minutes each) in a large lecture room. Each class meets 30 or 31 times per term (**Figure 1**).

I have been alternating between three textbooks—TWO and two others[19,20]— using two per year for the entire year. Lessons generally center on textbook chapters, but I often use extra materials, such as YouTube videos complete with original transcript-worksheets. In addition to the textbooks and other materials, I assign one essay per term. The spring essay assignment has been continuing since Phase 1: Having students explain their reasons for being in medical school. I correct these carefully with a red pen and return them to the students, who must then retype and resubmit them for a grade. The

autumn assignment is to write a persuasive essay. Both are to be written in TOEFL style, and I teach the students how to do this.

In April of 2015, in an attempt to boost student engagement and combat sleepiness, I initiated group work (GW) activities on Wednesday afternoons: ten times in the spring term (see **Figure 1**). I made a chart for the classroom showing the group seating arrangements and used MS Excel to sort the students into random groups each time. On GW days, each student had to discuss health-related issues with fellow group members, write the other members' names and opinions on a simple worksheet, and then submit it for a grade (with scores mainly dependent on effort). Ethical problems proved to be particularly good for GW.[21] Before the end of class, however, I asked the groups to share some of their opinions on the problems they had discussed, and I wrote these on the whiteboard. This activity led to some lively discussions within groups (although too often in Japanese) and it allowed me to interact with the students more than I normally can during class. With the exception of the addition of GW as part of the term score, the spring 2015 grading system was fairly representative of the system for all spring terms: exams, 25% each; essay, 10%; GW, 10%; attendance, 5% (for the spring 2012-2014 terms the essay was worth 15% and attendance was 10%).

Medical English I (医学英語 I)
医学部医学科 2015 spring calendar (Version 2)

				A & B classes
1	4	8	W	Beginnings – course introduction, etc. (+ Texas history!)
2		14	T	GKMG unit 11 (How to Educate Patients)
3		15	W	Essay writing + assignment ※due: 5/19 (place = 総6講義室)
4		21	T	GKMG unit 11 continued
5		22	W	??? (undecided, but certain to be fun!) (place = 総6講義室)
6		28	T	TCHI unit 1 (Doctor-Patient Relationship) (group work #1)
7	5	12	T	GKMG unit 1 (Closing the Health Gap in a Generation)
8		13	W	TCHI unit 1 continued (group work #2)
9		19	T	GKMG unit 1 continued ※essays due!!!
10		20	W	TCHI unit 3 (Cultural Competence) (group work #3)
11		26	T	Textbook catch-up + Exam #1 review
12		27	W	Exam #1
13	6	2	T	GKMG unit 15 (You Can Say Sorry)
14		3	W	TCHI unit 4 (Beginning of Life Issues) (group work #4)
15		9	T	GKMG unit 15 continued
16		10	W	TCHI unit 4 continued (+ unit 6?) (group work #5)
17		16	T	GKMG unit 20 (Alzheimer's Disease)
18		17	W	TCHI unit 6 (Palliative Care) (group work #6)
19		23	T	GKMG unit 20 continued
20		24	W	Textbook catch-up + Exam #2 review
21		30	T	Exam #2
22	7	1	W	TCHI unit 2 (group work #7)
23		7	T	GKMG unit 17 (Confidentiality and Modern Genetics)
24		8	W	TCHI unit 2 continued (group work #8)
25		14	T	GKMG unit 17 continued + GKMG unit 22 (Disclosure...)
26		15	W	TCHI unit 8 (Conflict of Interest) (group work #9)
27		21	T	GTMG unit 22 (Disclosure of Potential Conflict of Interest)
28		22	W	TCHI unit 8 cont. (group work #10) + Exam #3 review
29		28	T	Exam #3
30		29	W	Endings – return exams, final points, evaluations, etc.
31	8	5	W	FREEDOM!!!

* GKMG = Getting to Know Medical Genres / TCHI = Thinking Critically about Health Issues
* This schedule is subject to change (it might change)

Figure 1. The schedule for the spring 2015 term course, after having been slightly adjusted

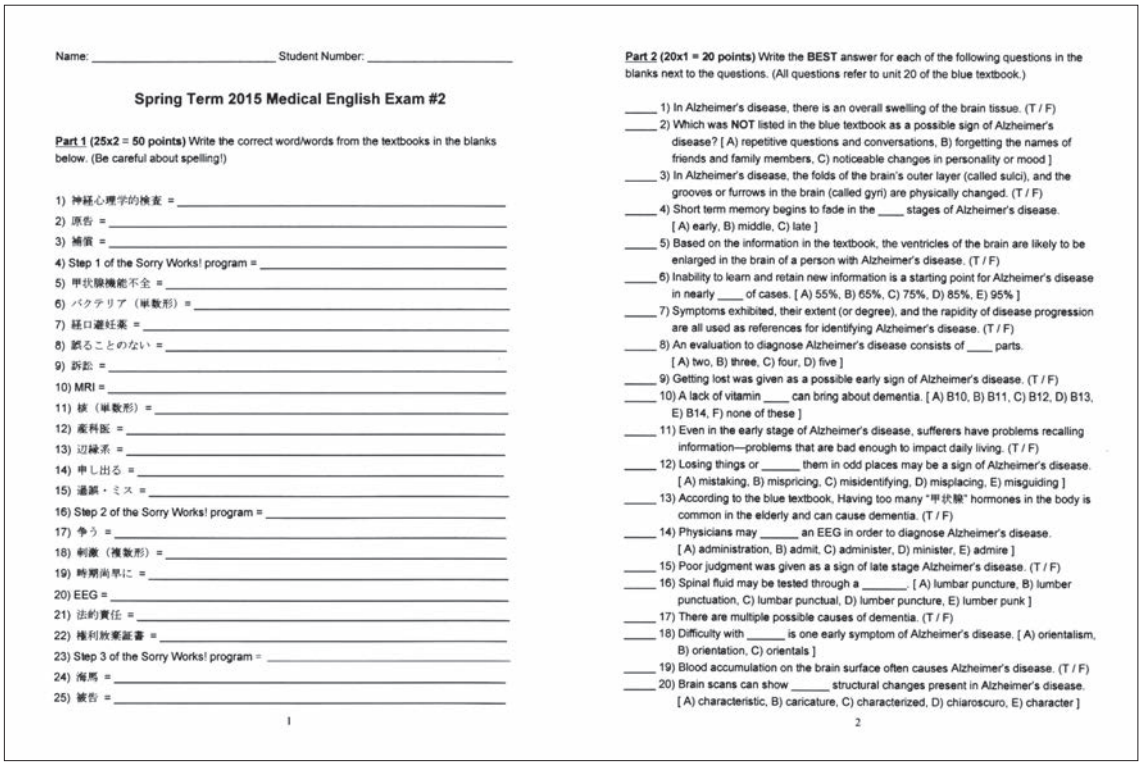
Since Phase 3 began, there have been three exams per spring term (**Figure 1**). Each has a vocabulary section, an essay part, and various other sections. The second exam from the spring 2015 term course (**Figures 2 and 3**) serves as a good, yet unusually playful, example.

I do not correct all exam essays, but I do correct the two I ranked most highly from each class by hand and distribute photocopies of them to all students in that class. I read them aloud (identifying the authors), and explain why they were the top essays, holding them up as examples. This seems to please the authors of these essays, and it leads to a notable rise in essay quality through the year. Dramatic improvement is seen in some cases.

Finally, EMP has increasingly become integrated with the medical school curriculum during Phase 3 (a desirable situation[22]) in that it is now tied to the students' Objective Structured Clinical Evaluation (OSCE) sessions. For the past few years, the freshmen have performed OSCE in English twice annually with non-Japanese simulated patients (SPs), whose presence has been arranged by my department head, Dr. Hitoshi Hasegawa.[23-25]

Knowing that they will be graded on OSCE seems to boost student motivation to better develop their medical English skills in the EMP classes. I also share an original OSCE worksheet/dialogue with the students, and have them practice with it during EMP class. This I annually update, in accordance with post-OSCE discussions with the SPs. Greater integration has also been achieved by arranging the EMP schedule to coincide thematically to a degree with Dr. Hasegawa's freshman course, and by focusing some on anatomical terminology.

In sum, Phase 3 is heavily colored by my general philosophy on teaching EMP, which is less about *making* the students *do* things than it is



Name: _____ Student Number: _____

Spring Term 2015 Medical English Exam #2

Part 1 (25x2 = 50 points) Write the correct word/words from the textbooks in the blanks below. (Be careful about spelling!)

1) 神経心理学的検査 = _____
2) 原告 = _____
3) 補償 = _____
4) Step 1 of the Sorry Works! program = _____
5) 甲状腺機能不全 = _____
6) バクテリア（単数形） = _____
7) 経口避妊薬 = _____
8) 訴えることのない = _____
9) 訴訟 = _____
10) MRI = _____
11) 核（単数形） = _____
12) 産科医 = _____
13) 辺縁系 = _____
14) 申し出る = _____
15) 過誤・ミス = _____
16) Step 2 of the Sorry Works! program = _____
17) 争う = _____
18) 刺激（複数形） = _____
19) 時期尚早に = _____
20) EEG = _____
21) 法的責任 = _____
22) 権利放棄証書 = _____
23) Step 3 of the Sorry Works! program = _____
24) 海馬 = _____
25) 被告 = _____

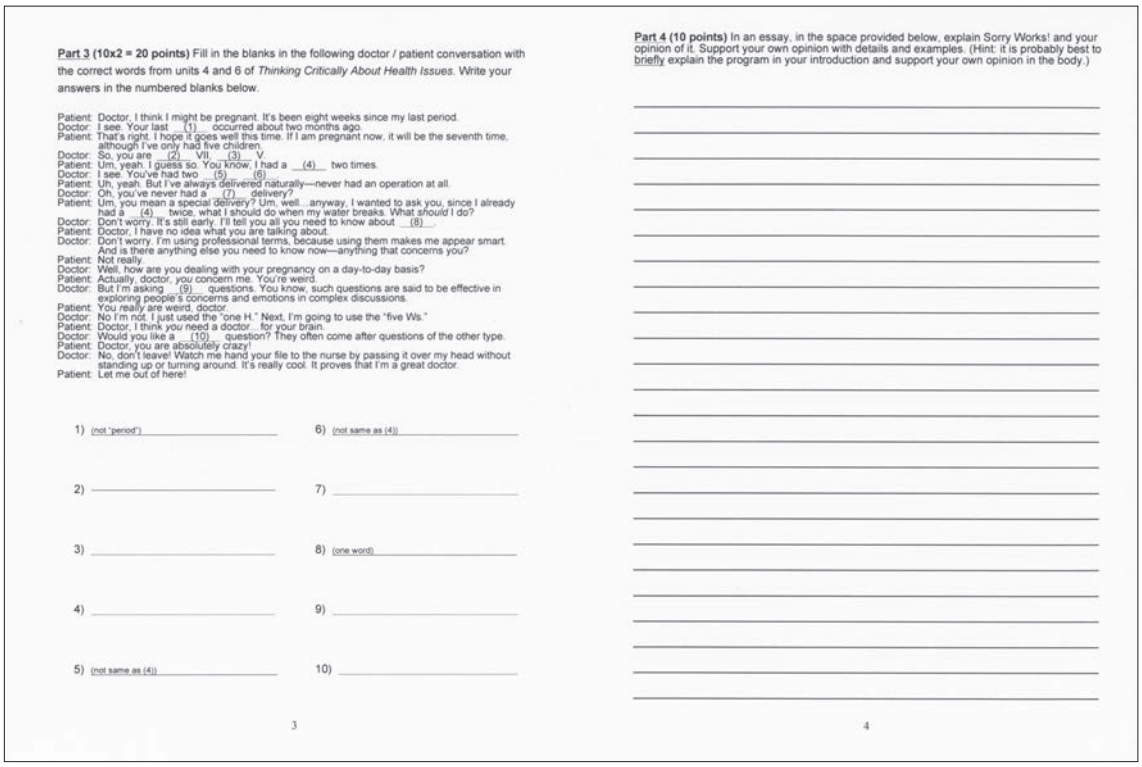
1

Part 2 (20x1 = 20 points) Write the **BEST** answer for each of the following questions in the blanks next to the questions. (All questions refer to unit 20 of the blue textbook.)

_____ 1) In Alzheimer's disease, there is an overall swelling of the brain tissue. (T / F)
_____ 2) Which was **NOT** listed in the blue textbook as a possible sign of Alzheimer's disease? [A) repetitive questions and conversations, B) forgetting the names of friends and family members, C) noticeable changes in personality or mood]
_____ 3) In Alzheimer's disease, the folds of the brain's outer layer (called sulci), and the grooves or furrows in the brain (called gyri) are physically changed. (T / F)
_____ 4) Short term memory begins to fade in the ____ stages of Alzheimer's disease. [A) early, B) middle, C) late]
_____ 5) Based on the information in the textbook, the ventricles of the brain are likely to be enlarged in the brain of a person with Alzheimer's disease. (T / F)
_____ 6) Inability to learn and retain new information is a starting point for Alzheimer's disease in nearly ____ of cases. [A) 55%, B) 65%, C) 75%, D) 85%, E) 95%]
_____ 7) Symptoms exhibited, their extent (or degree), and the rapidity of disease progression are all used as references for identifying Alzheimer's disease. (T / F)
_____ 8) An evaluation to diagnose Alzheimer's disease consists of ____ parts. [A) two, B) three, C) four, D) five]
_____ 9) Getting lost was given as a possible early sign of Alzheimer's disease. (T / F)
_____ 10) A lack of vitamin ____ can bring about dementia. [A) B10, B) B11, C) B12, D) B13, E) B14, F) none of these]
_____ 11) Even in the early stage of Alzheimer's disease, sufferers have problems recalling information—problems that are bad enough to impact daily living. (T / F)
_____ 12) Losing things or _____ them in odd places may be a sign of Alzheimer's disease. [A) mistaking, B) mispricing, C) misidentifying, D) misplacing, E) misguiding]
_____ 13) According to the blue textbook, Having too many "甲状腺" hormones in the body is common in the elderly and can cause dementia. (T / F)
_____ 14) Physicians may _____ an EEG in order to diagnose Alzheimer's disease. [A) administration, B) admit, C) administer, D) minister, E) admire]
_____ 15) Poor judgment was given as a sign of late stage Alzheimer's disease. (T / F)
_____ 16) Spinal fluid may be tested through a _____. [A) lumbar puncture, B) lumber punctuation, C) lumbar punctual, D) lumber puncture, E) lumber punk]
_____ 17) There are multiple possible causes of dementia. (T / F)
_____ 18) Difficulty with _____ is one early symptom of Alzheimer's disease. [A) orientalism, B) orientation, C) orientals]
_____ 19) Blood accumulation on the brain surface often causes Alzheimer's disease. (T / F)
_____ 20) Brain scans can show _____ structural changes present in Alzheimer's disease. [A) characteristic, B) caricature, C) characterized, D) chiaroscuro, E) character]

2

Figure 2. Pages 1 and 2 of the second exam of the spring 2015 term course



Part 3 (10x2 = 20 points) Fill in the blanks in the following doctor / patient conversation with the correct words from units 4 and 6 of *Thinking Critically About Health Issues*. Write your answers in the numbered blanks below.

Patient: Doctor, I think I might be pregnant. It's been eight weeks since my last period.
Doctor: I see. Your last __(1)__ occurred about two months ago.
Patient: That's right. I hope it goes well this time. If I am pregnant now, it will be the seventh time, although I've only had five children.
Doctor: So, you are __(2)__ VIII, __(3)__ V.
Patient: Um, yeah. I guess so. You know, I had a __(4)__ two times.
Doctor: I see. You've had two __(5)__ __(6)__.
Patient: Uh, yeah. But I've always delivered naturally—never had an operation at all.
Doctor: Oh, you've never had a __(7)__ delivery?
Patient: Um, you mean a special delivery? Um, well…anyway, I wanted to ask you, since I already had a __(4)__ twice, what I should do when my water breaks. What *should* I do?
Doctor: Don't worry. It's still early. I'll tell you all you need to know about __(8)__.
Patient: Doctor, I have no idea what you are talking about.
Doctor: Don't worry. I'm using professional terms, because using them makes me appear smart. And is there anything else you need to know now—anything that concerns you?
Patient: Not really.
Doctor: Well, how are you dealing with your pregnancy on a day-to-day basis?
Patient: Actually, doctor, *you* concern me. You're weird.
Doctor: But I'm asking __(9)__ questions. You know, such questions are said to be effective in exploring people's concerns and emotions in complex discussions.
Patient: You *really* are weird, doctor.
Doctor: No I'm not. I just used the "one H." Next, I'm going to use the "five Ws."
Patient: Doctor, I think *you* need a doctor…for your brain.
Doctor: Would you like a __(10)__ question? They often come after questions of the other type.
Patient: Doctor, you are absolutely crazy!
Doctor: No, don't leave! Watch me hand your file to the nurse by passing it over my head without standing up or turning around. It's really cool. It proves that I'm a great doctor.
Patient: Let me out of here!

1) (not "period") _____
2) _____
3) _____
4) _____
5) (not same as (4)) _____
6) (not same as (4)) _____
7) _____
8) (one word) _____
9) _____
10) _____

3

Part 4 (10 points) In an essay, in the space provided below, explain Sorry Works! and your opinion of it. Support your own opinion with details and examples. (Hint: it is probably best to briefly explain the program in your introduction and support your own opinion in the body.)

4

Figure 3. Pages 3 and 4 of the second exam of the spring 2015 term course

about providing them with as much information about a variety of health and medical topics as possible, encouraging them to process this information, and giving them opportunities to apply their knowledge. It also reflects my belief that EMP should not only focus on preparing medical students to practice medicine *in* English in the future.

2. Evaluating EAP/EMP over three phases

Although the spring and autumn term courses were essentially identical throughout Phases 1

and 2, this has not been the case during Phase 3, because one-half of the autumn term course now consists of an introductory medical anthropology sub-course. Consequently, as noted at the outset, this article relies entirely on spring term data for evaluation and comparison across the three phases. Because Phase 2 involved total sharing of the teaching duties, I do not have full data for 2011. However, for continuity I have included the spring 2011 courses in the numerical analyses in this article. As mentioned above, most data come from 2008-2015 course evaluation forms that students filled out at the end of each term. I trust these anonymous responses; although students are reluctant to voice their true thoughts about their courses to their teachers, they are surprisingly candid when writing—even when their identities are known (and more so when they are not).

Before considering student opinions, it is beneficial to compare two quantifiable indicators of student receptiveness to, and performance in, the courses over time. I have previously mentioned the low attendance and the easiness of EAP during Phase 1. My own attendance and grade data from 2008 through 2015 reinforce this, and suggest that the situation in 2011 (Phase 2, when EMP began) was considerably better than it had been in 2009, despite a near doubling in class size (**Figure 4**). Although one might expect truancy to rise as class size grows, Figure 4 shows a different trend. True, during Phase 1—when I taught only one class of medical students per term—I did not check attendance regularly, whereas during Phase 3 I have done so (usually at the end of class), but the effect of this on the data would probably be minimal. It is worth noting, however, that the data for 2009 and 2010 in Figure 4 are different, with the latter resembling a transitional phase, although it was merely the last year of Phase 1: that of standardized EAP.

The slightly higher attendance scores and slightly lower course scores in spring 2010 were probably due at least partly to the fact that I gave five quizzes over TWO in spring 2010, counting for 15% of the students' term scores, as opposed to four quizzes counting for only 10% in 2009. Overall, the patterns in **Figure 4**

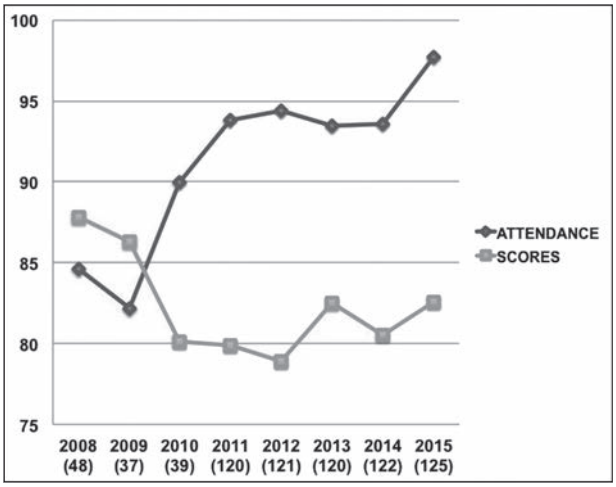


Figure 4. Term attendance and score average totals for spring term classes from 2008 to 2015, measured in percentages (left column), showing data on only one class for 2008-2010, and on A and B classes combined from 2011 (number of students in parentheses)

align well with my own subjective observations over the last eight years.

In order to better understand students' perceptions and evaluations of the courses, I tabulated their responses to the questionnaire item asking, "Did you learn enough from this course?" from the end of the 2008 spring term to the end of the 2015 spring term (**Figure 5**). Growth in the perceived value of the courses to the students seems evident, with the combined "I think so" / "I guess so" sections of the bars growing steadily upward. This trend was affected by the omission of the "I can't say" response option (the third section from the bottom in the 2008 bar and in the 2010-2012 bars in **Figure 5**) from the questionnaire forms beginning in 2013, but such answers were becoming less common over time, anyway. The elimination of that response option probably relates to the sudden appearance of some "I guess not" answers in 2013, 2014, and 2015 (third from bottom in the bars for these years in **Figure 5**). Perhaps students who responded in this way regretted not trying harder.

The fact that the data for 2009 do not fit the overall pattern also deserves mention. The "I think so" category is far too large, and there were no "I can't say" responses that term. This was probably caused by the fact that only 20 of 37 students attended class on the last day to receive their exams and fill out evaluation forms—apparently a disproportionate number of

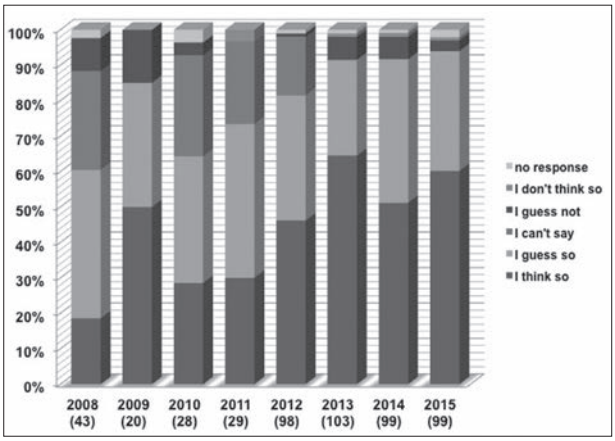


Figure 5. End-of-term responses to the standard course evaluation form question "Did you learn enough from this course?" from 2008 to 2015, with response numbers in parentheses (2011 data from one unidentified class)

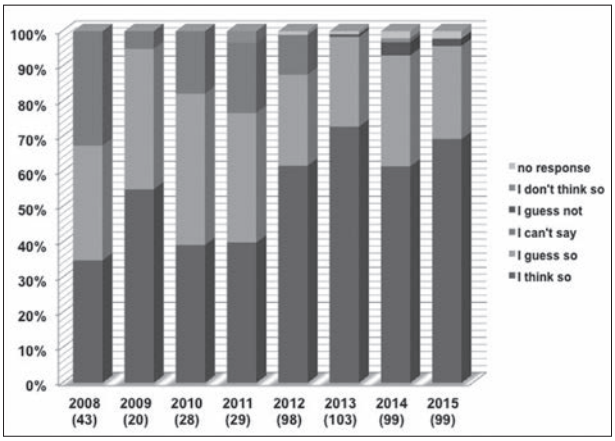


Figure 6. End-of-term responses to the standard course evaluation form question "Overall, do you think this was a good course?" from 2008 to 2015, with response numbers in parentheses (2011 data from one unidentified class)

satisfied students, or of students with an affinity for English. In sum, despite the 2009 data incongruity, students clearly found the courses of Phases 2 and 3 more valuable than the courses of Phase 1, regardless of the growth in class size.

Another effective indicator of student perceptions of course value is the aggregation of their answers to the questionnaire item asking, "Overall, do you think this was a good course?" for the same years (**Figure 6**). Interestingly, responses did not differ much between Phases 1 and 2—with the exception of 2009, probably for the reasons proposed above—but the difference between these and Phase 3 is striking. Again, the omission of the "I can't say" response option (the third section from bottom in the bars for 2008 to 2012 in **Figure 6**) from the forms in 2013 must be noted, but the overall trend is unmistakable nevertheless.

2.1. Student opinions of Phase 1 – comments

Students rarely wrote detailed comments on their course evaluation questionnaire forms during Phase 1, but when they did so they often expressed a desire to have EMP instead of standard EAP. Some showed appreciation for the ways in which I was trying to improve EAP. At the end of the spring 2010 term, I asked them to share their opinions and suggestions for the practical improvement of the course, and received many interesting responses. Some commented on the textbooks: "Since I got into medical school, I'd like to have done much more of 'Osler'—in fact, I think it should be the main textbook," "You should use only textbooks like 'Osler'—the others are high school-level," and "Student motivation will be higher if you use more challenging textbooks." Others expressed a desire to do more EMP: "Since we won't have many opportunities to study English after the first year, it would be better to study more Medical English." Others were critical of the exams: "Please stop giving exams with questions that students only have to memorize a bunch of material to answer." Clearly, many students wished to learn more in their required English courses.

2.2. Student opinions of Phase 2 – comments

Anonymous comments elicited of the students on the last day of class in Phase 2 revealed that they were generally happy about having "real" EMP lessons at the medical school campus (many had heard about the previous situation). Regarding the textbooks, students seemed to prefer TWO over the textbooks[16,17] that Professor Sato adopted for his half of the course, yet a few claimed that using only TWO (in my half of the course) as an EMP textbook was "boring." Comments like "'Osler' was good for learning about medical and related issues" were common. Many students considered the essay writing and video exercises to have been especially beneficial; a number expressed a desire to write more essays per term. Others wrote of wanting to learn a bit more general conversational English in class, in order to be able to better communi-

cate should they go overseas. Surprisingly, a number of students felt that the exams had been too easy: "Please make more difficult tests. It (*sic*) must have been too easy for freshmen because they studied English very hard to entered (*sic*) this school" (written in English), and "I think the exams were a little too easy—they're not interesting if you can just answer everything by memorization."

2.3. Student opinions of Phase 3 – comments

Student comments since 2012 have generally been positive, with little criticism. Many have cited the essay writing as particularly beneficial ("My essay writing skill really improved!"—written in English) and there were suggestions in 2015 that I make the essays weigh more in the final grade calculations. Criticism of the textbooks rarely appears, and some students report having enjoyed and learned from extra materials (printed handouts, videos, etc.) used in class. Students also appear to generally feel that the exams are appropriate and fair, although one was of the opinion in 2015 that the exams had covered too much material. Also in 2015, a Chinese student wrote on his GW worksheet that it was hard to have good discussions with Japanese students due to their reticence.

The most notable difference between student comments of Phase 3 as compared to Phases 1 and 2 is an increase in the number of comments such as, "I really enjoyed your class," "I'm looking forward to the autumn term," "Thanks for your help with OSCE," and "I was so glad that you remembered my name when you saw me outside." This does point to more satisfaction and enjoyment on the part of the students, but I would like to elicit more constructive criticism.

3. Discussion

Both the quantitative and the qualitative data indicate that the English courses for future physicians at Akita University have been evolving in a positive direction over the last decade, away from general EAP and memorization and toward increasingly problem-based, integrated EMP.[6,21] Attendance and course difficulty have risen in tandem—the latter indicated by the lower score averages for the courses (**Figure 3**). Meanwhile, student satisfaction with the courses has improved (**Figures 4 and 5**). Trends in anonymous student comments appear to match the numerical data (**Figures 3, 4, and 5**). To be sure, "cherry-picking" individual student comments is not a scientific approach, but these are very relevant—and probably honest—opinions of their English courses. Backed by quantitative data, such comments can serve as good indicators of student attitudes toward the courses.[11] It does seem safe to say that freshman EMP at Akita University is in a healthier state than ever before, despite the growth in class size.

Improvements could still be made. For one thing, spring term numerical course grade averages still seem a little high (although fall term averages are lower). Also, B class students tend to miss class slightly more frequently, and to have somewhat lower scores, than the students of A class. This is partly because their EMP classes always precede those of A class. I also still feel at times that my exams could place less emphasis on memorization, but the high number of students prevents me from making radical changes—as even now it takes 8-10 hours to grade the exams each time. I would also like to have the students write more essays, but I would not be able to meticulously correct them.

4. Conclusions and suggestions for large-class EMP

Although this is a report of the situation at only one university in Japan, it indicates that medical students in the country do prefer English courses that are tailored to their perceived needs and that speak to their interests, and that they are likely to be happier with such courses even if these are challenging. Large student-teacher ratios (among other factors) make it difficult to initiate and maintain meaningful EMP programs, but these do not necessarily make it impossible to do so. If teachers of EMP are motivated and have adequate autonomy and support, EMP programs can be successfully established and sustained, even for classes of 60 or more students. Granted, having smaller classes would be preferable, as well as would having more time for EMP in the curriculum, but much can be achieved even in one year by one teacher.

In closing, I propose some strategies for teaching EMP to large classes of medical students. 1) Make it clear to the students that the course has been designed especially for them. 2) Try to make the course as student-centered as possible, such as by having them work in groups and write essays that might be shared with the entire class. 3) Provide the students with much "real world" information on topics, particularly ethical ones, covered in class and encourage them to process this and to share their own original ideas verbally and/or in writing. 4) Make sure they learn how to express their thoughts clearly and logically in essay form, with confidence. And finally, 5) hold great expectations for the students—for their performances in the EMP courses, for their achievements in medical school, and for their future careers as physicians.

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Book Review

Fluent Forever

Author: Gabriel Wyner

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I first saw *Fluent Forever* by Gabriel Wyner in Oazo (the Maruzen bookstore outside Tokyo Station). It was love at first sight. Timidly I hesitated, however, and didn't take it home until my next visit. Within 48 hours I had decided to write a review for my Japan Society for Medical English Education (JASMEE) colleagues. To tell the truth, my feelings have evolved quite a bit since my initial infatuation. (Doesn't that always happen?) But I still want you to know about this book, which has helped me and I very much enjoyed reading. After reading this, I hope you will be encouraged to read it yourselves, with a realistic understanding of how it can help you and how it can't.

Fluent Forever's "subtitle" (actually it's written on the cover *above* the book title) is "How to Learn Any Language Fast and Never Forget It" and that brash promise (more the publisher's than the author's) is excusable, provided that "fast" means faster than the usual clumsy and ineffective ways, and is not construed to mean "overnight" or "in three weeks," as some unscrupulous publishers promise in their book titles and blurbs. But whatever the speed and lastingness of readers' language acquisition after reading *Fluent Forever*, the method is likely to be of only limited practical or professional use for the *Journal of Medical English Education*'s main readership, which is Japan-based language teachers, language learners, or both.

"Limited"? Why? We JASMEE members live in Japan and teach English. This book will give us some very good ideas and useful resources for learning almost any language *besides* Japanese, since we already know both English and Japanese. Those of us who are native speakers of English or have native-equivalent skills — as most of us do — and who want to learn a foreign language that is neither Japanese nor English, will definitely be helped by *Fluent Forever*. But it cannot help native speakers of Japanese (or other languages, for that matter) to learn English, because the reader must already know English very well to read *Fluent Forever*. (And it would be the devil to translate into other languages!) And although it will help most of us to teach, the extent of that help is limited, for reasons that I'll explain below.

The devil is in the details...

I bought the book hoping to learn new tricks, and I got my money's worth: the book is cleverly organized and extremely thorough. So much so that I will not attempt to summarize all its features, but you'll have enough on your plate with what follows. The book's main section (174 pages, a little over half of the book) is followed by a "Toolbox" containing a handful of "galleries" that introduce you to "the art of flashcards," a glossary, six appendices, a "last note" and then *more* notes, acknowledgments, and an index (ending on page 326).

Here I will cite only key elements and add some personal reflections that, I hope, will help my colleagues in their teaching work. To start with the key elements, Gabriel Wyner offers an amusing introduction to his

methods in Chapter 1 (available in its entirety, free, at <Fluent-Forever.com>); in Chapter 2 he teaches us Five Principles to End Forgetting; and in that and the following chapters he provides a very thorough introduction to spaced repetition systems (explained below), with a guide and links to spaced repetition system resources in Appendix 3.

In *Fluent Forever*'s first chapter, you will find much of what I'm sharing with you here (but of course more, and in a more entertaining fashion). Wyner's approach is based on three basic "keys" to language learning: (1) Learn pronunciation first; (2) Don't translate; (3) Use spaced repetition systems. Those who have talked with me about English teaching in Japan know that I'm a believer in teaching pronunciation (it's never too late!) and avoiding translation (keys #1 and #2): I am always telling people "If you do not pronounce a word correctly, you cannot hear the word correctly," and I permit no translation or bilingual materials to be used in my classroom (although, like Wyner, I believe bilingual approaches are acceptable under certain conditions). So there's nothing new there: the first and second keys — (1) Learn pronunciation first and (2) Don't translate — are sound principles, which I and many of my JASMEE colleagues have been advocating for years. (In my humble opinion, the Japanese education system is unable to accommodate either of them, but that's a separate issue.)

Spaced repetition systems (key #3), however, were new to me. To explain: SRSs are flashcards with some sort of arrangement to semi-automatically recycle the flashcards whose contents you've failed to memorize. Choices of media range from old-fashioned index cards filed in a "Leitner box" to digital software for PC or smartphone. With incredible patience and thoroughness, Wyner shows you how to include sounds (for pronunciation) and pictures (for thought associations) and many other mnemonic tricks to make digital flashcards more effective. For most of this, you don't even have to buy the book: as I said, his video and other resources are available for free at his website <Fluent-Forever.com> and they are excellent.

Note, however, that "Use spaced repetition systems" is advice *for learners*. Classroom teachers don't have much choice about the frequency with which we repeat material that has not been mastered. Mastery depends on motivation, which depends more on the students than the teacher. (At the recent 19th JASMEE Academic Meeting, there were talks on how to use information and communication technology to make students do coursework before class ("flipped classrooms"), but to the best of my knowledge, nothing was said about how to reschedule material that had not been learned.)

This spaced repetition advice might nevertheless induce us teachers to avoid doing the wrong thing in the classroom. Classroom language teaching is ineffective (as we all know...) and a good part of my (and I hope, *our*) enjoyment of *Fluent Forever* comes from Gabriel

Wyner's anecdotes, quoted epigrams, and witty comments on how and why this is so. *Fluent Forever*'s methods will make mastery faster and easier, but they won't make it easy, and we all know that (1) languages cannot be learned overnight, (2) in the Japanese educational system, pronunciation of English is taught based on katakana, and vocabulary acquisition is taught based on translation (violating two of the three sound principles referred to above), and (3) medical students have a stiff curriculum already.

But language learning can't be done alone: language is a tool of communication. So learners do need teachers. (Isn't that a relief to know!) *Fluent Forever* directs readers to teaching resources of different sorts. And yet another of its numerous useful features is the book's and the Wyner method's usefulness as an adjunct to language study in a standard language school. In other words, it doesn't supplant classroom teaching: it is complementary to traditional methods. (This aspect is addressed specifically in the very short Appendix 6: How to Use This Book With Your Classroom Language Course.)

Motivation!

All of the above notwithstanding, it is ultimately the *learner* who must read and use *Fluent Forever*: it is *learner-centered self-teaching*; it has relatively little to do with what the teacher does. This, too, is something that we language teachers should be reminded of.

Wyner's approach is comprehensive, thorough, and helpful, and he does it all without sounding nagging or preachy or pedantic — and this encomium applies to his online resources.

In a nutshell, *Fluent Forever* presupposes the learner's motivation and facilitates the organization of tens of thousands of facts that must be learned to master a language lastingly. To make full use of *Fluent Forever*'s methods, the learner must be crazy about learning languages to start with. Even with the latest technology, flashcard making is time-consuming; the point is, though, that with SRSs, it's lastingly effective. Hence the book's title, *Fluent Forever*, is not too much of a stretch. But what about us who want to teach English to medical students who are not always highly motivated? There's the rub!

Of course, Japanese is included among the languages that Wyner takes into consideration — but only from the standpoint of an English speaker trying to learn Japanese. He gives separate specific advice for learning Japanese and Chinese, focused on what English-speaking learners must do to learn kanji. That learning Japanese or Chinese is not the same as learning Hungarian or French is obvious, but it should remind us English teachers that there are aspects of English that are totally foreign to native speakers of Japanese: grammatical number, definite and indefinite articles, spelling, rhyme, alphabetic mnemonics... Though this idea is mine, not in Wyner's book, I was reminded while reading it that teaching rhyme through rhyming poetry might be a useful approach to teaching pronunciation and prosody (patterns of stress and intonation) to Japanese students of English. (Does that sound far-fetched?)

What's in it for us, if we think different

Gabriel Wyner explains clever ways to use flashcards for mastering different grammatical features and linguistic features that become important at different levels of apprenticeship (all analyzed and described in detail in different parts of *Fluent Forever*). For example, you could even use flashcards to learn the use of definite and indefinite articles in English, to learn the sequence of verb tenses, to become familiar with customary word order in sentences, etc. (He shows you how. I won't.)

In connection with his allusions to the defects of standard classroom teaching methods, Wyner suggests that we learn vocabulary (in a section titled "Where to

Begin: We Don't Talk Much About Apricots") as well as grammatical features in a completely different sequence from the standard. Latin, for example, is classically taught beginning with conjugations (e.g., amô, amâs, amat...) and declensions (puer, puerum, puerî...). Everybody knows how this just turns students off and doesn't teach them anything.

But this segues into one of the greatest discoveries for me personally in *Fluent Forever*: my introduction to "frequency dictionaries." (Wyner says Routledge publishes the best.) *Fluent Forever* provides a starter's version in the specific form of lists of the 625 words most often used in English (and pretty much the same, at least as a starting point, in other languages). You can start to learn a language by learning the foreign-language equivalents for those 625 words. Wyner supplies pre-translated lists for dozens of languages, organized both alphabetically and thematically (family, jobs, animals, common verbs, common adjectives, etc.).

This approach should be used more in teaching medical English. I cannot give an exhaustive list of all the types of words my students do *not* know, but I do have to teach them adjectives and verbs to describe emotions (my students seem to know only "happy," "sad," and "quarrel") nearly all the names of common diseases (oddly enough, they seem to know many *rare* disease names...), medical specialties, medical instruments and equipment, symptoms, and so on. Why aren't more of these common terms taught as "exam English"?

Anything else?

Yes! Although *Fluent Forever* is written to help language learners, its tips and principles are applicable to the learning of thousands of other facts that otherwise would depend on rote or brute-force memorization. Do you know any field that fits that description? Of course: *Medicine! Flashcards* incorporated into an SRS with sounds and pictures and other personalizing mnemonics would be, I presume, good news for medical students.

It is questionable whether our students — who have already devised their own methods for memorizing millions of facts for their exams — would be open to this kind of advice, which is geared more toward never forgetting what you've learned, as the "subtitle" says, but I do not intend to blame my students for learning stuff that they'll only forget the day after the exam. Although it is not the most important or unique thing that *Fluent Forever* did for me, the first thing it did was to remind me that, to be effective, teaching must be fun. I was reminded that I take myself too seriously in the classroom and whatever methods I use, my attitude is very likely to influence my students' attitude, on which their ability to become *fluent forever* depends. *Mea culpa!*

So, friends, "*tolle, lege!*" (Latin for "pick it up and read!"), as a voice said to Saint Augustine.

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