Journal of Medical English Education

February 2015

Vol.14 No.1

Editor’s perspectives
5 Bumper issues Timothy D. Minton

Chairman’s message
6 Journal of Medical English Education に期待する
My expectations of Journal of Medical English Education
伊達 暁 Isao Date

8 ご挨拶 Greetings from the former chair 西澤 茂 Shigeru Nishizawa

Original articles
11 Volunteering as an aid to better EMP teaching:
My experience as a hospital interpreter Thomas Mayers

15 Can-Do Statements 利用した医学英語教育ニーズの分析
アンケート結果について Assessing English needs of medical students
using Can-Do statements: Responses of teachers
坂田直樹 他

25 The efficacy of the etymological approach in English as a
Foreign Language instruction for Japanese medical students
William Tait MacDonald

Conference plenary
The 17th JASMEE Academic Meeting (第17回日本医学英語教育学会)

36 Special lecture (特別講演): Developing argumentation skills
in English writing classes Kyoko Oi

40 招待講演: 生命科学系総合大学におけるグローバル化推進の現状と計画
田邊 雄 岡安 亜

47 Keynote lecture 1: Global language teaching trends and English
for medical purposes Judy Noguchi

54 Keynote lecture (総合講演) 2: 腦科学から見た効果的外国語学習のコツ
Effective learning of foreign languages based on cerebral mechanisms
植村研一

EMP at work
63 University of Tsukuba faculty of Medicine Flaminia Miyamasu, et al

Official Journal of the Japan Society for Medical English Education (JASMEE)
Journal of Medical English Education

Vol. 14, No. 1, February 2015

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.

Copyright © 2015 by The Japan Society for Medical English Education
All rights reserved.

The Japan Society for Medical English Education
c/o Medical View Co., Ltd.
2-30 Ichigaya-hommuracho, Shinjuku-ku, Tokyo 162-0845, Japan
TEL 03-5228-2274 (outside Japan: +81-3-5228-2274)
FAX 03-5228-2062 (outside Japan: +81-3-5228-2062)
E-MAIL jasmeec@medicalview.co.jp
WEBSITE http://www.medicalview.co.jp/

Distributed by Medical View Co., Ltd.
2-30 Ichigaya-hommuracho, Shinjuku-ku, Tokyo 162-0845, Japan
第18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1988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名以上に及び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27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因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18回医学英語教育学会学術集会
日 時：平成27年7月18日（土）～19日（日）
会 長：伊東 熊（岡山大学大学院 神経内科）
会 場：岡山コンベンションセンター（〒700-0024 岡山県岡山市北区駅前駅1-1）
演題募集：平成27年2月1日正午～4月19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）
＊英語・日本語のどちらでも発表できます。学会ホームページよりご登録ください。
＊詳細は学会ホームページをご参照ください。
＊学会ホームページ：http://www.medicalview.co.jp/JASMEE/gakujutu.shtml

問合せ先：日本医学英語教育学会・事務局
〒162-0845 東京都新宿区市谷本村町2-30 メジカルビュー社内（担当：江口）
TEL 03-5228-2274 FAX 03-5228-2062 E-MAIL jasmee@medicalview.co.jp

Vol. 14 No. 1 February 2015  Journal of Medical English Education
The 18th Annual Conference of the Japan Society for Medical English Education

The Japan Society for Medical English Education (JASME) held its first meeting as a ‘study group’ in 1988. Since then, the society has continued to grow in promoting the development of medical English education, supported by over 400 members.

Medical English education has become a significant part of basic, postgraduate and continuing education. With the globalization of medicine and recent changes, such as the introduction of the Examination of Proficiency in English for Medical Purposes (EPEMP), JASME has extended its activities in ways that contribute to society.

The 18th JASME academic meeting will include plenary lectures, educational lectures, oral presentations, and symposia workshops. We welcome submissions on various topics related to medical English education such as: educational methods, assessment, student evaluation, integration of language education and specialized education, medical English for nursing and other healthcare related fields, medical English editing, teaching of medical writing, EPEMP, etc.

Date: July 18 (Saturday) to July 19 (Sunday), 2015
Venue: Okayama Convention Center
14-1 Ekimotomachi, Kitaku, Okayama
President: Isao Date
(Neurosurgery, Okayama University School of Medicine)

Call for papers: Proposals for papers on the following subjects should be submitted by the 19th of April, 2015.
- 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
- ICT/simulation education for EMP
- faculty development
- teaching of medical writing
- medical English editing
- how to make slides and give presentations at international meetings
- USMLE preparation
- medical interpretation
- EPEMP, etc.

All submissions should be made online. Only submissions by members in good standing of JASME can be accepted.
Registration: Please access the JASME homepage for details.
URL: http://www.medicalview.co.jp/JASMEE/gakujutu.shtml

For inquiries, please contact: The JASME Secretariat (c/o Medical View, Attn: Mr. Eguchi)
TEL 03–5228–2274  FAX 03–5228–2062
E-MAIL jasmee@medicalview.co.jp
Journal of Medical English Education

The official journal of the Japan Society for Medical English Education

jasmee@medicalview.co.jp

Executive chair, JASMEEM publications
Isao Date, Okayama

Editorial committee

Editor-in-chief
Timothy D. Minton, Tokyo

Associate editor
Clive Langham, Tokyo

Japanese editor
Takaomi Taira, Tokyo

Committee members
Mika Endo, Tokyo Alan Hauk, Tokyo Saeko Noda, Tokyo

Executive adviser
Reuben M. Gerling, Tokyo

Editorial executive board
Chihiro Ando, Tochigi J. Patrick Barron, Tokyo Raoul Breugelmans, Tokyo
Isao Date, Okayama Yoshitaka Fukuzawa, Aichi Mitsuko Hirano, Shizuoka
Masahito Hitosugi, Shiga Masanori Ito, Chiba Takako Kojima, Tokyo
Clive Langham, Tokyo Timothy D. Minton, Tokyo Shigeru Mori, Oita
Shigeru Nishizawa, Fukuoka Minoru Oishi, Tokyo Takayuki Oshimi, Tokyo
Jeremy Williams, Tokyo Toshimasa Yoshioka, Tokyo

Review editors
James Hobbs, Iwate Ruri Ashida, Tokyo Eric H. Jego, Tokyo
Takayuki Oshimi, Tokyo Jeremy Williams, Tokyo

Former editors-in-chief
Reuben M. Gerling, 2008–2014
Nell L. Kennedy, PhD, 2004–2008
Shizuo Oi, MD, 2000–2004

Executive adviser emeritus
Kenichi Uemura, M.D.
Editor’s perspectives

Bumper issues

As you will have noticed, this bumper issue of JMEE – all 72 pages of it – comes to you with a brand-new cover design. This was created by Mr. Junji Eguchi and his indefatigable team at Medical View, and was approved after long discussion and a few tweaks by the editorial board. The previous design had many admirers, of course, not least among the members of the editorial board. However, the black background, bold and striking as it was, had been criticised by several JASMEE members for highlighting their fingerprints. We hope this problem has now been eliminated and that the new design will meet with the approval not only of those readers who have sweaty fingers but also of the JMEE readership in general!

I am grateful to the new and previous chairs of JASMEE for sharing a few thoughts with us in this issue. Both the new chair, Professor Isao Date, and his predecessor, Professor Shigeru Nishizawa, give prominence in their messages to JASMEE’s Examination of Proficiency in English for Medical Purposes (EPEMP), and it is indeed noteworthy that we will be accepting the first candidates for the Level 1 examination this summer. I know that all of those JASMEE members involved in producing and administering the four levels of EPEMP are keen to increase the number of people taking the exams, and all of us on the JASMEE board would like to encourage members to publicise not only EPEMP but also JAMSEE’s activities in general. These include the series of biennial seminars on medical English writing that have been running for the last three years. With all lecturers drawn from the JASMEE membership, these seminars offer valuable training to Japanese medics engaged in the demanding task of reporting their research to the world. Information about all of JASMEE’s activities can be found on our website: http://www.medicalview.co.jp/JASMEE/.

This issue also contains highlights from the 17th JASMEE Academic Meeting, held last summer in Ochano-mizu under Professor Tsukimaro Nishimura’s expert leadership. As my predecessor, Professor Reuben Gerling, announced at this conference, the October 2015 issue of JMEE will be devoted to articles on extracurricular activities. All engaged in teaching English for Medical Purposes are cordially invited to let us know about the opportunities they are offering their students or colleagues to improve their English proficiency in medical settings. We are already accepting contributions to the October issue, which will, I hope, be another bumper one.

T.D. Minton
Editor-in-Chief
Journal of Medical English Education
Chairman’s message

Journal of Medical English Educationに期待する

2014年7月に日本医学英語教育学会（JASME）の理事長に就任しました。本学会の特長の一つが医学英語教育に関する重要な情報を提供する本誌の発行です。私はかつて本学会に会した際に、年に数回郵送されてくる本誌を読んで、医学英語教育に取り組む一人として大変感激したのをよく覚えています。医学英語教育を行う者にとっても、受ける者にとっても多くのアイデアを各論文から得ることができます。年次学術集会で発表されたプレゼンテーションを基にした論文も多く、それが年次学術集会に参加する動機の一つにもなりました。

編集委員長のMinton先生は、前任のGerling先生を引き継いで本誌の編集委員会を組織されました。すでに新しい組織の下で本誌の発行が始まっています。2年に一度の特別号（特集号）の発行も企画され、次回は「課外活動としての医学英語教育」がとりあげられます。また、表紙のデザインも一新されています。会員の皆さんが手に取ると新しい風を感じることができるでしょう。

本誌には、年次学術集会、日本医学英語検定試験（医英検）、医学英語教育ガイドライン、医学論文トレーニングセミナー等、JASMEが取り組んでいる重要な活動に関する情報が満載されています。医英検は2、3、4級検査に引き続き、2015年に1級試験を開始します。これまで全国で約2000名の方が医英検を受験していますが、よりよい1級試験を行うことで医英検の完成形となります。医学英語教育ガイドラインの作成に関連して、学会として「改訂版 講義録 医学英語 1～3」、「論文の書き方」「口頭発表の仕方」などの書籍の発行を計画しています。また、トレーニングセミナーでは医学論文だけでなく、医学生や研修医を対象とした海外臨床実習のトレーニングセミナーも実施します。

今後も本誌が、会員の皆さんに医学英語教育に関する実践的なアイデアを供給する場であり、またJASMEの活動の重要な情報源であり続けることを期待しています。

日本医学英語教育学会

理事長 伊達 勲
Chairman’s message

My Expectations of Journal of Medical English Education

I was appointed executive chair of the Japan Society for Medical English Education (JASMEEE) in July 2014. Part of the work of the society is publishing the Journal of Medical English Education (JMEE), which offers important information relating to medical English education. I remember how impressed I was by the JMEE, which was sent to me several times a year after I had joined JASMEE. The articles in the JMEE provide useful ideas both to teachers and to students of medical English. The JMEE has a lot of papers based on presentations at the annual JASMEE conferences, which motivated me to participate in the conferences.

Professor Timothy D. Minton, taking over as editor-in-chief from Professor Reuben M. Gerling, introduced new members to the JMEE editorial committee. Publication is now under the new editorship. It will include publishing a special issue once every two years. The topic of the first special issue will be “EMP in extracurricular activities.” At the same time, the cover of the journal is being redesigned. I hope readers will enjoy the fresh new look.

Each JMEE issue has information on important activities of JASMEEE, such as the annual JASMEE conference, the Examination of Proficiency in English for Medical Purposes (EPEMP), EMP guidelines and training seminars for writing medical papers in English. In addition to the examinations for levels 2, 3, and 4 that are already in operation, EPEMP will start a level 1 examination in 2015. About 2,000 people have taken the tests so far. With the level 1 examination the EPEMP will be covering all proficiency levels. Our plans for the future include the publication of a revised version of the Textbook of English for Medical Purposes (3 vols.) and books such as How to Write Medical Papers and Oral Presentations in Medical English, all based on JASMEE activities related to the making of EMP guidelines. We are also planning to add the present training seminars for the writing of medical papers, seminars for overseas clinical clerkships targeted at medical students and interns.

I hope the JMEE will continue to provide practical ideas for our members and be an essential source of information on the activities of JASMEEE.

Isao Date, Executive Chair
Japan Society for Medical English Education
Greetings from the former chair

ご挨拶

産業医科大学 腦神経外科の西澤 茂 です。昨年（2014年7月）に日本医学英語教育学会の理事長を退任致しました。在任中は会員の皆様に大変お世話になりましたので、お礼のご挨拶をさせていただきます。

日本医学英語教育学会は浜松医科大学脳神経外科前教授 植村研一先生が発足され、1988年に第1回学術集会が浜松で開催されました（当時は研究会）。本学会は医学部、医科大学、医療系大学で英語教育を担当する英語教官と医師からなるきわめてユニークな学会です。思いは同じ。いかにして卒前・卒後の学生、医療従事者にどのようにして効果的に医学英語を教育し、世界に通じる医療人を育てるか、ということがあります。植村研一初代理事長。大井靖雄2代目理事長というこの分野におけるスーパースターのリーダーシップで会員数も増え、研究会から学会へと順調に舵を切りました。念願だった学会主催の「日本医学英語検定試験3・4級」も開始になりました。

私は2005年に会長として第8回の本学会を主催させていただきましたが、その翌年に前任地の浜松医科大学から北九州市の産業医科大学に赴任することになり、教室作りに奔走してしばらく本学会出席から遠ざかっておりました。久しぶりに2009年の福島での学会に参加させていただいたときに、理事会・学会はその運営方針をめぐって少しずくしておく雰囲気となっており、その後大井靖雄理事長が任期を1年残し退任されましました。その後の学会運営をはからずも私が引き受けさせていただくことになりました。お二人のスーパースターのあと、私のようなものに何ができるのと腹を絞んだものでしたし、理事・評議員・会員の皆さんが本学会が目指さなければならない方向性をしっかり把握されており、その思いにのせいただき、学会の運営にたずさわってまいりました。

目指す「日本医学英語検定試験2級」の実施です。また健全な学会運行を行うために会員数を増やし、地域での施設受験を可能化することを目指す理事・評議員の皆さんと解決策を相談してきました。幸い、2級試験の実施にこぎ付けることができ、また施設受験も数を増やすことことができました。私は、次期の3年度とあわせて、計4年度理事長を務めさせていただきました。この間私自身、いろいろ勉強させていただきました。はじめに目標とした懸案事項に少しでも解決の余地が見いただせたことはすべて理事・評議員・会員の皆様のご尽力のご支援のおかげです。深く感謝申し上げます。

2014年7月に岡山大学医学部脳神経外科教授 伊達 敬 先生が新理事長に就任されました。早速敬意を発揮され、1級検定試験も現場で可能になりそうですし、3・4級検定試験の施設受験会場も飛躍的に伸ばしました。これから益々学会が発展していくものと楽しみしております。

今後も理事の一員として、学会の発展に少しでも貢献したいと思っております。この4年間、暖かい、また温かいご支援をいただき、すべての会員の皆様に感謝申し上げます。ありがとうございました。

2015年1月

産業医科大学 腦神経外科

西澤 茂
Greetings from the former chair

January 2015

After serving as executive chair of the Japan Society for Medical English Education (JASMEE), my term ended in July 2014. I would like to express my thanks to all the JASMEE members for their support during my chairmanship.

After its founding by Professor Kenichi Uemura, a former professor of neurosurgery at Hamamatsu University School of Medicine, JASMEE held its first conference in 1988 in Hamamatsu. JASMEE is a very distinctive academic society, whose members comprise English teachers in university departments of medicine, medical schools, and schools for medical professionals, as well as practicing physicians. The members’ common wish is to effectively teach medical English to students, graduates and medical professionals, and to foster medical professionals who can function internationally. As JASMEE increased its membership, the original research group steadily developed into an established academic society under the leadership of two superstars in this field, Kenichi Uemura and Shizuo Oi, who worked as the first and second executive chairs of JASMEE.

I had the honor of presiding over the eighth JASMEE annual conference in 2005. In 2006, I left Hamamatsu University School of Medicine and joined the University of Occupational and Environmental Health, Kita-Kyushu. As I was busy establishing a new program, I was forced to miss several annual conferences. When, after a long absence, I participated in the annual conference in 2009, the executive board and the society were not exactly working in harmony. After Professor Oi resigned as executive chair, I accepted the role of managing the society, which was a totally unexpected development for me. Following two such illustrious predecessors, I wondered about the amount of work I could handle, but the council members, executive board members, and other JASMEE members helped me in doing what was necessary to lead the society in an efficient manner.

Our objective was to establish a level 2 in the Examination of Proficiency in English for Medical Purposes (EPEMP). I made efforts to increase the number of members to support the sound administration of the society and to make it possible to take the EPEMP at local facilities, with the help of council members and executive board members. Fortunately, we successfully implemented the first level 2 exam of the EPEMP and were able to increase the number of applicants who took this exam at local facilities. I served as executive chair for four years, including the next three-year term. These years were a wonderful learning experience for me. I am grateful to the council members, executive board members, and other JASMEE members for helping me find solutions to the many challenges JASMEE had to tackle. Thank you very much.

Professor Isao Date of the Department of Neurosurgery, Okayama University Medical School, was appointed executive chair in July 2014. He has immediately shown himself to be an immensely competent leader, making it possible to introduce a level 1 EPEMP very soon and boosting the number of exam sites for levels 3 and 4. I look forward to witnessing the further development of JASMEE.

Moving forward, I hope to contribute to the development of JASMEE as a member of the executive board. My deepest thanks go to all JASMEE members. Thank you very much for your generous support during the past four years.

Shigeru Nishizawa
Department of Neurosurgery
University of Occupational and Environmental Health
Volunteering as an aid to better EMP teaching: 
My experience as a hospital interpreter

Thomas Mayers
Medical English Communications Center, Faculty of Medicine, University of Tsukuba

This report introduces hospital interpreting as an example of how the volunteer sector can provide the English for Medical Purposes (EMP) instructor with unique opportunities for professional development. I will demonstrate how hospital volunteer work can give the EMP instructor firsthand access to the clinical settings in which medical consultations, involving profession-specific communication skills and medical vocabulary, are used daily. As the volunteer experiences the hospital from the perspectives of both the medical professional and the patient, and is therefore positioned to have a positive impact on patient healthcare and wellbeing, this report discusses some ways in which hospital volunteer work can lead the EMP instructor to a fuller understanding of the subject matter of EMP and thereby positively impact his or her teaching.


Keywords: English for Medical Purposes, hospital volunteer, professional development, interpretation, workplace English

1. Introduction

At the heart of the University of Tsukuba’s medical complex is the university hospital. Having a hospital next door to one’s workplace can serve as a profound advantage for anyone involved in teaching EMP, as being able to witness the day-to-day life of the hospital provides a practical window into the actual world of medicine for which our students are being trained.

Gaining experience in the hospital setting has been a particular concern of mine, since I come from a professional background in education rather than in medicine. For the non-healthcare professional like me the door to the clinical side of the hospital might initially seem firmly closed. There is no obvious place for an English teacher in the consultation rooms or on the wards of a Japanese hospital.

For the EMP instructor, occasions for professional development usually take place outside of the hospital, at conferences, seminars, and in carrying out research. As a newly appointed EMP instructor, however, I came to the conclusion that avoiding personal contact with the hospital would be a wasted opportunity. Therefore I began volunteer work as a means of personally engaging with the hospital. This report will describe one of my volunteer activities: hospital interpreting. I will explain how this kind of activity can not only have a positive impact on the lives of patients, but also have an equally positive impact on teaching and thus be an effective way to gain practical career-related experience for the EMP instructor.

2. The roles of hospital volunteers

Volunteers take on a number of different roles within the hospital. Volunteers in these various roles help to provide holistic care for patients by complementing the work of the paid hospital personnel and contributing to the hospital’s goals. Mellow, in her research on hospital volunteers, places them into four categories: 1) direct service volunteers, 2) indirect service volunteers, 3) revenue service volunteers, and 4) community-based volunteers. This paper deals with hospital interpreting, which falls into the first category, as it is an activity that puts the interpreter in regular contact with inpatients, outpatients, and family members. However, all four categories of volunteering are equally important components of the voluntary sector of the healthcare sys-
Some recent articles have highlighted the many benefits of volunteering. An article, published in *The Guardian* in 2013, mentions "…extensive evidence of the health and social benefits to patients, communities and volunteers from volunteering." Alongside such health and social benefits, the EMP instructor volunteering in a hospital can also encounter unique professional development opportunities. Mellow discovered that half of the male volunteers working in a hospital’s emergency department "were medical students or training to be paramedics, and this volunteer placement was a way of gaining career-related experience." EMP instructors can likewise legitimately benefit from the career-related experience that volunteering offers and, at the same time, contribute to the work of the hospital. In this report, I will give some examples of how this has taken place within my own volunteer praxis.

3. An introduction to hospital interpreting: The University of Tsukuba

Tsukuba Science City has a very international demographic. Being home to numerous educational facilities and over 250 national and private research institutes, it attracts researchers and students from all over the world. Tsukuba City currently contains about 7000 foreign residents (3.5% of the population) from over 120 different countries. There is, therefore, a demand for healthcare services to offer support in foreign languages to non-Japanese speakers. To meet this need, the University of Tsukuba Hospital has established an interpreting service for its outpatients and inpatients during consultations and examinations, which became a formal service in 2009. Currently, interpretation services for the following languages are provided: English, Chinese, Korean, Russian, Tagalog, Spanish, Portuguese, French, German, and Arabic, with about 10 hospital consultations per month requiring the services of an interpreter. There are currently 115 people registered as interpreters: 9 staff members from within the university and 106 from the general public. According to the coordinator, however, there are only about 10 people who can be readily called upon to act as interpreters. Most of the interpreters are Japanese nationals, but there are also some of other nationalities registered, such as Chinese, Koreans, Brazilians, and from the Philippines. The participation of the voluntary sector is thus instrumental in enabling the hospital to offer interpretation services for its patients in such a wide range of languages.

When I first approached the hospital about volunteering, I was unaware of this particular service or of the hospital’s need for interpreters and was asked by the coordinator if I would participate. As a non-native-Japanese speaker, volunteering as a hospital interpreter obviously requires a certain level of proficiency and confidence in Japanese. I initially had some reservations about taking on this role. In particular, I was daunted by the medical terminology in Japanese and also by the responsibility of interpreting in medical situations.

Although I still find interpreting to be a daunting task, over time and with practice, I have found that it becomes easier the more familiar I become with medical terms in Japanese and the medical conditions of the patients. While interpreting, I almost always encounter unfamiliar terms and jargon and therefore have to carry a medical dictionary to every consultation. I also take a notebook and pen to make a note of new vocabulary. I occasionally also have to ask the medical staff to repeat any sentences or words that I cannot understand or need to clarify. I find both the medical staff and patients to be very patient with me on this point, and actually appreciate the care and time taken to be provided with an accurate interpretation.

4. Being a member of the health-care team

Volunteering opened up the door to the clinical practice of the hospital that I had thought to be closed to outsiders. Volunteering made me an insider and a small part of the healthcare team, which in turn has helped me to more intimately understand the day-to-day life of the hospital.

To illustrate this point from my own experience, I have interpreted on numerous occasions for diabetes mellitus patients. In a typical visit, the diabetes patient will usually talk to various healthcare professionals: dieticians, nurses, doctors, and administrative staff, requiring a wide-ranging vocabulary. From this experience I have been able to develop a sufficient working vocabulary for diabetes consultations and have also become more familiar with this disease and its treatment. I have also become familiar with the hospital’s endocrinologists, dieticians, and specialist nurses.

At the University of Tsukuba Hospital, the same interpreter will generally be used for all of a particular patient’s consultations. The interpreting session may involve waiting with that patient in the waiting room, at the bedside before the consultation, or even being with them through a test or procedure (for example, I once interpreted for a patient undergoing a colonoscopy). An interpreter therefore becomes familiar with particular patients and their conditions. This familiarity makes interpreting sessions easier and
also brings reassurance to the patient.

The interpreter can thus also play a supportive role for a patient. The interpreter will directly experience the patient’s questions, concerns, and anguish. For foreign patients, requiring medical care away from their home country can often be very distressing and the interpreter can help to ease this distress. For example, I once interpreted for nursing staff as they explained to their patient about how to change a colostomy bag. The patient later wrote to thank me for being with him on that particular occasion. He expressed that he had been harboring a deep sense of shame about the colostomy and that my interpreting and presence during that particular session had helped to remove that feeling of shame.

5. Understanding the perspective of the patient

Observing the hospital through the eyes of the patient can be a very informative experience. For example, seeing the effects that a doctor’s words and body language has on a patient has invaluable informed my understanding of the subtleties of medical communication skills. Hospital interpreting has given me unique opportunities to witness such real-life medical interactions on a regular basis.

From this experience I have learned to encourage medical students to consider the patient’s perspective. This has consequently encouraged me to study patient-centered care more deeply and has led to a better understanding of my role as an EMP instructor. Furthermore, as an interpreter I have felt a strong sense of fulfillment by helping patients through difficult times. This has probably been the most rewarding part of being a volunteer interpreter although it can also sometimes be emotionally distressing.

Perhaps the most daunting and moving experience I have had as an interpreter thus far, was being asked to interpret at a consultation between a doctor and his cancer patient. In this consultation, the doctor had to inform the patient that he had tried every available treatment and that there was nothing more he could do. In preparation for this consultation, I met with the doctor beforehand to review the patient’s medical history and to discuss the doctor’s plan for the consultation. I was able to take some time to study the English and Japanese vocabulary related to the disease and its treatment, and also research techniques for breaking bad news to patients. This preparation helped me considerably during this difficult and emotional consultation, enabling me to facilitate the conversation more professionally between the doctor and his patient without drawing attention to myself as the interpreter.

The following month, when I was teaching a class of doctors, the conversation turned to truth-telling and breaking bad news to patients. The experience with the cancer patient enabled me to better sympathize with the doctors, who very often find themselves in such difficult situations. This sense was reinforced three months later as I interpreted for the same patient’s family at his bedside in the ICU.

6. The cultural dimension

One interesting aspect of hospital interpreting that I often encounter is meeting patients of different cultural backgrounds and experiencing the manner in which that culture relates to medicine and healthcare. For example, a recently diagnosed diabetes patient was concerned about observing Ramadan while keeping the strict dietary and insulin regimen necessary for managing her condition. When the patient brought up this issue with the doctor, it was apparent that this was something that the doctor had not considered, perhaps since it is not a common issue in a Japanese context. The doctor very carefully asked for exact details of the patient’s typical activities of daily life during Ramadan and subsequently gave appropriate directions regarding insulin use and diet. On behalf of the patient, I also did some follow-up research in medical journals and found some articles on this subject written by Muslim doctors. This gave the patient a perspective on this issue from within the traditions of her own faith, which served to reinforce the advice given by her Japanese doctor.

In another case, a female patient seemingly refused to follow healthcare advice from the medical staff regarding weight loss, exercise, and diet. She was especially dismissive of advice given by the nurse. The patient’s lack of will to be proactive in managing her condition was clearly frustrating and disappointing for the medical staff. Many of the complicating factors in this patient’s case appeared to arise from cultural factors, such as a tradition of high-fat, high-salt diet, of which her dietician was well aware. Yet other, less obvious, cultural factors also appeared to play critical roles, particularly the traditional gender roles of a woman within her society, a factor I later discovered in a search of medical literature on similar cases, and was something that I had not considered previously. Encountering such differences in cultural attitudes towards medicine has broadened my concept of what interpretation actually involves. Interpretation is not a purely linguistic task — it is also a cultural one.
7. Hospital interpreting and EMP teaching

As I have suggested in this report, volunteering as a hospital interpreter has had a profound influence on my work as an EMP instructor and a very positive general impact on my teaching. I have found it to be a very effective way to become more informed about both the surrounding contexts and the subject matter of EMP. Volunteering as an interpreter has helped me to bridge the gap between the clinical practice of the hospital and the EMP classroom. It has made me a participating member of the healthcare team and, as such, has allowed me to witness firsthand examples of the numerous medical dialogs that I teach my students. This experience has fed back into my classroom, invaluably informing my teaching. It has helped me to build a foundation of firsthand clinical experience from which I have drawn confidence as a teacher of the subject.

My previously mentioned work interpreting for a diabetes patient illustrates this point, as it brought me many detailed clinical insights and a deeper understanding of the disease and its treatment. These insights have enabled me to more accurately plan and teach realistic lessons on doctor-patient consultations for diabetes and its related symptoms and complications. It is very satisfying as a teacher to know that in the limited time I have with students in the English classroom I can provide them with a realistic and practical medical English education.

Meeting regularly with patients has been another way in which interpreting has helped with my EMP teaching. Alongside the many benefits that this aspect of volunteering brings, working with patients has given me a wealth of background knowledge for simulating the role of a patient. I often participate in workshops for medical history taking as an instructor and sometimes as a simulated patient. In such classes my volunteering experiences have enabled me to better offer advice to students on patient-doctor interactions.

As an EMP instructor I have also found insights into the cultural influences on healthcare useful when working with classes of more advanced learners. In such classes, discussions occasionally lead to considering how ethical, religious, and other cultural factors might make a significant difference to decisions regarding the course of treatment for patients. Because the relative homogeneity of Japanese society might not allow Japanese medical students to often contemplate such issues, I would consider it an important element for training in international or cross-cultural awareness. This is something that I would like to develop further in my teaching.

8. Summary

In this report I have introduced hospital interpretation as an example of how an EMP instructor might begin to engage with a hospital through the voluntary sector and also highlighted the mutual benefits of participating in this valuable service. Acting as a hospital interpreter has brought me in close contact with the affiliated hospital and allowed me to participate in the clinical encounters that I teach students in the university classroom. It has allowed me to better sympathize both with the medical staff and patients, and has also deepened my understanding as to how cultural factors relate to healthcare. Coming from a nonmedical background, volunteering has given me a source of clinical experience that has fed back directly into classroom content and the quality of my teaching. I hope that this report might encourage some of my fellow EMP instructors to consider volunteering as an interpreter in a hospital.

Acknowledgements

The author would like to acknowledge Brian K. Purdue and Flaminia Miyamasu of the University of Tsukuba and Mike Guest of the University of Miyazaki for their invaluable help reviewing this manuscript. I would also like to thank all the volunteers and staff of the University of Tsukuba Hospital.

References

Can-Do Statementsを利用した医学英語教育ニーズの分析：
医学部教員へのアンケート結果について

Assessing English needs of medical students using Can-Do Statements: 
Responses of teachers

Background and Objective. While curriculums of medical students are packed and contents of English classes should be focused, their needs for English may not have been investigated comprehensively and elaborately. To address this situation, our research group aimed at their thorough and detailed needs for English, involving both teachers (at medical faculties many of whom were medical doctors) and students, and conducting questionnaires and objective tests. Since the amount of results exceeds the allowance of one paper, this paper only reports the needs of the teachers.

Methods. Newly developed Can-Do Statements for EMP, consisting of 50 questions asking the extent to which English is necessary in each situation medical doctors seem to be involved in, were distributed by hand or online to 91 teachers at medical faculties of two universities in Japan, whose ages and specialties (clinical medicine, basic medicine, general education) are varied.

Results. Overall, receptive skills such as reading and listening were rated higher than productive skills such as writing and speaking. Needs for medical words were also high. Besides, it was found that needs were varied by age and specialty groups.

Conclusion. The results of this study show that to make the curriculum in medical faculties more efficient, reading, listening, and medical words should be focused on. Plus, we should keep in mind that opinions towards English teaching are varied among teachers. To design balanced curriculums, it is necessary to audit opinions of multidisciplinary members.

Keywords English for Medical Purposes, needs analysis, can-do statements, medical faculty

1. はじめに

高度な専門性を持つ医師は、英語に触れられる機会が多いため、英語に触れる機会が多いと考えられる。最新の医療に関する知識を得るために、論文を海外から取り寄せることもある。医師が患者を診る機会もあると考えられる。しかし、このような時に、医師が医療英文に対するニーズを把握するため、短い時間で高い効果を上げる教育が求められていると言える。そこで、本論文では上述の英文教育のためのCan-Do Statementsを利用したアンケート調査に基づい
2. 研究の背景

本研究における「医学英語」は、English for Specific Purposes (ESP) の下位分野の English for Medical Purposes (EMP) を指す。ESP とは、「それぞれの学問領域や職業には固有のニーズが存在し、そのニーズによって同質性が認められ、異質性も生じる。そして、同質性が認められた各専門領域では「ディスコース・コミュニティ」が形成され、その目的を達成しようとする。その場合、各団体の内外において明確な共同目標を持つ英語が使用される。その際の言語研究および言語教育」である。この定義を EMP に適用すると、ESP とは、「医学・医学研究者、その他の医療従事者が含まれる団体が、その医療集団に特有のニーズと目標を持って、その医療の中で、あるいは患者に対して使用する英語に対する教育研究」と考えることができる。

日本における医学英語に関する研究は、近年ますます多くなってきている。日本医学教育学会国外教育ワークショップグループによる 1994 年から 1995 年にかけて行われた全国の国立・私立の医学部・医科大学への調査において、「医学英語」という科目を設定している大学は、回答のあった 54 校のうち 34 校あり、それ以前に行われた調査よりも増加していることが報告されている。また、1998 年には医学教育学会の前身である医学英語教育研究会の第 1 回研究会が行われ、さらに、2008 年には日本医学英文検定試験が開始されている。

一方で、日本における医学英語教育は、EMP とは何かという統一的な理解がなされてはいないが、その研究では、ESP の方法論を取り入れることにより、より適切な医学英語教育の実現を目指す。

3. 先行研究

ESP の観点に基づいて EMP に関してニーズ分析・調査を行った先行研究は、国内外含めていくつか挙げることができる。本稿は、この中から、先駆的な調査である菱田・大木、横山他および日本と英語の使用状況が類似していると思われるタイの調査を取り上げ、それらを比較しながら、その貢献と問題点を提出する。

表 1 は、上記の先行研究の調査対象、目的、方法・項目をまとめたものである。

菱田・大木は、1999 年の医師会 133 名に聞き取り調査を行った。医師としての英語の使用については、学生数が数種類の調査に応じて不同である一方、英語使用頻度（同項⑥）は、その職種対応で大きく変わることが示されている。一方、英語文法能力（英語文法論文の解読）は、1999 年の医学教育学会の前身である医学英語教育研究会の第 1 回研究会が行われ、さらに、2008 年には日本医学英文検定試験が開始されている。

一方で、日本における医学英語教育は、EMP とは何かという統一的な理解がなされてはいないが、その研究では、ESP の方法論を取り入れることにより、より適切な医学英語教育の実現を目指す。

ESP の特徴は、アンケート調査や聞き取り調査によるニーズ分析に基づいて、シラバス・コース設計、教授法の決定、評価基準の設定を行う基盤に位置づけられる。ニーズ分析は、目標状態分析（Target Situation Analysis; TSA）と現状分析（Present Situation Analysis; PSA）から構成される。TSA は「どのようなことを、どのレベルまで学習する必要があるか」と「どのようなことを学ぶべきか」を含む。PSA は、「学習者の現在の客観的英語能力」と「学習者の英語に対する態度」を示す。TSA・PSA の調査対象となるのは、当該職業者団体とこれからの職業者団体に入れる学習者である。EMP の文献では、前者は医師・医学研究者、後者は医学部学生である。したがって、EMP 教育を適切にすすめるためには、医師・医学研究者、医学部学生に対するニーズ分析を行い、TSA と PSA を行わせる接続のギャップを明確にし、そのギャップを埋めるような教育を行うことが必要となる。横山他は、これらのうち、「医師・医学研究者からのツールを多角的に明らかにしていく。
表1 先行研究の調査項目・方法・調査目的

<table>
<thead>
<tr>
<th>看護</th>
<th>対象 (回答者数)</th>
<th>目的</th>
<th>項目・方法</th>
</tr>
</thead>
<tbody>
<tr>
<td>萩田・大木</td>
<td>医師・医学専門教員 (133)</td>
<td>実務における英文の使用実態および学部における医学英文教育に関する必要度を調査</td>
<td>①英語の論文を読む頻度 ②英語の論文を書く頻度 ③他の人による論文をチェックする頻度 ④英語で口頭発表・講演をする頻度 ⑤学会のポスターセッションで、英語で発表する頻度 ⑥外国人患者と英語で話す頻度</td>
</tr>
<tr>
<td>横山・他</td>
<td>医師・医学専門教員 (168)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>学部学生 (300)</td>
<td>一般・専門英文教育に対する実態調査</td>
<td>①日本人医師に英語は必要か ②大学教育課程で英語は必要か ③専門英文教育の必要性 ④医学部学生に対する英文教育の目標 ⑤大学の英文教育で伸ばしたいか ⑥どの程度まで力をつけるか ⑦英文教育に満足しているか ⑧医学部で英文コミュニケーション能力は必要か ⑨何年生まで英語の授業は実施すべきか ⑩医師として必要な英語力 ⑪開業医と研究者には違うか ⑫専門英文の習得に意欲を持っているか ⑬専門英文を誰に教えてもらいたいか</td>
<td></td>
</tr>
<tr>
<td>Naruenawatana &amp; Vijchulata</td>
<td>医師・医学専門教員 (10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>学部学生 (297)</td>
<td>ニーズ調査</td>
<td>四技能それぞれに関して、比較的具体的な項目（例：&quot;Listening to conversations on general topics.&quot;&quot;)を設定して、5件法で調査</td>
<td></td>
</tr>
</tbody>
</table>

4. アンケートの開発

4.1. Can-Do Statementsと英語教育

本研究で使用したCan-Do Statements (CDS)とは、「(ある言語で)〜ができる」という行動を表す表現で例示された言語運用能力の記述文 (descriptor)の集まりで、Can-Doリストとも呼ばれる。例えば、「英語で自己紹介ができる」という記述文は、学習者にとっては「自分がそれをできるかどうか」を判断する自己評価のツールとなり、教員にとっては「学習者がそれをできるかどうか」という習熟度評価、あるいは「指導の結果できるようになったか」という教育効果の評価を行うツールとなる。「英語で自己紹介ができるようになるため」の教材開発や、「できるかどうかをチェックする」テストの開発、さらには「いつまでに何ができるようにするか」を示すことで学習者の進捗を把握し、学生がどの程度の程度の必要性を感じているかを調査することも可能である。このような状況に即した具体的な能力記述文、学習に明確な目標を与える有益な道具となる。7

しかしながら、ESPではまだCDSの事例は限られている。数少ない例としては小野が大学工学部におけるCDSの策定に着手し、妥当性の検証を行っているほか、深山が知的財産権分野におけるCDSおよびそれに基づく教材作成を行い、10

Vol. 14 No. 1 February 2015 Journal of Medical English Education
4.2. Can-Do Statements for EMP

Up to this point, the project has used TOEIC® Can-Do Guide to develop a meaningful ability-based proficiency description that mirrors the complexity of Japanese language and culture and consists of communicative domains. These can-do statements include reference to the Japanese language, culture, and communicative skills.

In the current study, we used the TOEIC® Can-Do Guide to develop a meaningful ability-based proficiency description that mirrors the complexity of Japanese language and culture and consists of communicative domains. These can-do statements include reference to the Japanese language, culture, and communicative skills.
5. アンケート調査の実施

パイロット調査後、項目の並べ替え・精査を行った上記のCDSS-EMPについて、2013年7～8月にかけて、紙媒体またはオンライン（アンケート調査用ウェブサービスSurvey Monkeyを用い）に通して回答を依頼し、2つの私立大学の医学部教員計41名から回答を得た。回答者の属性は表2のとおりである。

6. 結果

6.1. 全体像

教員全体の回答結果を技能別・場面別にまとめたものが表3、表4である。全体として、受容スキル（リーディング・リスニング）のニーズが産出スキル（ライティング・スピーキング）よりも高く、また、用語、一般・ニュース等のニーズが高い一方で、患者と接する、研究・学会、医療従事者とのコミュニケーションの際に使う英語に対するニーズは、あまり高くないということが分かった。表5および表6に、全体ニーズの上位項目と下位項目を挙げておく。

<table>
<thead>
<tr>
<th>表2 回答者の属性</th>
</tr>
</thead>
<tbody>
<tr>
<td>医師免許</td>
</tr>
<tr>
<td>なし</td>
</tr>
<tr>
<td>臨床医学</td>
</tr>
<tr>
<td>有回答</td>
</tr>
<tr>
<td>総計</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>表3 技能別ニーズ（教員全体・平均）</th>
</tr>
</thead>
<tbody>
<tr>
<td>リーディング</td>
</tr>
<tr>
<td>4.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>表4 場面別ニーズ（教員全体・平均）</th>
</tr>
</thead>
<tbody>
<tr>
<td>用語</td>
</tr>
<tr>
<td>4.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>表5 ニーズ上位5項目</th>
</tr>
</thead>
<tbody>
<tr>
<td>技能・場面</td>
</tr>
<tr>
<td>リーディング・用語</td>
</tr>
<tr>
<td>リーディング・用語</td>
</tr>
<tr>
<td>リスニング・用語</td>
</tr>
<tr>
<td>リーディング・研究・学会</td>
</tr>
<tr>
<td>リーディング・用語</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>表6 ニーズ下位5項目</th>
</tr>
</thead>
<tbody>
<tr>
<td>技能・場面</td>
</tr>
<tr>
<td>ライティング・医療従事者</td>
</tr>
<tr>
<td>スピーキング・研究・学会</td>
</tr>
<tr>
<td>スピーキング・研究・学会</td>
</tr>
<tr>
<td>スピーキング・医療従事者</td>
</tr>
<tr>
<td>スピーキング・医療従事者</td>
</tr>
</tbody>
</table>
6.2. 技能・場面・教員属性別のニーズ

表7 6.2.1. 技能別（全体・教員属性別）
技能別では、技能の種類を参加者内要因、専門および卒後年数を参加者間要因として、3元配置の分散分析を行った。その結果、まず教員全体の各技能別のニーズについて、F(3, 213)=22.9, p<0.01となり、有意差が観察された。多重比較の結果、リーディング他の3つの技能よりもニーズが高かった。また、リスニングはスピーキングよりもニーズが高いことが分かった。また、専門の違いによる差も有意であった（F(3, 71)=3.6, p<0.05）。多重比較の結果、基礎医学を専門とする教員のニーズは、臨床医学を専門とする教員よりも高いことが分かった。卒後年数については、F(5, 71)=4.1, p<0.01となり、多重比較の結果卒後5年以内の教員のニーズが、卒後21-30年、卒後31年以上の教員よりも有意に低いことがわかった。また、リーディングのニーズ、リスニング、リーディング、スピーキングのニーズ、リーディング、リスニング、スピーキングのニーズが高い教員に対する影響を検討した。なお、卒後年数では、F(5, 72)=4.0, p<0.01となり、卒後年数の傾向が見られた。リーディングのニーズ、リーディング、スピーキングのニーズについて、卒後年数以内の違いにおいては、学部×卒後年数、専門×卒後年数、技能×卒後年数、のいずれも有意な差が見られず、属性による影響を検討した。なお、リーディングのニーズに対する影響を検討した。

表8 場面別ニーズ（属性別・平均）

7. 考察

7.1. 全体考察
まず、技能別にみると、受容スキル、特にリーディングへのニーズが高いことが判明した。これは横山ら、および、Naruenratatana & Vichulataの研究と一致する。一方で、菱田・大木では医学英語教育に対して外国人患者との英会話の育成が重要だとしているが、これは実際にそのような
Can-Do Statementsを利用した医学英語教育ニーズの分析：医学部教員へのアンケート結果について

場面が多いというよりも、大学時代にしか存在せぬ教養内容として挙げているものと思われます。今回の調査の目的は、「学生が理解し、卒業に至るために学ぶべきもの」という関心を受けたと考えると、まず英語の必要性度としては、リーディング（リスニング）が高いと言えると思われる。

場面別では、用語、および一般・ニュースへのニーズが比較的高かった。特に、用語について、各技能を通じてニーズが高いことがわかり（資料2参照）、これは高校まで学習できていない医学用語について、大学でしっかりと学ぶ必要性を、強く反映していると言える。一方で、上述の患者との会話等については、相手の話に対するもののがニーズは高くなく、現実の医療場面を反映していると捉えられる。

また、医療従事者間のニーズが高くなる。外国語の看護師、理学療法士等と接する機会は限られているのだろうと思われる。

次に、専門による違いがあるが、技能別の分析（6.2.1）で有意差があり、また、平均値自体を見てみると、専門による差異は少ないことを示しており、本論文では基礎医学を専攻する教員のニーズが（とくに有意な差ではない）ことを示していると考える。研究活動に従事する時間が長く、国際的な情報の受信・発信をこなす必要があることを見抜いていると推察される。

また、専門による、場面別のニーズの差異があることが興味深い。総合教育教員が、場面別のニーズに差を見出していない一方で、臨床医学における基礎医学の教員の分析結果は、必要な場面ははっきりと示しており、また、医療教育に専攻する教員のニーズが高かった。基礎医学を専攻する教員の結果で、同ニーズは最も高かった。用語ニーズよりも有意に低かったが、臨床医学教員の結果では、両者に有意な差を生じていない。これについては、臨床医学教員の方が、外国語を用いる場面を経験し、そのようなニーズが低くないということが認識していると考えることが自然ではないであろう。すなわち、多くの医学が臨床医になる可能性が高いことを鑑みても、（全体としてのニーズがより高くない）患者場面の英語教育について、ある程度考慮に入れる必要性があると言えるかもしれません。また、総合教育教員と医学専門教員の場面間のニーズの認識が異なったことは、今後のカリキュラム作成において、幅広い視野が求められることを意味する。医学部という専門教育が必要な場面においては、専門性の高い医師・医学専門教員に意見を聞くことが、効果的な英語教育に、重要なものではないであろうか。

卒後年数が短い教員ほど、英語に対するニーズが高いということは、過去の研究ではなかった新しい知見であった。直接的理由を即時に見出し難しいが、妻木・大木の「卒後年数を言語学的態度に差がない」との結果を鑑みると、実際に必要性の見解より、ニーズの感じ方に違いがある可能性がある。一つの解釈としては、卒後年数の短い教員については、時代背景もあり、英語の必要性について大学在学時から強く言われてきたか、あるいは、卒後年数が長い教員については、英語の重要性はあまり認識していないまま医師になり、その後職業上必要となったことで、強くそのニーズを感じている可能性はある。もちろん、この裏付けには資料分析の裏付けが必要であるが、世代ごとのニーズの数値が、傾向として異なることには、今後も同様の分析をする際の留意事項となるであろう。

7.2. カリキュラム作成への提言

本研究の結果より、大学病院の医療現場で働く医師や教員達へのアンケート調査から、受容スキルのニーズが高いこと、どのような英語使用場面のニーズが高いか明かとなった。従って、医学英語教育について以下の如き分析が考えられる。まず、ニーズが高かった受容スキルである、リーディングとリスニングについての医学英語教育に必須であると考えられる。この際、「用語」はリーディング、リスニングのいずれでニーズが高かった（資料2参照）、早期時期から指導を行う必要がある。注意が必要なこととして、同じ「身体部位」の用語であっても、リーディングとリスニングでニーズに差がある場合があることが挙げられる。具体的には、リーディングでは「身体部位の日常用語を読んで理解することができる」（4.30）も「身体部位の解剖用語を読んで理解することができる」（4.25）も高いニーズがあった一方で、リスニングでは、「身体部位を日常用語で聞いて理解することができる」は4.27と高いニーズがあったものの、「他の医学従事者が身体部位の解剖用語を話すのを聞いて理解することができる」（3.85とニーズに若干の聞きがみられた。このことは、実際の受容現場で、カルテルや論文で解剖用語を見て理解する必要があるが、会話で解剖用語を用いることはそれほど多くないことを反映している可能性がある。このような情報は、授業内容を学習すべきスキルの関係を考えうえで有用であり、授業を組み立てる際にも、「身体部位の解剖用語」のリスニングを行う前に、ニーズが高い他の項目を優先させるなどの配慮が可能となる。

本研究の結果は、リスニングやリーディング等の技能分析、各項目から指導を行うか、また、どのような教材を用いるかといったカリキュラム設定においても大きな役割を果たす可能性がある。例えば、リーディングのオーセンシク探求的な教材として、教科書以外に論文の抄録や症例報告、一般向け雑誌の医学に関する記事、カルテル等を用いることが考えられるが、論文の抄録（4.26）や一般向け雑誌（4.06）、症例報告（4.04）のニーズが高いのでに対して、医学機器の説明書（3.73）は、医学に非常に深い関連があるにもかかわらず、ニーズがそれ程高くない。このように、本研究で得られたニーズ分析の結果を利用することで、より現場のニーズに合った教材選択やカリキュラム設計を行うことが可能となる。
8. おわりに

本論文では、EMPに関する細部的なCan-Do Statementsの策定過程と医学部教員へのアンケート調査実施について報告し、その結果について技能別・版面別の全体的な傾向、および教員属性別のニーズの特徴を分析した。先行研究の結果に沿った結果もありましたが、技能と版面をクロスさせてニーズを観察したことで、相対的に重要なニーズを抽出することができたと考えられる。一方で、本研究は、医師免許を持たない医師で勤務する教員が対象であり、学生が卒業時を持っているべき英語力を理解しているものの、一定の偏りが存在することは否定しない。医師が必要な英語力という観点からは、開業医・(大学病院で)勤務医も含めて、広範な調査が今後も必要だと思われる。また、医学教員ニーズ点においても、医学英語教育に対するニーズは、大学によって異なることも考えられるため、本研究で作成したアンケートを他校でも実施することで、多様なニーズの把握に役立てていただければ幸いである。本研究で作成したCDS-EMPは、十分な網羅性を持たずに配慮して作成したため、医師・医学部(医学科)学生だけではなく、作業療法士、理学療法士や看護師を目指す学生のニーズを把握することにも応用が可能であると考えられる。ただ、同様のリストが他にあまり中で、手探りで作成したため、偏り・修正すべき点もあることに大いに意見を Myst。よりよい医学英語教育の実施のためには、アンケートの改善、また、それを踏まえたカリキュラムの改善については、新たなニーズの把握に役立てていくことが必要である。この点については、今後の研究課題としたい。

謝辞

本研究により、医学部教員のニーズを把握するために必要な調査実施を可能にすることができた。本研究を行う際、医学部教員の協力を得たことに感謝申し上げる。専門分野の異なる教員各位の協力に心から感謝申し上げるとともに、本研究に関わる全ての方々に感謝申し上げます。特に、 تح問の皆様に深く感謝申し上げます。
5. 横山彰三、山内恵子、中野秀子、他。2005. ESP教授法に基づく大学専門英語教育のための効果的シラバスと教材開発の研究 [科学研究費補助金研究成果報告書]。

### 資料1: CDS-EMPアンケートフォーマット
まず、ご自身についてお答えください(1, 2とは当てはまるものに〇をつけてください)。
1. 敬称 面接医学・基礎医学・総合教育講座
2. 医師免許 持っている・持っていない
3. (2で持っていると回答された方のみ) 卒後年数 ______年

以下の項目では、医学部生が大学卒業時（卒業医師試験まで）に「英語」どの程度身に付ける必要があるかについてお聞きします。各項目について、「そう思う(=5)」〜「そう思わない(=1)」のうち当てはまると思うもの〇をつけてください。

### Listening

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>身体部位を日常用語で聞いて理解することができる</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

### 資料2 アンケート項目と結果平均値（得点順）

<table>
<thead>
<tr>
<th>技能</th>
<th>項目</th>
<th>結果平均値</th>
</tr>
</thead>
<tbody>
<tr>
<td>用語</td>
<td>身体部位を日常用語で聞いて理解することができる</td>
<td>4.27</td>
</tr>
<tr>
<td>用語</td>
<td>診療科・専門分野の名前を聞いて理解することができる</td>
<td>3.95</td>
</tr>
<tr>
<td>用語</td>
<td>他の医療従事者が病名を話すのを聞いて理解することができる</td>
<td>3.90</td>
</tr>
<tr>
<td>用語</td>
<td>他の医療従事者が身体部位の解剖用語を話すのを聞いて理解することができる</td>
<td>3.85</td>
</tr>
<tr>
<td>医療従事者</td>
<td>他の医療従事者が病名を話すのを聞いて理解することができる</td>
<td>3.80</td>
</tr>
<tr>
<td>患者</td>
<td>患者の話を聞いて、その症状、病歴、生活習慣を理解することができる</td>
<td>3.78</td>
</tr>
<tr>
<td>医療従事者</td>
<td>医療従事者(医師、看護師、理学療法士、技師など)が話す業務上の説明、指示を聞いて理解することができる</td>
<td>3.60</td>
</tr>
<tr>
<td>医療従事者</td>
<td>医療従事者が医療用語を話すのを聞いて理解することができる</td>
<td>3.56</td>
</tr>
<tr>
<td>医療従事者</td>
<td>医療用語の使用の仕方の説明を聞いて理解することができる</td>
<td>3.47</td>
</tr>
<tr>
<td>用語</td>
<td>病名を読んで理解することができる</td>
<td>4.33</td>
</tr>
<tr>
<td>用語</td>
<td>身体部位の日常用語を読んで理解することができる</td>
<td>4.30</td>
</tr>
<tr>
<td>医療従事者</td>
<td>抄録（論文の内容を要約したもの）を読み、理解することができる</td>
<td>4.26</td>
</tr>
<tr>
<td>医療従事者</td>
<td>身体部位の解剖用語を読んで理解することができる</td>
<td>4.25</td>
</tr>
<tr>
<td>医療従事者</td>
<td>診療科・専門分野の名前を読んで理解することができる</td>
<td>4.20</td>
</tr>
<tr>
<td>技能</td>
<td>場面</td>
<td>項目</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>研究・学会</td>
<td>医学論文を読んで一般的な構成と流れを理解することができる</td>
</tr>
<tr>
<td></td>
<td>授業</td>
<td>英語で書かれた教科書を読むことができる</td>
</tr>
<tr>
<td></td>
<td>一般・ニュース</td>
<td>一般の向けの雑誌、新聞などの医学に関わる記事を読んで理解することができる</td>
</tr>
<tr>
<td></td>
<td></td>
<td>症例報告を読んで病状を理解することができる</td>
</tr>
<tr>
<td></td>
<td></td>
<td>医療従事者</td>
</tr>
<tr>
<td></td>
<td></td>
<td>一般・ニュース</td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>医療従事者</td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>患者</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>授業</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>用語</td>
</tr>
<tr>
<td></td>
<td></td>
<td>研究・学会</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Introduction

There are those who advocate teaching English word parts (English etymology) to Japanese medical school students in the belief that this will help students to learn, retain and generalize vocabulary more effectively.1–4 Explicit etymological instruction (EI) potentially offers certain unique benefits that make it ideal for teaching students studying medical or other scientific terminology, such as allowing students to guess the meanings of unfamiliar technical words, improving pronunciation, and gaining a deeper understanding of words.3,4

These benefits are of particular use in studying medical terminology, because of the high density of Greek and Latin word parts in medical vocabulary, with a high prevalence of approximately 200 common word parts.1–3 These benefits may also transfer to studying vocabulary in medical English and general English studies, since the 200 word parts common to medical terminology overlap considerably with the 100 most common word parts in general English vocabulary.5

Research exists suggesting that higher-performing English second-language (ESL) students can access the full benefits of EI. However it may be that these students can only use this strategy, and receive these benefits, because they already have higher than average English abilities.6

There is also research that casts doubt on the benefits of explicit EI for ESL learners, with research on some ESL learners finding no statistical proof for the efficacy of this approach.7–12 In Japan there is research suggesting that students of English as a Foreign Language (EFL) do not benefit from this teaching approach, although this research is of limited utility because of the context in which it took place.13 Moreover, even studies with English first-language (L1) students on the effects of EI have yielded mixed results.14

Given the mixed research findings on the efficacy of explicit EI, the claims regarding its superior effectiveness in learning scientific and medical terminology, and the lack of research into this area in Japan, it seems only reasonable to investigate further in order to ascertain why previous studies have yielded such mixed results regarding its efficacy.

First, the history, purported benefits, and underlying assumptions of explicit EI will be reviewed in order to provide an operational definition of what is meant by EI. Next, the validity of the assumptions underlying explicit EI will be
investigated in the context of Japan, specifically focusing on medical students in Japan. Some original research will also be presented in the form of the results of a questionnaire administered to 103 second-year medical students.

The review will show that EI assumes certain foundations. Research will be cited to show that without these foundations the benefits of explicit EI may not be accessible to students. Finally, research will be reviewed to examine whether medical students in Japan can be assumed to have the requisite foundation knowledge required to access the full benefits of EI.

The goal of this article is to establish that the foundations required to produce the full benefits of EI cannot be assumed to be present in many or even most Japanese medical students, and that further research is therefore needed to assess the impact of this lack.

2. Explicit etymological instruction

Explicit EI is a method of instruction where students study the origins and meanings of words, and word parts (prefixes, suffixes and root words), that express meaning. When teaching medical terminology the focus is normally on Greek and Latin word parts.5

Defining EI is not a simple task. EI takes place worldwide in countries where English is a first language, second language, and foreign language. Compounding this issue EI also takes place at a wide variety of levels, from primary to tertiary. In order to arrive at a clearer understanding of what is meant by EI the history and benefits associated with EI will be briefly reviewed.

2.1. The origins of etymological instruction

In von Fritz20 the idea of students studying the history of words is traced back to the Roman orator and educator Quintilian, and his theories of education, as proposed in Institutio Oratoria in 95 CE.

In the 16th century, during the Renaissance, Latin and Greek were actively re-introduced into English, along with a great many loan words from other languages, such as French, Italian, and other European languages.5 The 16th century marked a renewed interest in the history of words.

In 1821 Grimshaw16 produced An Etymological Dictionary, aimed at instructing students of the sciences in the history of words and thereby the meanings of word parts. In addition to Grimshaw’s dictionary there are also dictionaries and workbooks focusing on etymology produced for school children, by individuals such as Stormonth17 and Chambers.18 Earlier etymological dictionaries exist, but the 19th century seems to be when the etymological approach became popular in English instruction for school students. It is certain that for nearly two centuries EI has been a part of English education.

2.2. The potential benefits of explicit etymological instruction

The potential benefits of EI offer a useful method for assessing its scope and outcomes in a meaningful way. Not all instructors may cover all of the aspects of EI, but this section will review those benefits associated with EI in the literature in order to obtain a clearer idea of what range of outcomes EI should be producing.

One of the potential benefits of explicit EI is that it allows students to both guess at the meaning of an unfamiliar word, and to gain a deeper understanding of the words that they already know.12-14

English is a compound language that evolved from several other related languages, namely Greek, Latin, French and the Germanic languages.5 In the sciences a large portion of the vocabulary is taken from Greek and Latin.5,19 However, some words may come to English through other languages, such as German or French, which can prove confusing for learners because of the shifts in pronunciation and use.20

Medical terminology uses many Greek and Latin word parts, which is why explicit EI is frequently used for teaching medical students.21

Fluency in these languages is not required, but an awareness of the basic structure of the language which the word or word part came from can assist in pronunciation, spelling and understanding.22 For example the Greek word part -oma refers to a tumor or mass, and is generally pronounced /əʊmə/.

Another potential benefit of the etymological approach is that it aids in linking known words by similar features. Once someone knows the meaning of -oma it is possible to cross-reference all words sharing this word part, such as lymphoma and carcinoma, and group them together, rather than storing the words singly in unrelated memory locations. This networking effect aids recall and each time one of the words in the network is recalled it helps to reinforce the memory of the entire network.20,23-25

Finally, the explanation of the history and meanings of the word contextualises the word or word part. Placing the words in their cultural and historical context provides not only a mnemonic benefit, but also provides a richer understanding of the history of the English language and the inter-connected nature of European cultures and languages.26 Understanding that a word is Latin may help to understand how a word transforms, such as why the plural of vena...
cava is venae cavae, or the plural of bacterium is bacteria. There are also more recent shifts, such as the recent preference for the simpler American English spelling in medical terminology, such as anaesthetic (British English) becoming anesthetic, or foetal becoming fetal.

The potential benefits of explicit EI can be summarised as follows:

a) The ability to guess the meanings of unknown words
b) A clearer understanding of the underlying meanings of words
c) Some of the word’s cultural and historical context, which may aid memory
d) Better pronunciation
e) Some understanding of the reasons behind English’s irregular spelling rules
f) A stronger conceptual framework for memorizing and recalling words and word parts
g) An understanding of the history of English and its connection with other European cultures and languages

2.3. An operational definition of etymological instruction

An examination of the benefits of EI provides the basis for a more satisfactory operational definition of the term.

EI is distinguished from other instructional methods in that it promotes an awareness of the underlying structure and form of English words, and through this awareness produces most of the benefits associated with this teaching approach.

This awareness that English words can be broken down into word parts allows students to identify words with similar word parts, which unlocks the ability to group words containing the same word parts in the students’ mental lexicon, creating stronger memory structures (benefit f).

The grouping process also enables students to see that similar words contain similar meanings, and so when a student encounters an unknown word that has similar features to several known words they can guess the meaning by comparing the word to similar words and seeing if there is a common theme (benefit a).

This understanding of word parts can also allow students to re-examine known words and arrive at a deeper understanding of a word (benefit b).

Finally, word parts tend to be pronounced and written fairly consistently, and so word parts grouped together will share similar pronunciations and orthography, allowing the student to make an educated guess at the pronunciation of an unfamiliar word and connect how this sound is normally written (benefits d and e).

The common element underlying and enabling all of these benefits is an awareness of English word parts. Whether the teacher is pointing out the occasional word part each class, such as that -itis indicates that the word relates to inflammation, or giving an entire 15 week course on prefixes, suffixes and roots, this definition is consistent and distinguishes EI from other instruction methods.

There are other ancillary features of EI, such as contextualising the word through its history, cultural relevance, and so forth, (benefits c and g) but these features are not definitive. For example, the teacher who just points out a few word parts each class is not likely to offer much in the way of context, so contextualizing words is not a consistent feature of EI, nor is it necessary to unlock most of the benefits.

It is important to note that an awareness of word parts is a necessary, but not sufficient, condition for unlocking the benefits of EI. Other preconditions must be met in order to realise the benefits.

2.4. The assumptions of etymological instruction

The potential benefits of explicit etymological instruction are based on several assumptions. The purpose of reviewing the foundation conditions presupposed in EI is not to imply that the lack of one or more of these conditions will automatically invalidate this teaching method, but rather that these are potential areas of concern that may interfere with the effectiveness of EI.

The first assumption relates to the student’s existing level of competence in English. EI presupposes an individual with a strong initial English ability that is being supplemented, rather than an individual with a lower level of English ability who may be easily misled or confused by false cognates. For example, aroma shares the same final sound as the Greek -oma, but derives from Latin, and has nothing to do with tumours or masses.

On a similar note, one might correctly recognise that the term hepatoma derives from the Greek hepato-, meaning relating to the liver, and -oma, meaning a tumour or mass, and conclude that the word indicates a tumour of the liver. However, this analysis does not make it clear that the term specifically refers to a hepatocellular carcinoma, which is a malignant tumour of the liver. When scanning a text, English learners with a strong grounding in the English language might only encounter one or two words that they don’t understand. EI would provide them with a broad understanding of the word, sufficient for them to continue reading so that they could clarify their understanding from the context. English learners with a weaker grounding might
encounter multiple points of confusion, and despite the hints provided by explicit etymological instruction, may be unable to proceed, or may misunderstand the meaning entirely.27 Research has shown that children, who have smaller vocabularies, are unable to reliably make use of strategies to guess the meaning of unfamiliar words.28 Students who learn a strategy that appears to work, but later proves unreliable, will abandon the strategy.29,30

The second assumption is that EI enhances memory regardless of vocabulary size. This effect is built on the assumption the learner has a sufficiently large vocabulary, containing multiple instances of the same word parts.29,30 In students with smaller vocabularies, who lack a sufficient numbers of words containing the same word parts, this mnemonic effect would be expected to be weaker or even non-existent. To use a simple analogy, consider a tourist’s travel dictionary of a few thousand words as compared to a full dictionary with tens of thousands of entries. The travel dictionary appears merely alphabetically organised, and looking at the words and meanings on a page will probably show no other patterns. By contrast open a full dictionary and a critical observer will see that the words are organized alphabetically, but also by prefix, with many words on a page sharing a common meaning, and this can aid learning and recall.

The third assumption relates to the student’s familiarity with other European languages. Etymological instruction presupposes a basic familiarity with other European languages, cultures and pronunciation rules. While monolingual L1 English speakers with a university level education might deny their ability to speak other European languages, they will be familiar with words and phrases such as aide-mémoire (French), et cetera (Latin), gestalt (German), al dente (Italian) and incommunicado (Spanish), and will have at least a rudimentary idea of the correct pronunciation of these foreign words and phrases. The ability to link letters or clusters of letters to the correct sounds (orthographic knowledge) has been shown to be critical in English L1 speakers’ ability to decode words.22

The fourth assumption is that EI is progressive and explicit. English first language children start with the simplest word parts like dis- (from Late Latin) and re- (from Latin) and experiment with making word trees changing only one part of a familiar word to show how words change.23 This explicit EI gradually increases in complexity until it culminates in students being able to decode complex words. Studies have found that explicit and incremental EI enhances the effectiveness of this teaching method.24,25

In summary the etymological approach is based on several assumptions that may not hold true for EFL and ESL learners:

- False cognates may be difficult to identify without sufficient grounding in English;
- Correctly interpreting etymological clues requires a high level of English comprehension;
- Familiarity with other European languages, pronunciation systems and cultures cannot be assumed;
- The mnemonic effects presuppose a sufficiently large vocabulary;
- Systematic and progressive EI is not necessarily present;
- Prior explicit EI cannot be assumed.

2.5. Etymological instruction in Japan

The previous section introduced EI and the assumptions on which it is based. In this section these assumptions will be examined in the context of Japan, to see if the necessary preconditions are present for EI to be fully effective.

2.5.1. Vocabulary size and the etymological method

Laufer calculates that Japanese EFL students of English at university have a vocabulary of approximately 2000 to 2300 words.24 To put the average Japanese university student’s vocabulary in context, the average English L1 high school graduate has a vocabulary of 40,000 words, approximately 20 times larger.25

It might be argued that medical school students are not average, but even if Laufer’s estimate were doubled it would still fall well short of the goal of at least 3000 to 5000 word families that other studies have found would indicate a reliable chance of successfully inferring the meaning of unknown words.26,27 Previous research has found that English L1 students with a similar vocabulary size were unable to reliably infer the meaning of unknown words.28

The reason for the relationship between vocabulary size and the ability to successfully guess the meaning of unknown words becomes clearer when one considers the process used to break down an unfamiliar word, the subtraction method.

For a simple illustration of this method consider the prefix re-, meaning ‘again,’ and the words, renal, rectum, retro-active. Someone unaware of the meaning of these words and trying to assess if they related in some way to ‘again’ would subtract re- from the word, and find that the remaining portion did not resemble any word or word part that they knew, and so was not related to re-.

Now consider relapse, realign, react. When the prefix re- is removed the remaining portion is an English word or word part, in this case lapse, align and act. These are all
English words or word parts, so it seems like these words relate in some way to ‘again.’

The subtraction method presupposes a sufficiently large vocabulary to recognize the remaining portion of the word, and while someone with a vocabulary of less than 5000 word families would probably recognize the word ‘act’ they are unlikely to know ‘align’ and ‘lapse.’ This means that even if one of the word parts is known then someone with an insufficiently large vocabulary may be unable to identify that the remaining word part has meaning.

A smaller vocabulary may also influence the success of EI in other ways. Consider the word, ‘analgesia.’ Using the subtraction method a student well instructed in using EI to decode medical terminology might try an- and be left with -algesia, or anal- and be left with -gesia. Neither are recognizable root words, as -algesia does not conform to the normal patterns for the Greek word algos, meaning pain, which normally appears as -alg(i)o, -alga, or -alge(s), and removing anal- leaves -gesia, which is not a root word. Someone with a larger vocabulary may know a similar word, such as hyperalgesia, which contains the same irregular use of -algesia, or will have a large enough vocabulary to contain multiple instances of similar words where a letter needs to be added or subtracted to make the word fit the normal pattern, and would know to just ignore the extra letter.

These examples highlight just two ways that vocabulary size can influence the ability to unlock the benefits of EI, and make it unreliable. An unreliable strategy may be used in the short term, but if it isn’t reliable it will eventually be abandoned.25,29 This suggests that the average Japanese medical student is unlikely to instinctively guess the meaning of unfamiliar words.25,30

Vocabulary size also relates to another assumption of the etymological approach. One of the arguments for the etymological approach from psycholinguistics is that EI aids recall by making students aware of the meaning of individual word parts, and provides multiple points of connection between similar words, thereby enhancing recall. If a Japanese English student knows twenty times fewer words than an English L1 student at the same level, then it would be expected that the resulting memory structures would be less robust, and a less marked effect would be seen, or the vocabulary level may fall below the threshold for any memory enhancing benefits.

A similar phenomenon has been noted in research into vocabulary gain through reading and has been labelled as the “Beginner’s Paradox,”27 where individuals with an insufficiently large lexicon lack sufficient data to organize words by similar features and draw inferences. This “Beginner’s Paradox” may also interfere with Japanese students’ ability to supplement the clues to a word’s meaning from explicit etymological instruction with additional clues from the context in which it is presented. This can be controlled for in the classroom situation by presenting students with material tailored to present only a few unknown words at a time, however when presented with material from outside the classroom the learner is likely to encounter multiple unknown words in a single text, and find difficulty in supplementing the etymological clues with contextual information. As mentioned before, a vocabulary strategy that proves unreliable is likely to be abandoned.

There is also a specific concern related to cognates in Japanese medical terminology. Many medical cognates in Japanese originate from German,36 such as rentogen (レントゲン, meaning x-ray, from the name of the German physicist, Wilhelm Conrad Röntgen, who discovered x-rays), kuranke (クランケ, from the German kranke, meaning a medical patient), or averugi (アレルギー, from the German allergie, meaning allergy).

Japanese students are starting with a different medical vocabulary from their Japanese L1, lacking many of the Greek and Latin cognates that an English L1 speaker possesses, and making the problem more complex than simply comparing vocabulary sizes.

It might be argued that these German words are an advantage, as English is from the same language group, however the shift from averugi (allergie, German) to averugii (allergy, English) may seem intuitive in hindsight once the meaning has been explained, but before that point it is more difficult than it seems. Consider the Spanish word mostrar, meaning ‘to show’ and two Italian words, mostra and mostrare. Which Italian word has the same meaning as the Spanish? Both are similar, but without explicit instruction it would be difficult for a learner to know that mostrare is the verb form meaning, ‘to show,’ while mostra is the noun form meaning, ‘a show or exhibition.’ Simply comparing the English vocabulary size of English L1 students and EFL students would not show this difference.

To summarize:

- Research suggests that Japanese EFL students may lack the vocabulary size required to reap the full benefits of EI.
- The beginner’s paradox may prevent Japanese EFL learners from using etymological clues to learn new words more effectively.
- The presence of false cognates in Japanese EFL students’ vocabularies would require explicit instruction in the method to prevent confusion.
• Students may show an interest in explicit EI during the course, when the method seems effective, but may be abandoned later if unsuccessful outside of the course.
• Many cognates present in medical Japanese originate from German, unlike English, where much of the medical terminology comes from Greek and Latin.

2.5.2. English education in Japan
Explicit EI is not the norm in Japan. English instruction in general starts comparatively late for students in Japan, with the Japanese government having only recently introduced English instruction in the last two years of elementary school (grades 5 and 6 respectively, for students aged approximately 10 and 11 years old). Prior to this formal English instruction only began in junior high school at the age of about 12. This means that currently most university students in Japan have only had 6 years of formal instruction in English.

The new national textbook for elementary school students in Japan, *Hi, friends!*, includes no explicit focus on etymology. Nor is there any explicit mention of teaching etymology in the junior or senior high school textbooks, although informal discussions with Japanese high school English teachers revealed that some of them had decided on their own to include some mention of the etymological approach.

As a result of these discussions, a survey of 103 second year medical school students was conducted to establish the extent to which they had received explicit instruction in English etymology. The results can be seen in Figures 1 to 4.

Charts 1 and 2 show that at least 25% of students lacked any explicit etymological instruction, and that at best 11% of students had received what they would consider “a lot” of explicit instruction in English etymology.

Charts 3 and 4 show that most students surveyed first received explicit EI in senior high school (39–41%), but a large percentage of students (21–24%) first received explicit EI at university.

A quarter of students had never received any explicit instruction in English etymology, and of those students who have been previously instructed in English etymology the vast majority (at least 61%) have only had “a little” instruction in the method.
This survey, and a review of the teaching materials used in primary and secondary education, strongly suggest that the systematic and progressive programme of instruction in English etymology that is the foundation of explicit EI in English L1 learners is simply not present in the Japanese education system.

Research has shown that explicit EI greatly enhances learning using this method. If English L1 students require explicit EI over many years to grasp and apply the techniques properly then it is reasonable to doubt if EFL students, who lack a background in EI, could fully utilize the techniques after just a short introduction. Nor is the narrower context of medical terminology a major mitigating factor, with some textbooks listing more than 200 common word parts relating to medical terminology.

Therefore:

• Evidence suggests that there is relatively little education in English etymology in Japan
• Current university students have had only 6 years of English education
• The educational background in explicit EI that is a foundation condition for English L1 medical students learning using EI is not present in many, if not most, Japanese medical school students

2.5.3. The etymological approach and the learner’s L1

It is also worth considering the learner’s first language (L1) as a potential confounding factor in second language (L2) acquisition. Differences in the structure of language can influence the ability of students to make use of EI.

Rose found that when English L1 learners of Japanese L2 were taught using an etymological approach, focusing on kanji parts and their etymology, the learners could remember the etymological origin, and hence the English meaning, but could not remember the pronunciation(s) of the kanji. Matsumoto found a similar pattern, that students with an alphabet-based L1 performed worse in Japanese vocabulary tests than students with a logographic (a language where a symbol represents a word or word part, such as Japanese kanji) L1.

Rose and Matsumoto’s findings suggest a fundamental difference in where meaning is recorded in Japanese and English. In Japanese the meaning is hinted at in visual clues within the kanji, but kanji that share similar parts have radically different pronunciations, so careful study of a written kanji would provide hints as to its meaning, but would provide no insights into its pronunciation.

Simply hearing an unfamiliar Japanese word would provide no hint to its meaning, as the pronunciation is unrelated to meaning. One of the reasons for this is that Japanese kanji were largely imported from China and had two (and frequently more than two) pronunciations imposed on them. The first pronunciation was the Japanese approximation of the Chinese pronunciation(s) for the kanji, however the divergent evolution of the languages and the intoned nature of Chinese make it difficult to determine an etymological link from the sound alone. The second kanji pronunciation(s) was the Japanese sound(s) currently being used for that meaning, which bore no etymological link to the kanji. A further complication is the large number of homophones in Japanese. The result is that in Japanese the kanji is the source of meaning, not pronunciation.

In English, however, the pattern is reversed for complex words. The meaning of difficult English words is hinted at in the word parts, and these are most clear when the word is spoken, as word parts tend to be pronounced as separate segments. For example, an English L1 speaker pronouncing the word ‘cardiovascular’ would pronounce the word parts with a tiny pause between them as cardio- and -vascular as these separate units of meaning. Even in common words like ‘repeat’ or ‘reject’ the re- portion is separated by a shift in stress. This is why English speakers will often sound out an unfamiliar word, as the English orthographic system provides no clues as to which word parts contain meaning.

It can therefore be seen that there are fundamental structural differences in where Japanese and English store their meaning. In Japanese the meaning is stored visually in the kanji, but the sound of the word contains no hints to meaning. In English the meaning of complex words can be derived most easily from the spoken word, although it is also possible to obtain hints from the written form if one has a full understanding of English’s irregular orthography, which should not be assumed for L2 learners.

This presupposes that the individual has sufficient grounding in English to be familiar with which English words can be subjected to etymological analysis. For example non-compound words like ‘bat’ are not readily subject to this method, and some compounds words like ‘reject’ (from the French rejeter, originating in the Latin re-, meaning ‘again’ and -cere, meaning ‘to throw’) are extremely difficult because of the degree of linguistic drift. Explicit EI assumes that the learner knows the meanings of these words already, and is using them exclusively for more difficult compound terms such as cardiovascular, haematoma and tachycardia.

Finally, orthographic differences may be important for reasons of brain structure, as there is research that suggests that logographic and alphabetic input is processed in differ-
ent areas of the brain, making the difference deeper than just learning, but rather structural in nature.  

Therefore the research suggests that the student's L1 and orthographic differences may influence how students approach unfamiliar words.

2.5.4. The etymological approach and teaching variables

Yamazaki and Yamazaki's paper on explicit EI also suggests that some Japanese learners of English may experience difficulty in seeing the relevance of English etymology to their studies. In Yamazaki and Yamazaki's study the students could not see the connection between the Latin word parts they were being introduced to and the English words. The students' lack of understanding was such that they described the Latin as "useless" and students became demotivated.

The research by Yamazaki and Yamazaki lends support to the proposition that Japanese students may lack the educational background in English that would allow them see the relevance of EI, and suggests that it is necessary for teachers to explicitly demonstrate how English etymology is relevant. Yamazaki and Yamazaki's research also shows that the subject matter being taught is relevant. The context of their paper was a class on reading newspapers. The highest density of words with strong Greek and Latin roots is found in scientific and medical writing, not in texts such as newspapers. As a result the subject matter in Yamazaki and Yamazaki's research may have had a lower density of words suitable for etymological analysis, providing fewer examples for students to analyze, and thereby lowering student motivation as EI seemed of limited utility.

The Yamazaki and Yamazaki paper highlights the possible importance of students' perceptions of the usefulness and relevance of the EI approach as variables in student motivation. It may also illustrate how students could respond when they have finished a course of EI and find the techniques they have learnt are unreliable outside of the classroom because they lack the vocabulary to separate word parts, lack the knowledge to identify what words may be subjected to etymological analysis, or are confused by false cognates.

While Yamazaki and Yamazaki do not speculate on the effect of culture it may be that the perception of Latin and Greek as "useless" may also have a cultural and educational component. English L1 students are made aware of the interconnected nature of European languages quite early, and of the input from Latin and Greek, and so the usefulness of Latin and Greek does not need to be demonstrated, however to Japanese students the link may not be apparent for cultural and educational reasons.

Yamazaki and Yamazaki's research demonstrates that:

• Explicit instruction is required as students will not implicitly understand the value of etymological instruction;
• Without demonstrable relevance students' motivation levels will suffer;
• Lacking the cultural and educational background assumed in the etymological method may diminish the perceived usefulness of EI.

3. Conclusion

Explicit EI is a well-established and widely-used approach in English L1 countries; however it makes a set of assumptions that do not necessarily hold true in Japan and other EFL environments.

It seems that many of the assumptions that underlie and enable the special benefits that make explicit EI valuable as a tool for instructing medical students are not being met in Japan for the majority of medical school students.

Explicit EI possesses a high level of face validity; it seems on the surface of things that it should work, and it may work for exceptional students or when the course materials can be controlled to provide examples that can readily be decoded using the word parts provided. However, when we go beneath the surface level and examine the underlying assumptions then there seem to be legitimate questions regarding how effective explicit EI really is in the context of learning medical terminology in Japan.

This article opens up numerous avenues for further research into explicit EI, for example:

a. Are Japanese medical students who receive explicit EI able to unlock the full benefits and out-perform students who have been instructed using other techniques?

b. After a course of explicit EI do students persist in trying to decode unfamiliar words using the word parts they learnt? Or does the behavior cease when the students are exposed to a large number of words that defy analysis?

c. If the full benefits of EI are not being unlocked, then where does the key lie? Is it a question of English vocabulary size, the number of Greco-Latin words in their mental lexicon, the amount of explicit EI, the number of times they have been exposed to explicit EI, or some other factor or combination of factors?

Explicit EI is the preferred method of instruction for medical students for good reasons. Studying medicine involves learning a large and specialised vocabulary of medical terms, which causes problems even for English L1 stu-
The efficacy of the etymological approach in English as a Foreign Language instruction for Japanese medical school students

...dents. The benefits potentially offered by EI, such as enhanced memory, word guessing and the ability to better understand words are particularly useful to medical students. The intention of this article is not to tear down EI, but rather to raise the possibility that the full benefits of this method are not being realized for most Japanese medical students, and to stimulate research into the area to confirm if this is the case and, if it is the case, then to determine what steps need to be taken to address the situation and unlock the full benefits of explicit EI for Japanese medical students.

Acknowledgement
To Professor Tetsuya Fujiwara, for asking the questions that inspired this article, assisting with data collection, proof reading and making comments that shaped this article, but who very modestly declined co-authorship. My most profound thanks.

References
30) Bowers PN, Kirby JR and Deacon SH. 2010. The Effects of Morpho- logical Instruction on Literacy Skills: A Systematic Review of the


1. Importance of writing in Japanese education context

At the turn of the century, Warschauer in his article titled “English as a requirement of international communication” states:

“A large and increasing number of people, even if they never set foot in an English-speaking country, will be required to use English in highly sophisticated communication and collaboration with people around the world. They will need to be able to write persuasively, critically interpret and analyze information, and carry out complex negotiations and collaboration in English.” (p. 518)

I agree with his claim in that young people in the future should learn to be able to write persuasively, critically interpret and analyze information, and carry out complex negotiations and collaboration in English.

I agree with his claim in that young people in the future should learn to be able to write persuasively, critically interpret and analyze information, and carry out complex negotiations and collaboration in English.

However, as is shown in Fig. 1, after the recent change in the Course of Study, stipulated by the MEXT, the subject “writing” has disappeared from the high school curriculum.

Although it was integrated in a new subject titled “English expression,” we cannot but fail to notice that “writing” has to take a back seat due to this change.

We should notice, though, that the MEXT claims that there is a need for fostering thinking abilities in Japanese education. In the currently running Course of Study, as a fundamental motto, the following principle is included:

“To foster thinking ability, judgment, expressive ability, and problem-solving ability across all the subjects.” In Japanese these are: 思考力, 判断力, 表現力, 問題解決能力. I think these abilities can be incorporated under the umbrella terms of “argumentation.”

Today I would like to talk about what we can foster in teaching L2 (second language) writing, i.e. English writing. There are two aspects: one is the linguistic aspect. Through writing students will learn “how to express in English what they want to say in Japanese.” Another aspect is thinking ability: “how to convey the meaning to the reader and how to convince the reader with their ideas.” Today, I will mainly talk about the second aspect of the abilities writing will foster. I will also use the term “argumentation” to refer to these abilities. The point I would like to posit today is that writing fosters thinking ability. This idea of mine is well represented by a remark Raimes’ made in 1983: “Composing means expressing ideas, conveying meanings. Composition means thinking.”

2. Argumentation and academic English writing

Andrews advocates the need for teaching argumentation in higher education as follows (p. 1):

1. It is important to be able to argue rationally in a civilized society.
2. Advancement in knowledge often comes via argument.
3. Argument is about clarification as well as persuasion.

He further gives a definition of argumentation, stating that it is “a logical or quasi-logical sequence of ideas that is supported by evidence” (p. 2). In addition, he considers it
as one of the "generic skills" that establishes the foundation of every dimension in higher education. Therefore, we all must learn "argumentation" at university.

Now where should argumentation be taught at university? It may be possible to teach argumentation in different types of English courses. Today I would like to posit my opinion that argumentation be best taught in academic English writing classes. That is because many of the skills and strategies learned in academic English can be transferred directly to the study of technical information, as is shown in Fig. 2.

Let’s consider what academic English writing is. According to Dillon, one of the features of academic writing is the rationality that accompanies logic and argumentation structure. Then, what is argumentation structure? I would posit that the structure of an English paragraph itself presents an "argumentation structure," as is shown in Fig. 3.

Bean also claims that the writing process itself provides one of the best ways to help students learn the active, dialogic thinking skills valued in academic life (pp. 18-20). That is because in order to construct the paragraph in such a way as to possess a logical, hierarchical structure, it invariably requires analytical or argumentative thinking.

However, it is a tough job to teach argumentation to Japanese students. Nisbett claims: …the whole rhetoric of argumentation that is second nature to Westerners is largely absent in Asia. North Americans begin to express opinions and justify them as early as the show-and-tell sessions of nursery school ("This is my robot; he is fun to play with because …") (p. 73).

In addition, there is Hind’s famous dichotomy of "writer-responsible language" vs. "reader-responsible language." In a "writer-responsible language" such as English, the writer leads the reader in the direction the writer intended. That means the writer has to take pains in order to have the reader understand exactly what the writer intends to communicate. In contrast, in a "reader-responsible language," it is like a "stepping-stone" where all that the writer does is just to place ideas one after another, making the reader connect those ideas to sustain the discourse. So, for Japanese students, who are used to this kind of writing style, it is a big change to employ the "writer-responsible" way of writing in the first place.

Furthermore, in English there is an aphorism that says, “Tell them what you are going to tell them. Tell them. And tell them what you have told them.” In other words, you have to repeat the same thing three times. Then people understand what you want to say. This aphorism corresponds to paragraph writing in that the “Tell them what you are going to tell them” part corresponds to the topic sentence of a paragraph, the “Tell them” part corresponds to “supporting sentences”, and “And tell them what you have told them” corresponds to the concluding sentence of the paragraph. Also in English writing, there is an idea of “Burden of proof,” in which one has to be responsible for what one says. That’s why we see many examples of uses of “because” in English utterances or writing.

Let us now take a look at how the definition of “to argue” is presented in dictionaries. According to OALD, “to argue” means “to give reasons why you think that something is right/wrong, true/not true, etc., especially to persuade people that you are right.” This derives from a Latin word that means “make clear, prove, accuse.” In contrast, the definition of argument (議論) in Japanese is: 「互いに自分の説を述べ合い、論じあうこと。意見を戦わせること。また、その内容（広辞苑）[State one’s ideas to each other and discuss them. Contend one’s opinions against another person’s.] There is no mention of “reason” or “to persuade” in this Japanese definition.

So the students who are used to this kind of writing style initially tend to employ the same kind of writing when they write in English.
3. What I teach in my academic writing class

Now I would like to show how I conduct my academic writing course. The following is a list of objectives in my writing class:

1. Follow the format of each genre of writing
2. Make an explicit and solid argumentation
3. Write in a good paragraph/essay structure
4. Use appropriate transition words
5. Write in an objective tone
6. Write in a formal style
7. Write with correct grammar
8. Write using varied sentences
9. Use abstract and refined vocabulary
10. Use correct Spelling

(大井, 2010)

In particular, in order to attain the objective of #2, I teach students by employing “Toulmin model,” take “Inner-dialogic approach,” and give feedback.

Today I would like to show how we can utilize the Toulmin Model in teaching writing. Fig. 4 shows the basic structure of the Toulmin Model with a case where it is applied.

This can be interpreted as follows:

• You hear and witness that junior high school teachers are leading extremely busy lives. (DATA)
• Therefore, you want to claim more staff should be hired at junior high school to lessen at least the clerical jobs of the teachers. (CLAIM)
• Then you would like to present the reason that junior high school teachers are too busy with the enormous workload of teaching, discipline, clubs, paperwork (WARRANT)
• The statement can be strengthened by the specific evidence, especially the newly announced data by OECD that reported that Japanese teachers work 54 hrs/w, while the average in the world is 38 hrs. (BACKING)
• Then you qualify your statement stating that not everyone is a HR teacher, nor do they all oversee club activities, in order not to invite a counterargument. (RESERVATION)
• Lastly you qualify the strength of your claim, thinking about the extent of the statement. (QUALIFICATION)

This completes your argument that “Japanese junior high school teachers are too busy, so more clerical staff should be employed.”

If you convert the Toulmin model into the structure of the essay (paragraph), it can be shown as in Fig. 5.

In my class, I employ the Toulmin model in teaching argumentative writing among other things related to academic English writing.

I would like to show the students’ reflections that they wrote after they had taken my writing course.

• Through repeated writing of assignments, I started to write from a deeper point of view. For example, I started to consider whether my writing was really objective and whether there might be an opposite point of view. (T.S.)
• At first I just tended to write my opinion intuitively. Then I started to ask myself: where did my instinctive views come from? What was the basis of my point of view? (E.T.)
• Before (this class) I just wrote down what I thought. There was no basis to my ideas. However, after taking this class, I realized I had to add further information to support my argument. Compared with before, I really became better at thinking of my reasons and foundations of my argument before writing. I came to ask myself, “Can you really say that?” and stopped writing just any old thing. (K.S.)
4. From my empirical study (Oi, 2011)\textsuperscript{11}

I conducted a pre-post study to investigate how the students’ writing changed through my one-semester-long instruction with an emphasis on argumentation. I collected the students’ writing both in English and Japanese on different prompts respectively. The results revealed that:

(1) Some students acquired argumentation skills in English writing.

(2) Through learning English academic writing conventions, Japanese learners learned a logical/dialogical organization that is inherent in English paragraphs/essays, and some of them came to possess argumentation skills as a part of their multi-competence.\textsuperscript{12}

(3) Japanese learners of English who understood the necessity of using the argumentation skills they had used in writing courses utilized these skills even when writing in Japanese.

5. English paragraph writing styles adopted into Japanese writing

In the books and articles that are on the market in present-day Japan, we can find an increasing number of instances where an English paragraph structure model is adopted into Japanese writing. Also, argumentation style can be a powerful tool to utilize in presentations. Among the abilities to be fostered at the undergraduate level specified by the Central Council for Education, logical thinking ability, and problem-solving ability are mentioned as part of the generic skills to be learned at university. These skills can be termed argumentation.

6. Conclusion

I have claimed that teaching argumentation skills is necessary at university and that it can be best achieved in academic writing classes. I believe that the argumentation skills cultivated through this process are useful in a wide range of social situations. It is important that we train students in the skill of critically evaluating the various issues and problems that they encounter in their daily life through logical and objective thinking and to find ways of solving those problems precisely and persuasively in a concise and convincing manner. Furthermore, this ability will serve the students well not only while they are at university but also in their future employment. I strongly believe that we the teachers have a vital role to play in cultivating these skills through secondary school and university writing classes.

References


第17回日本医学英語教育学会
招待講演
生命科学系総合大学におけるグローバル化推進の
現状と計画
（東京ガーデンパレス，2014年7月19日）
岡安 熠
北里大学名譽教授・前学長

1. はじめに
　私たちの北里大学はグローバル化が遅れておりますが、
私たちが悩ましながら進めました取り組みが皆様方にご
参考になればと思い、お話をさせていただきます。北里大
学は医学科学の総合大学ですので、そういう枠の中でのこ
れまでの私たちのグローバル化の取り組みを紹介して、後
半には今後の計画をお話させていただきます。

2. グローバル教育とは
　グローバル教育とは、相互学習などによる単なる国際化
ではなくて、世界水準におけ教育・研究システムの構築で
あり、またそのための組織改革が主たる目的と言っています(図1)。
　現在、TPPの交渉が進められています。TPPが成立します
と、農業、水産業関連だけではなく、教育や医療サービスの
領域でも国際化が進むこととなります。さらに、学生が単位
互換性を用いて、国内外の大学を自由に行き来して学ぶ
ということが可能になります。その際に、世界水準
の教育・研究を整備していない大学は学生が相手にされ
なくなるということとなります。
　特にわが国では少子化が進んでおり、このよう
な事態になりますと、人材育成という観点からは大変大き
な問題です。従って、「世界水準の教育・研究」を整備す
ることは、緊急の課題です。

3. 生命科学・医療系大学の
　グローバル教育導入の困難さ
　そこで、私どもは、グローバル化を目指して遅ればせな
がら、国際部を設置しました。大学全体の国際化を図って
いくことにしました(図2)。そして、大学・各部門の英文
ホームページを作成して、世界のどこからでも本学の状況
がわかるようにしました。
　さて、実際にグローバル化を進めるにあたり、理系・医
療系の大学では、留学制度を作ることも大学制度を整備すること
も、また卒業時に国家資格試験を設けていることから、
容易に英語での教育など、相互学習制度の選択が進み
ません。その中で、少人数単位の実習生の格別のグローバル化
は単位互換制よりもやす、比較的導入しやすいと考えられ
ます。
　したがって、医学部では病院実習を中心とした短期の相
互学習制度を進めようということにしました。そのために、
病院実習に関しても学外との単位互換制度の導入を積極的
に行ってきました。

---

![図1](image1.jpg)

![図2](image2.jpg)
4. 医学部における海外選択病院実習

続いて、医学部の海外選択実習を紹介いたします（図3）。北里大学医学部では、初年度に導入英語教育を行い、2年次には医学英語という枠の中で段階的に医学にシフトした英語教育を行っています。そして、6年生の前期の病院選択実習の中で海外選択実習を含みます。

すなわち、6年に於いては、各科の病院実習を行った後に、6年次には希望する科目を選択して、3週間の病院実習を行うようにしています（図4）。

この時期に希望者に海外の大学病院で病院実習を行い、単位履修を受けることをシステムです。現在、海外の4つの大学病院にて1〜2名数名単位で研修を受け、互いに学費免除を行っており、現在は定着し評価も受け、最近は医学部の推薦や宿泊代の一部を補助しています。特にこのイタリア・ダスコニア大学においてはexchange programを組み入れており、こちらからも毎年5〜6名の学生が北里大学に来学し、臨床研修を体験している。彼らは、修士論文レベルの研究で卒業までに課せられていますので、研究参加にも熱心であり、本学医学部の学生も彼らに大いに刺激を受けています。

学生は実習期間中、とてもハードな状況ですが、修了後の能力発揮に、総合研修会では充実した実習であったと好評です。最近は医学部の英文ホームページをみて、海外の大学から、本学の院生に研修を受けたいという希望が寄せられています。特にドイツでは、最後の学年は学外で研修を受けけるシステムのようにして、積極的にアプローチしてきます。

5. 医学部・大学病院におけるその他の国際化の取り組み

続いて、その他の国際化の取り組みを紹介いたします（図5）。海外の施設との連携・協力にはその関係から3つに分けられます。

すなわち、まず1番目は、本学の教員・学生・医療従事者の海外施設訪問について、その先進医学・医療を学ぶことです。2番目は、対等の形での共同研究や連携です。北里大学では、北里研究所の特技を生かして、感染制御に関連する、タイ・インドネシア・ベトナムなど、アジアの大学との共同研究が盛んである。そして3番目は、北里大学が国際支援をすることで連携協力です。2番目は後に少し述べますので、ここでは1番目、3番目の具体的例を次に紹介いたします。

1番目の海外から学ぶというのも、この1のポスドクなどの留学は誰にとっても行っておりますので、省略します（図6）。

6. 大学病院における新技術導入制度によるグローバル化

本学独自のユニークなものとして、この2の大学病院の新技術導入制度が、既存病院の医療従事者を海外派遣するという方式で紹介いたします。

過去の典型的な例を抜粋してみましょう。例えば、救命救急医が医薬品中毒治療の先進国である米国の施設で、そのノウハウを学んできています。また乳がんの低侵襲治療が盛んな米国のストーンセンターに医師と看護師がチームで行って、その手技の習得、目指す目標は、この新しい技術を北里大学の大学病院に導入し、北里大学病院全体の医療水準を上げることです。
7. 国際支援

7.1. 中国吉林大学との国際交流

さて、3番目の国際支援について紹介いたします。こちらは、中国北部の吉林大学と早稲田大学の連携を通じて、吉林大学病院の医療人材の研修を本学の病院で引き受けさせていただきました。

私どもの病院では、中国の吉林大学との関係を強化し、相互に医療技術を学び合う機会を設けてきました。吉林大学の医師が本学の病院で研修を受け、お互いの医療技術を学び合っています。

私どもの病院では、中国からの研修生を積極的に受け入れ、中国の医療環境を体験させ、研修全般にわたる支援を行っています。これにより、中国の医療環境を学び、互いの医療技術を学び合ことができます。

当院では、中国からの研修生を積極的に受け入れ、中国の医療環境を体験させ、互いの医療技術を学び合っています。これにより、中国の医療環境を学び、互いの医療技術を学び合ることができます。

今後も、このような国際交流を通じて、医療技術の向上を図ります。
もに式典に出席し、記念植樹なども行い、互いに支援を図り、良好です（図9）。こうした活動で、本学獣医学部の学生が夏休みを利用して、実務獣医師を研修中でした。

中国の医学・獣医療は急速に発展して、現在は支援という形態の共同教育・研究の体制になってきています。

7.2. カザフスタン核実験場周辺住民の放射線影響調査

次に国際支援活動として、私共が体験した少し変わったケースを紹介いたします（図10）。中央アジアのカザフスタン核実験場周辺住民の放射線影響調査です。旧ソ連時代にカザフスタンのセミバランシスで核実験が合計456回行われました。これは広島投下原爆の1,160個分が1949年から40年間行われたことになります。その影響は周辺住民100万人以上に及んでいるといわれます。

その国には互いながら、被爆国としての経験を生かし、放射線の影響調査に入りました。その際、文部科学省がこのプロジェクトを推進し、これを日本放射線影響タウンを委託されて、調査を担当しました。実際の放射線影響を調べるためには実地での死因などの臨床診断が、がんの病理診断の精度を確認する必要があります。そこで、臨床医、病理医を含む各学会・臨床分科会が結成され、これは病理診断の精度確認のため、調査団のメンバーとして教室の先生らと共に、2度現地を訪問しました。残念ながら、現地では英語はいまだほとんど通用せず、会議ではモスクワから来てもらった日露通訳の方が立ち会って討論を行いました（図11）。

病理診断の精度はman to manで病理標本を顕微鏡下で観察して確認しました（図12）。細かいがんのsubtypeについては少々の違いがありました。がんそのものの診断はほぼ100%の一致率でした。同様に、肺の胸部X線診断も大体の中ではほぼ100%の一致率であり、その診断は信頼できるとしました（図13）。

その結果、統計的解析によりますと、被爆者では、男性の中線量群で、多くの部位、特に消化器系のがんが有意に増加している。また、男女ともに被爆線量の増加に伴って、循環器系、特に肺癌の心疾患が有意に増加しているという結果を得ました（財団法人放射線影響タウン「セミバランシス地区周辺住民等健康影響調査」平成13年度～平成20年度調査結果、平成22年3月発行による）。
7.3 テレビコンサルテーションシステムの立ち上げ
その年の交流が継となり、本学医学部病理学教室とカザフスタンプロダクションセンターとで、今で言う遠隔地テレビコンサルテーション、すなわち病理診断が困難な症例の検討を、英語を共通言語として一緒に行いました（図14）。

以下、医学部・大学病院における国際交流について、これまでの公募の取り組みをお話しさせていただきました。

8. スーパーグローバル大学創生支援への応募

最後に、今回JSTから公募がありました。スーパーグローバル大学等事業「スーパーグローバル大学創成支援」の応募について紹介いたします（図15）。

公募の際に、ハードルが高かった。英語にあまり実績がありませんので、難しい印象でしたが、トライすることによって、本学の現状や補強すべきことがわかり、応募した喜びが。したがって、皆様からみると難解に感じることもありますが、ご理解願います。

このプロジェクトは国際部委員の七里義義教授に主導していただき、調査研究を重ねていただき、生命科学、医療分野での生涯教育に向けた動機付けを与える革新的国際化教育研究拠点としての目的を果たすことが期待される。
学の建学の精神の一つ「教義と実践」、そしてその先の「実践を尊重する」というコンセプトと一致します。
医学部のみならず、他学部も含めて、これまで各学部が携わった海外の大学、目的を持って短期留学を行い、各国の学生と一緒にそれぞれユニークな実習を体験します（図17）。そのようなことにより、英語運用能力を有する生命科学者・医療人になろうというモチベーションが格段に上がっていくものと期待しております。

9. 国際交流における本学の

センター

ここで勝手ながら、国際交流における私共のセールスポイントを、1枚のスライドで提示させていただきます（図18）。第1は、生命科学研究所を中心とした、天然素材を利用した抗感染症薬の開発やワクチンの開発です。アジアの発展途上国では感染症の制御が重要な課題ですので、このテーマはインパクトがあり、それぞれの国と共同研究や研究者の相互訪問などが活発に進められています。
第2は医農連携です。これは学祖・北里柴三郎先生が唱えた「医学は予防であり」という観点から、環境、食の安全

を確保することで健康を増進しようというコンセプトです。したがって、医農連携ではなくて、本学ではあえて「農医連携」として進めています。
現在は、獣医学部と協力して、漢方薬の研究を展開しています。漢方薬は無農薬ないしは減農薬栽培のモデル事業を進めています。これは、現在本学が進めております、COILプロジェクトの重要なテーマのひとつでもあります。また、大学との触れ合うように動物介在療法を北里メディカルセンターで開始しております。
こういった取り組みが国際交流・グローバル化に役立てられてるものと期待しております。

10. まとめ

まとめますと、入学当初から、一般教育部での自校教育に加えて、「語学教育」や「仕事と人生」というテーマ教育をとおり、グローバルな視点で社会貢献を学生に勧めます（図19）。そして、専門課程での実学の学びが深くなると共に、国際交流を通じて生命科学・医療・医療の領域で、世界平和に貢献する人材を育成していこうという決意であります。

蛇足ながら、最近開院した新しい大学病院には、各病棟に学生実習室を作りました（図20）。ここを拠点にして、留学生を含めた、多彩でかつ深みのある病院実習やチーム医療教育を進めていく所存です。

謝辞

学会長の西村月満先生には、本学会での発表の機会を与えていただき、また発表内容に関しては、お手数にご意見を多々いただきました。深く感謝申し上げます。また、国際部副部長、七里義義教授、医学部医学教育部門の守屋利佳准教授、一般教育部の平井清文教授、及び北里大学病院国際学術交流運営委員会に資料のご提供と使用の許可をいただきました。厚く御礼申し上げます。
要約
大学のグローバル化とは「世界標準の教育・研究のための構造改革と国際化」である。生命科学の総合大学として、北里大学のこれまでの取り組みと今後の計画を紹介した。
理系および卒業時に国家資格試験を控える医療系大学では、海外の協定大学との実習を基盤とした、短期の相互留学制度が導入しやすく、また実績をあげられる。北里大学では、病院実習を主体とした短期の海外留学によって、グローバルな視野を身につけることを主眼に進めている。一方、大学病院では、新技術導入制度や海外の大学・病院との連携協力システムを使って、積極的に海外の医療施設や大学と情報・技術交換を行って成果をあげてきている。また北里研究所時代からの実学の実績を生かして、感染制御関連領域で東南アジア諸国との学術交流もグローバル化に貢献している。
大学在学時のみならず、生涯にわたって学び、国際交流を含めた社会貢献を行うことによって、世界平和に貢献する人材を育成していくことを大目標に掲げている。
The title of my talk today is “Global language teaching trends and English for Medical Purposes,” and because of the time limit, it’s going to be mainly global trends.

Language teaching over the past fifty years has changed dramatically. And there are three reasons for this. Number One: It has been compelled by a great need for a lingua franca. In this globally connected world of today, we need to talk to each other. And the default choice is English. It’s the language of computers, it’s the language of the nation that won World War II. So all of those things led toward English being the choice.

Number Two: Language teaching has been fueled by advances in technology. We can now examine natural language as we could never before. When I started my PhD work at the University of Birmingham, they had just finished the COBUILD Dictionary. It had been done on mainframe computers. Today, I can do the same kind of work on my laptop, my notebook computer. So technology has drastically changed the scene.

And because of that, we have reason number three. We have now become better able to understand what’s happening when language is taught or learned. Developments started in the 1970s or so when we moved away from a grammatically based syllabus and grammar translation to a notional functional syllabus. People started to say “If language is used to do things, why don’t we do things with language?” That made a lot of sense. And I think now we are moving into what can be called a pragmatic syllabus. This kind of syllabus will consider how language is actually used in various situations.

So, today, I would like to give you an overview of what is happening and how it can help us with the teaching and learning of English for Medical Purposes.

A good overview can be garnered by looking at the Invited Symposia at the AILA World Congress which is going to be held next month (August 2014). AILA is the Association Internationale de Linguistique Appliquée or the International Association of Applied Linguistics. This conference is held once in three years. The last one was held in Beijing. This year it is in Brisbane, Australia. Here is the list of topics for the Invited Symposia.

*Content and Language Integrated Learning (CLIL) as a catalyst for research cooperation in Europe and beyond
*Making Applied Linguistics Matter: Opportunities for Engaging with Professional Practice
*English as a lingua franca
Automatic translation
*Language testing and assessment
Language and trauma
Reassessing translation
*Interdisciplinary Approaches to Language Teaching and Learning in contemporary and transnational times

Let us focus on the ones indicated by the asterisks, which are related to language teaching and learning: CLIL, language testing and assessment, ELF, ESP and LSP. The first one listed is CLIL, or Content and Language Integrated Learning. EMP (English for medical purposes) where medical topics are taught via English would be a form of CLIL.

Language assessment issues are another important topic. In Japan, MEXT (Ministry of Education, Culture, Sports, Science and Technology) has decided to do away with the Center exam. So what are we going to be doing? How are we going to be judging language learners?

Another very important issue is ELF, or English as a lingua franca. Today, when we talk to people in English, we are not necessarily talking to people who are native English
speakers. We’re trying to use this language to speak with people all over the world.

And finally, this last one, ESP (English for specific purposes) and LSP (languages for specific purposes) can make applied linguistics matter. ESP and LSP offer opportunities for engaging with professional practice. This is especially important for this group of people (JASMEE members), and I will be looking at this in a little bit more detail.

There are many acronyms. The first one I would like to take up today is CEFR and CEFR-J which concern language teaching and assessment. CEFR is the acronym for the Common European Framework of Reference for Languages: Learning, Teaching, Assessment. It is a framework of reference for not only English, but all languages: how to learn these languages, how to teach them, how to assess them. It is based on over 20 years of research. Actually, the ideas for CEFR can be considered to have gotten started around the 1970s when Wilkins came out with a notional functional syllabus to replace the grammatical syllabus in use at the time. This eventually led to the development of CEFR which aims to provide a transparent, coherent, and comprehensive basis for language syllabuses, for curriculum guidelines, designing of teaching and learning materials, and also how to assess foreign language proficiency. CEFR is being used in Europe, and also on other continents and is now available in 39 languages, one of which is Japanese.

CEFR has proposed six levels of language proficiency: basic user (A1 & A2), independent user (B1 & B2), and proficient user (C1 & C2). There are specific Can-Do lists for all language skills of listening, speaking, reading and writing. The lowest level, or A1, states that “This person can read a very short rehearsed statement.” For example, “Let me introduce the first speaker.” At the A2 level, the person can give a short rehearsed basic presentation on a familiar subject. At the B1 level, the person can give a prepared straightforward presentation on a topic within his or her field. At the B2, C1 and C2 levels, people really start being able to communicate with those outside their own world. C2 is amazing as you could probably be better than a native speaker in your field of specialty. What we need to aim for is at least a B2 level.

The EU language policy is plurilingualism, not multilingualism. Multilingualism refers to a situation in which a person knows a lot of languages like a native speaker of each and can use it in various forms. But that’s not very realistic, when you think about how long we live and how much we have to do in our lives. As one of the speakers here said, there’s so much to learn in medicine today that you couldn’t possibly do everything unless you live until 200. What is more realistic is plurilingualism. It’s an expansion of the individual’s learning experience from home to society to the languages of other people. This is what CEFR is aiming for. In other words, it’s not the mastery of an ideal native speaker model, but the acquisition of a linguistic repertory of all the linguistic abilities that are important for your field, for what you want to do with the language, socioculturally, interculturally, and practically.

Based on the European CEFR, Professor Ikuo Koike and Professor Yukio Tono’s groups have worked on a CEFR for Japan. This is NOT a simple translation. It’s not just simply an import from Europe. No, this is based on 10 or more years of real research. It’s trying to understand what’s happening in Japan and how we can incorporate this kind of framework, how we can use it in Japan. So it’s adapted to the English-teaching context in Japan. And it uses an action-oriented approach. It’s not rote learning. It’s about what are you going to do with the language you are learning.

Now, if you compare the CEFR scales with the CEFR-J scales, you will notice that while the original has six levels, the Japanese one has twelve. You will also see that most of the additional levels are at the low end of the scale: pre-A1, which is below A1. There are also A1.1, A1.2, and A1.3, which would not be even thought of for a European scale. But according to research done by Professor Tono’s group, while the average Japanese university graduate should be at least at the B1 level, about 80% of them are at the A level or below. That is the reality in Japan today.

And so that’s why there is a preponderance of scales at the low levels. But things are going to start to change. Listening to the other speakers presenting today, I’m pretty sure the English language level in Japan will improve drastically and quickly.

The CEFR and CEFR-J details are available online. They are very well thought out and worth looking into.

With that kind of framework, people are going to start saying well, why can’t we use it more? This line of thinking has led to the notion of “Content and Language Integrated Learning,” or CLIL. This is where educators have started trying to kill two birds with one stone. Instead of teaching English and teaching medicine, they say why don’t we just teach medicine through English? That’s the idea... And the thing that’s interesting about this is that, in Japan, it would mean using a foreign language, not a second language. If you were in a country where English was being used, then that would be using the second language to teach. But English is not a second language in Japan. It is a foreign language. Teaching in a foreign language is a rather difficult undertaking.
This type of work began in the early 1990s and got the name of CLIL from about 1994. It’s been supported by the CLIL Research Network. CLIL is really looking at contextualized language teaching approaches. So it would mean merging education and content-based language teaching.

Now the next thing that I’d like to look at a little bit more deeply is how to make applied linguistics matter. The symposium at AILA will be looking at opportunities for engaging with professional practice. I think that’s exactly what we are doing here (at this JASMEE conference): we’re having English teachers work with people in the medical fields, in other words, engaging with professional practice.

This is just a part of the blurb from this AILA symposium and it’s frightening. “Inadequate communication training for health professionals results in miscommunication, a major cause of adverse events. Applied linguists can contribute greatly to cultural change toward best patient care.” Please remember this word: “cultural change.” It doesn’t mean the standard “kimono culture” or something like that. It’s a different kind of culture. “We focus on our own research, employing discourse analysis of health communication, to explore problems and potential solutions in this sector.” As I said, the kind of research we can do on the laptop or with the notebook computer now, is amazing and discourse analysis is certainly one of them.

So we have students graduating from universities with A-level, very basic level English skills, and yet we want them to be able to communicate in their professional work situations. How are we going to bridge this huge gap between the actual foreign language proficiency and the kind of proficiency they need? I think one possible solution lies in ESP, or English for specific purposes.

ESP focuses on the English needed for a specific discourse community. I’ve been in the pharmaceutical department at my university for a long time so I can probably talk to you about pharmacy or language education, but I don’t think I’ll be very good at talking to you about sports. Two key words that are extremely important in ESP are “genres” and “moves.”

A discourse community consists of people who are connected by discourse, or the communications that they exchange with one another. For example, you could think of doctors in a university environment. These people have a means of communication; they are not bound by location; and they construct the knowledge in the field, for example, by writing papers to describe their research findings. The reason that there was such a ruckus about that Nature paper on STAP (stimulus-triggered acquired pluripotency) cells is that they thought that this was new knowledge that would help construct a new area. It turned out that it was not up to par. But this is why everybody doing research has to write papers.

Now I asked you to remember the word “culture.” The culture that they’re talking about is “professional culture,” or how other people in this community think about what they are doing. Somebody mentioned about how doctors think. How do they reason? What do they think about what they are doing and how they are doing it? That’s professional culture.

And how they actually present this by the things that they say, the things that they write, is “professional practice.” What they use for communication, the types of text, is “genre.” For example, John Swales has done a lot of work on the research paper genre. In fact, one of the first things that he analyzed were the introduction sections of research papers, and this started a new field of genre analysis.

The individual text that you are looking at is the specific text that you are dealing with right now. So there is a whole range of layers, from this individual text that is actually there in front of you, to context, which is everything behind...
the text. Many people only focus on the text itself. They forget all about the overall context. But increasingly, people are saying, “This background behind a text is extremely important. This can guide us. This can tell us what to do next.”

Texts which are repeatedly used form genres. A genre is a repeatedly used type of communication event, which because it’s repeatedly used, has developed patterns for efficiently transmitting information. And this pattern is what’s very important. Here is a picture showing the three important parts of a genre. The action part is the impact the genre has on society. The problem with the STAP cell papers was the content, or the substance, was not appropriate.

The form is where English editing comes in. In other words, the research paper has to look like a research paper, it has to read like a research paper; the linguistic packaging has to be appropriate for the genre. Many of us only focus on the form, and forget all about all of the other elements. But all of these elements, i.e., Action, Substance and Form, are very important in genre.

Genre, as I said, is a means of communication. It’s how you communicate with other people in your field. It could be an email message, a research paper, a conference presentation, or a patent application.

To more clearly illustrate genres, here are two business letters sent out by a company to their customer, on the matter of price increase. These are typical examples that can serve as templates. One is in Japanese (Fig. 3) and one is in English (Fig. 4). I did a little bit of analysis, which shows you what discourse analysis can tell us.

**Fig. 3. Discourse analysis of a Japanese business letter on price increase.**

The letter is on the left and the moves are listed on the right.
Let us compare the English and the Japanese letters. As you can see, in English, there is a lot of explanation of why the price needs to be raised. In Japanese, the explanation is much shorter. On the other hand, in Japanese, there are many polite forms such as “We trust that your company is doing well and we hope that you will understand the situation.” In English, that section is just one sentence: “We hope to continue to have your patronage.”

What is important here is that if you are writing an English letter, this is how you would write it. But if you’re writing it in Japanese, this is how you should write it because it would be very awkward to have a Japanese business letter written with an English style.

Now let’s look at a more scientific genre. Here is an abstract (Fig. 5) on research done by researchers in France and Canada that was published as a Letter to Nature. The paper describes the transfer of carbohydrate-active enzymes from bacteria to Japanese microbiota. When I teach how to read and write research papers at graduate school, I challenge the students with this question: Can you read this in one minute and tell me what this is about? Everybody goes “Huh?” Well, at the end of this class, they should be able to do this, because they will start recognizing what hint expressions they should look for. How is this text organized?

On the right hand side of Fig. 5 is the organization of the text and the underlined portions in the abstract itself are
the hint expressions that inform the reader as to what the writers are presenting in this particular section. That is, where the authors are presenting the background for the research, the specific purpose for the present research, the materials and methods used for the research, what the actual results were, and what the conclusion is.

Essentially, what this abstract says is that Japanese gut microbiota differ from the microbiota of North Americans. And this is because the Japanese people eat a lot of nori, or seaweed. Now this is interesting, but I tell my students, if you stopped here, this would not be a good research paper. The important part is the concluding statement. This research started off with the question of “Why is it that human intestines have such a highly diverse variety of microbiota?” The results from this study offer one step toward an answer. They concluded that this is due to the food we eat; habitually eating certain kinds of food can help our gut develop and support a diversity of microbes.

There are two advantages to being able to pick out the hint expressions. The first is that this enables you to read very quickly. The other advantage is that you can learn to write using expressions familiar to professionals in your field. This does not mean copying or plagiarizing other people’s work. For example, if you put the following sentence in Google search, you will get one hit: “A fundamental question that, to our knowledge, has yet to be addressed is how this diversity evolved.” If you copy it, people will know that. However, if you put in “A fundamental question” you will see that it appears about 70,000 times. In other words, this is a phrase you might want to use when you are writing. How about “To our knowledge” which is used more than two million times! This phrase is a way of protecting yourself by saying that “As far as we know, nobody has done this before, so that’s why we’re doing it.”

So these are the things that I have my students look for and use when they are writing. This is not copying; this is not plagiarizing. It is learning how to say things in your professional field. If so many people are using this phrase, maybe you should be using it, too.

These phrases are not something you can find in a grammar book or dictionary. You find them by being aware of genre and perhaps knowing how to use corpus linguistics to help you. But corpus linguistics is beyond the scope of this talk.

Before ending, I would like to briefly introduce ELF, or English as a Lingua Franca. There are now more nonnative speakers than there are native speakers of English, so we need to be able to communicate with each other under new conditions.

**Fig. 5. Move analysis of a research paper abstract.**

| Gut microbes supply the human body with energy from dietary polysaccharides through carbohydrate active enzymes, or CAZymes, which are absent in the human genome. | **Background** |
| These enzymes target polysaccharides from terrestrial plants that dominated diet throughout human evolution. **The array of CAZymes in gut microbes is highly diverse,** exemplified by the human gut symbiont *Bacteroides thetaiotaomicron,* which contains 261 glycoside hydrolases and polysaccharide lyases, as well as 208 homologues of susC and susD-genes coding for two outer membrane proteins involved in starch utilization. **A fundamental question that, to our knowledge, has yet to be addressed is how this diversity evolved** by acquiring new genes from microbes living outside the gut. |
| **Here we characterize the first porpyranases from a member of the marine Bacte- roidetes, *Zobellia galactanivorans,* active on the sulphated polysaccharide porphyran from marine red algae of the genus *Porphyra.* **Furthermore, we show that genes coding for these porpyranases, agarases and associated proteins have been transferred to the gut bacterium *Bacteroides plebeius* isolated from Japanese individuals.** |
| Our **comparative gut metagenome analyses** show that porpyranases and agarases are frequent in the Japanese population and that they are absent in metagenome data from North American individuals. Seaweeds make an important contribution to the daily diet in Japan (14.2 g per person per day), and *Porphyra* spp. (nori) is the most important nutritional seaweed, traditionally used to prepare sushi. |
| **This indicates that seaweeds with associated marine bacteria may have been the route by which these novel CAZymes were acquired in human gut bacteria, and that contact with non-sterile food may be a general factor in CAZyme diversity in human gut microbes.** |

| **Purpose** |
| **Here we characterize the first porpyranases from a member of the marine Bacte- roidetes, *Zobellia galactanivorans,* active on the sulphated polysaccharide porphyran from marine red algae of the genus *Porphyra.* **Furthermore, we show that genes coding for these porpyranases, agarases and associated proteins have been transferred to the gut bacterium *Bacteroides plebeius* isolated from Japanese individuals.** |
| **Method** |
| **Results** |
| **Conclusion** |
communicative contexts. This does not mean that your English is “poor or deficient” if you are not a native speaker of it. It’s a matter of being able to understand each other. It is being able to select the most effective resources for your communication purpose. ELF speakers have at least two cultures and two languages. They can use their multicompetence, i.e., different ways of thinking, different ways of looking at the world. We don’t all have to learn about British culture, we don’t have to all learn about American culture. But we do need to be able to use the language so that we can communicate with people from Britain, from the United States, from Australia, and also from all of the other countries that use English as a second language or as an additional language. If you are interested, you can find more about ELF at the University of Vienna VOICE site.\(^\text{17}\)

I would like to conclude by referring to the model 21st-century language learner proposed by Susan Hunston, when she came to talk at the JACET Kansai Chapter 40th Anniversary Conference.\(^\text{18}\) She described the model learner as being Motivated, Self-directed and Informed. She said we should help our students become more Motivated. That can be done with the ESP concepts I have outlined in this talk. Learners need to be self-directed because language learning is considered to be a life-long enterprise. And they should be Informed by knowing how to use language tools, such as genre analysis which I have briefly shown you today. And what we’re aiming for is a plurilingual — in other words, someone who can use a discourse community model to really use English that works for him/her and for the community. Thank you.

(Transcription by Christopher Holmes)

References

1) <http://www.collins.co.uk/category/English+Language+Teaching/COBUILD+Reference/>
2) <http://www.aila2014.com/>
3)日本語版: 《センター試験、5年後発表へ 新試験の実施、詳しい。》(2014/03/12 13:02)
4) Council of Europe, website on Education and Languages, Language Policy <http://www.coe.int/t/dg4/linguistic/cadre1_en.asp>
6) <http://common european framework marianjuan.blogspot.jp/>
7) <http://www.cefr-j.org/english/index-e.html>
9) <http://cefr-j.org/Tono_20130602.pdf>
10) CEFR <http://www.coe.int/t/dg4/linguistic/cadre1_en.asp>
11) CEFR-J <http://www.cefr-j.org/>
12) <http://clil-ren.org/>
17) VOICE (Vienna-Oxford International Corpus of English) <http://www.univie.ac.at/voice/>
Effective learning of foreign languages based on cerebral mechanisms

(Kenichi Uemura, MD, MS)

(First-year Japanese medical students who have passed an extremely difficult entrance examination, which includes English, generally do not understand at all when they listen to a speech given by an American President. This is because they have been taught English with no respect to the cerebral mechanism for learning a language. A baby will learn to understand the language spoken by the mother, because the dominant cerebral hemisphere (the left hemisphere in most people) will establish a specific area to understand that language. No matter how many years you study a foreign language through grammar translation, your brain will never establish a specific area to process that language, unless you focus on listening skills. Without such a specific language area, you will not learn to speak fluently. Foreign language education in Japan has failed completely because it has neglected the cerebral mechanisms.

Each language has specific expressions and vocabulary that will make the speaker sound natural. The grammar translation method of putting Japanese sentences into a foreign language will not result in language that is natural, and native speakers might feel uncomfortable when confronted by this type of English. You should learn how to translate Japanese into natural English. In Japanese, expressions that are direct will take a negative form, while those that are indirect or polite will have a positive form. This is quite the opposite in English. In both English and Japanese, many nouns have corresponding verbs. Many nouns used in medical English have corresponding verb forms, while the equivalent nouns in Japanese have no verb forms. Unless you understand this, you will translate medical Japanese into quite unnatural medical English. Japanese physicians like to use many words and phrases that are unnecessary in English. You cannot express yourself in English that is natural or comfortable for the listener unless you avoid unnecessary words or phrases.

Writing a sentence is a function of the dominant hemisphere, while the non-dominant hemisphere, which is related to arts, functions to make a good speech or to write a well-constructed manuscript. In Japan, such language functions of the non-dominant hemisphere are not taught for any languages, even Japanese. Foreign language education in Japan should be immediately reformed with respect to cerebral mechanisms.

Each language has specific expressions and vocabulary that will make the speaker sound natural. The grammar translation method of putting Japanese sentences into a foreign language will not result in language that is natural, and native speakers might feel uncomfortable when confronted by this type of English. You should learn how to translate Japanese into natural English. In Japanese, expressions that are direct will take a negative form, while those that are indirect or polite will have a positive form. This is quite the opposite in English. In both English and Japanese, many nouns have corresponding verbs. Many nouns used in medical English have corresponding verb forms, while the equivalent nouns in Japanese have no verb forms. Unless you understand this, you will translate medical Japanese into quite unnatural medical English. Japanese physicians like to use many words and phrases that are unnecessary in English. You cannot express yourself in English that is natural or comfortable for the listener unless you avoid unnecessary words or phrases.

Writing a sentence is a function of the dominant hemisphere, while the non-dominant hemisphere, which is related to arts, functions to make a good speech or to write a well-constructed manuscript. In Japan, such language functions of the non-dominant hemisphere are not taught for any languages, even Japanese. Foreign language education in Japan should be immediately reformed with respect to cerebral mechanisms.
1980年頃、米国の常設でハーバード大学の米人学生から、きめ細やか且つ流暢な日本語話しかけられ、朝日新聞の専門記者が、米国の大学で日本語を教えるべきかと問われた。1960年より日本に在住する外国人医師も、日本語で医師国家試験の合格しなければならぬ、複数の米人の医師が、帰国してカリフォルニア大学で2年間日本語を勉強したので、当時の論述形式の医師国家試験に合格したと聞いたことがある。

ニューヨーク州立大学アッスティア州立学部に留学したときに、ドイツ語の医学論文を読んだ「君はドイツ語を勉強したのか」と聞かれ、「日本の医学部ではドイツ語は必須科目で2年間勉強させられた」と答えたところ、いきなり流暢なドイツ語で話され、まったく聞き取れなかった。「話者が自由でないかとドイツ語を勉強したと言われいないでくれ」と忠告された。フランス語を読める医学者は流暢にフランス語を話した。これが米国におけるきめ細やかで効果的な外国語教育である。

以前の西ドイツでは、共産圏からの数多くの難民をたちに難民キャンプに収容し、徹底的に会話教育を3ヶ月にしただけでなく、全員が日常生活に困らないようになった。日本のある工業高等専門学校で、日本人のドイツ語教師が20年も教育したとき20%の学生が毎年落第していたが、この西ドイツの難民キャンプの教師を招聘したところ、まったくドイツ語のわからない1年生にいきなりドイツ語で講義を始め、学生に話しかけた。3ヶ月で全学生がドイツ語で話せるようになり、グループ討論ができるようになった。1年後の期末試験では全員が80点以上の成績を上げた。

1980年頃、著者は東京外国語大学の非常勤講師として、1年間の日本語教育を修了した学生に「脳の仕組みから見えた効果的な外国語習得法」を、大学の要請に従って日本語の漢字と仮名のみのスライドで用いて、医療用語を含めて完全に日本語で、しかも口語で講演したことがある。学生は全員、私の講演を完全に理解しており、実に流暢な日本語で多数の質問が出た。まったく日本語のわからない学生達は、入園後直ちに国大学の寮に入れて、まったく外国語のわからない日本人の管理人や事務人と会話しなければ食品も食べられない状況に置かれ、あっと言う間に日本語の会話ができるようになったそうである。

このように米国でも日本語を話す機会が多い学生から、会話から入った外国語教育はすべて大成功している。

英語を含む難関の入試を突破した某国立大学の医学部1年生に、医学英語の講義の前にNew York Timesの社説を辞書として読む人数はいるかと問ったところ、帰国子女を除いて、手を挙げた学生は一人もいなかった。また米国の大統領や英国首相の演説を聴かせ、大体の内容を日本語で解答させたところ、帰国子女を除いて、内容をほとんど単語がつづかず聴き取れたのがちょっとであった。

米国では2年間の日本語教育で日本語を使いこなすところまで効果的なのに、日本では中学・高校・大学と年間もの英語教育がまったく失敗したのは、脳の仕組みを無視した教育を行ったからである。

帰国後同級生の日本語の医学論文を英訳したところ、それを読んだスタンフォード大学外国文学教授から、「この英語には文法的間違いないが、comfortableではない」と言って、丁寧に添削していただいたことがある。これが、私がcomfortable Englishの研究と教育を始めたきっかけとなった。

ある時期、私は日本脳神経外科学会の英文の機関誌の編集に、米人の英語学者と共に携わったことがあるが、彼女がまずやったことは、英語の添削ではなくparagraphを含めた論文全体の構成の修正であった。日本では、国語を含めた言語教育で、paragraphingを含めた論文の構成やpublic speechなどまったく教育されていない。

以下、米国における外国語教育の改善すべき点を、脳の仕組みから解説する。

1. 脳の仕組み

1.1. 脳の小脳・脳幹の機能分担

図1.2に模式的に示したように、脳は大脳、小脳、脳幹に分かれており、かつ大脳は左右2つの半球に分かれている。脳幹は、意識・知覚・行動といった生命維持機能に不可欠である。小脳は、大脳の指示で手足を動かす運動を細かく調節する役割を果たす。人間の精神活動（心）や行動は大脳の機能である。大脳の表面は大脳皮質と呼ばれ、ここに最も高度な機能が発揮される脳細胞が密集している。大脳の中心部には、視覚・聴覚下部・大脳基底核といった脳細胞の集団があり、大脳皮質の機能を支援している。

1.2. 優位半球と劣位半球

すでに述べたように、\textsuperscript{17}左右2つの半球のうち、人間特有の言語機能に関与している方を優位半球、関与していない方を劣位半球と呼んでいる。右利きの人のはとんどと左利きの人の大部分で左半球が優位半球となっている。しかし、図3に示したように、劣位半球は視覚空間認識に関係し、方向感覚、芸術性の上で、文章構成、２戦のためとも関与し、人間生活をつくるに重要な機能を発揮しているので、劣位半球の名称は不当であるとするのが、近年の脳科学者の見解である。

1.3. 優位半球の言語関係機能の局限

右半身の運動と感觉および右骨の右視野は左半球の機能であり、右半球は左半身の感情・運動と左視野の機能に関与している。これは半身と半視野を大脳皮質と連絡する神経路線が途中で左右交差しているからである。ところが音に関しては、各耳に入った音は、60%が対側の。
図1. 脳・小脳・脳幹の主要な機能
脳の表面の脳皮質が心（神経活動）と動作を司り、小脳が運動の調節をし、脳幹は生命維持に不可欠の意識、呼吸、循環の維持に不可欠で、この機能の変化が脳死の原因となる。

図2. 脳・小脳・脳幹の主要な機能
脳の表現の脳皮質が心（神経活動）と動作を司り、小脳が運動の調節をし、脳幹は生命維持に不可欠の意識、呼吸、循環の維持に不可欠で、この機能の変化が脳死の原因となる。

図3. 大脳半球の代表的機能の表示
大脳は左右2つの半球に分けられ、言語機能を担当する半球を優位半球と呼び、右利きの人のはとんどと左利きの人の大半で左半球である。もう一つを劣位半球と呼び、非言語的概念、方向感覚、時間感覚、視空間感覚、芸術性、幾何学、文章構成、書記、図画・視覚などに関与し、日常生活に欠かせない機能を担っており、劣位半球と呼ぶのは不当である。

図4. 聴の知覚と認知
耳に入り込んだ音は内耳の鴨牛で神経信号に変換され、60%が外側の、40%が同側の大脳半球の前頭葉にある聴覚皮質にて神経信号、その他の聴覚皮質で情報処理されて認知される。優位半球では言葉が、劣位半球では音楽が認識される。聴覚皮質の前半では音色（優位半球では誰の声か、劣位半球ではどの音楽の音が）が認識され、後半では意味（優位半球では言葉の意味、劣位半球では音楽の意味）が認識される。優位半球のこの部はワールチック感覚性言語野と呼ぶ。

図5. 各言語機能の優位半球内での局在を示している。図中の番号はBrodmannが組織学的に大脳皮質を53の領域に分けて付けた番号である。ワールチック感覚性言語野
図5. 優位半球での各言語機能の局在
図中の塗番号は、Brodmanが大脳皮質を組織学的に53の領域に分類した番号で、組織学的に異なる部位は機能が異なると考えられている。

図6. 多言語使用者Multilingualsの言語研究からの新知見
これまでウエルニアック言語野の全体が母国語の言語を記録し、識別していると信じられていた。しかし近年、米国ワシントン大学脳科学外科のOjemann教授が、脳手術中にウエルニアック感覚性言語野を電気刺激したところ、母国語に関与する部位はきわめて小さい所限局しており、検出した14人のbilingualの人の3つに少なくとも2つの言語がまったく異なった部位、少なくとも2 cmは離れた部位で喚起されていることが判明した。

2. 脳の仕組みを活用した効果的外国語教授法のコツ

2.1. 人脳の言語能力の獲得過程

英語初学者の言語学習において、多言語使用者が認知する言語野が形成されることを示す。母国語の言語を理解するようになる。そこで、言語学習において、母国語に発音や
2.2 ウェルニッケ感覚性言語野に外国語野を形成させる教授学習法

明治政府が日本を開国した頃は、急に欧米の文化を日本に輸入する必要があり、外国語教育は文法と単語の学習で外国文が相手でなければならず、日本との産業と科学が世界一になった今では、日本独自の研究発表を外国人にただ発信するだけではなく、国際会議で徹底的に論じなければならなくなり、使いこなせない外国語教育はまったく役に立たなくなった。

外国語を自由に使いこなせるためには、ウェルニッケ感覚性言語野にその外国語を認識できる言語野を増設しなければならない。そのためには、聴き取りと会話の教育を徹底しなければならない。図6に示したように、文法と直訳の学習を何年か続けても、会話はしなかずに、その外国語の言語野は決して形成されないことが証明された。このような人が学習になって留学しても、日常会話はできるようになるが、ジョークまではなかなか理解できない。しかし、外国へ転勤した親についていった子供たちは、赤子と同じ言語習得をするので、発音も外人と変わらないどころか、最初からジョークが理解できるようである。

ウェルニッケ感覚性言語野に英語の言語野を形成するにあたっての留意事項を以下にまとめると、(1) Nativeの言語を聴く。実際にNativeから直接教えてもらうのが最良であるが、日本人の英語教師が教える場合には、自分の下手な発音を開かせないで、CDやVTRなどでnativeの発音を聴かせる。
(2) 初心者を教える場合には、最初はゆっくりした発音を聴かせ、段々とスピードを上げる教え方がされているが、これは脳の仕組みから言って、まったくの間違いである。ゆっくりした発音を聴かせると、脳はゆっくりした発音しか理解できない神経回路網を作成してしまう。
(3) テキストを見ながら聴いてはならない。学生はテキストを見ながら聴く方が楽に聴き取れる。すると脳は、音楽を見なければ聴き取れない神経回路網を作成してしまう。
(4) テキストを聴かないで聴くとしても、ただ聞き流しではまったく効果がない。聴きながら、人前では心の中で、一人のときには声を出して、復唱shadowingしながら聴かないと言語野は形成されない。
(5) 聴き取れないときは、フレーズ毎に漢字を説明し復唱すると格段のスピードで上達する。
2.3. Manners in English speaking countries

Manners in English-speaking countries differ significantly from those in other parts of the world. In English-speaking countries, it is considered polite to make eye contact and maintain eye contact during conversation. This is different from many other cultures, where it is considered impolite to make eye contact. In English-speaking countries, it is also important to maintain a friendly and open body language. This includes smiling, nodding, and making eye contact. In contrast, in many other cultures, it is considered impolite to smile or make eye contact during conversation.

3. Manners in Japan

Manners in Japan are different from those in English-speaking countries. In Japan, it is important to be polite and respectful to others. This includes maintaining a formal and respectful tone of voice during conversation. In addition, it is important to maintain a polite and respectful body language. This includes making eye contact, nodding, and smiling. In Japan, it is also important to maintain a friendly and open body language, as this is considered polite and respectful.

3.1. Manners in Japan

Manners in Japan are different from those in English-speaking countries. In Japan, it is important to be polite and respectful to others. This includes maintaining a formal and respectful tone of voice during conversation. In addition, it is important to maintain a polite and respectful body language. This includes making eye contact, nodding, and smiling. In Japan, it is also important to maintain a friendly and open body language, as this is considered polite and respectful.
2.3. There is (are)…は避ける

日本語は「-があります」という表現を愛用するが、英語では、もっとと“be”動詞は活性のない動詞“inactive verb”なので、“there is (are)…の表現は文を非活性化するので好ましくない。したがって、「この大学には立派な図書館があります」は、「In this university there is an excellent library」と直訳するのではなく、「This university has an excellent library」と意味する。文の長さも75%と短くなる。また、「この大学には英語を手に取る学生が多数います」は、「In this university there are many students who can speak English well」と直訳するのではなく、「Many students speak English well in this university」と意味する。文も66.7%と短くなる。この場合、canは省くことも教えなければならない。

Comfortable Englishは常に短くなると覚えていただきたい。
4. 効位半球の活性化も要する語学教育

4.1. 声量、話術、Public Speech, 論文構成の教育

国際医学界では連載された、スライドのわかりやすい、声量、話術のうまい、あらゆる点で抜群である。同じ英語圏でも、英語や日本語圏の学者より適切にうまい。これは米国ではpublic speechが必要分野であり、大学の一般教養課程で論文構成が徹底的に教育されているからである。医療やシンポジウムでの言語の学習において、英語教師による論文構成の教育は相当に厳しく、米国人学生の50%が日本語学習が苦手である。このような厳しい教育は日本ではなされていない。

私は中学1年の時に弁論に所属していたために、先輩から徹底的に声量の特訓を受けた。中学2年よりESS (English Speaking Society)に所属し、大学を卒業するまで毎年英語のスピーチ・コンテストに出場した。しかし米国人の英語教師に原稿の英語は添削してもらったが、paragraphingや論文構成などを改変することもなかった。ニューヨーク州立大学アッププライド医学部に留学して、生理性医学院修了時に学位論文を米国生理学会で発表したときに、Preston主任教授から半年間わたって、論文構成、speech mannerなど特訓を初めて受け、大変勉強になった。

読者が読みたいになるように表題の付け方、読者を窺いつける序文の書き方など、すでに詳説したので文献を参照されたい。

5. 終わりに

米国には、国語（英語）の教授にはProfessor of English LiteratureとProfessor of English Languageの異なった専門分野の教員がおり、大学の教養課程の英語は後者が教え、
前者はあくまでも英文学の専攻の学生の教育に専念している。残念ながら日本のほとんどの大学に英文学科はあっても英語学科はない。私が千葉大学学生の頃は、教育学部に天野教授がおり、この先生は自身で専門は英文学ではなく、英語学だと主張され、我々SES (Spoken English Society)（千葉大学ではESSではなくSESと天野教授が命名）の部員の英語を徹底的に教育された。

日本の英語教育の失敗をなくすには、英語を自由に使いこなせるbilingualを育成して、英文学ではなく英語学の教師とnativeのみに英語の教育をさせる大改革が必要と痛感している。

参考文献
2) 植村健一. 2005. 医学・生物学研究者のためのうまい研究発表のコツ. メジカルビュー社.
3) 植村健一. 2007. 頭の仕組みからみた高次大脳機能 (1) —認知・表現の仕組を中心に一、理療 37(1): 54-63.
4) 植村健一. 2007. 頭の仕組みからみた高次大脳機能 (2) —記憶・学習・可塑性とリハビリテーション一、理療37(2): 77-84.
6) 植村健一. 2008. 頭の仕組みからみた英語教育一Progress in English一、Edoc社。
1. Introduction

The University of Tsukuba has always had a strong international character. This character derives considerably from the large community of non-Japanese who live and work in Tsukuba as academics at the university or at the city’s numerous research institutions. Since being selected in 2009 by the Japanese Ministry of Education, Culture, Sports, Science, and Technology as one of the 13 universities of the “Global 30 (G30) Project for Establishing Core Universities for Internationalization,” the university’s international character has become further ingrained.

The G30 project’s aim is to promote internationalization by recruiting overseas students and faculty to the nation’s universities and establishing research partnerships and student exchange programs with overseas universities. At the University of Tsukuba Faculty of Medicine, partnerships thus far established include those with universities in Brazil, France, Germany, Indonesia, Taiwan, the United Kingdom, the United States, and Vietnam. The number of G30 students currently studying at the faculty is twenty-eight. They are studying for degrees at both the undergraduate and the graduate levels (Degree in Medical Sciences, 5 students; Master’s Degree in Medical Science, 8 students; International Research Course [PhD], 15 students).

G30 program courses are all taught and administered in English.
the University of Tsukuba Faculty of Medicine’s G30 program is that Japanese students are also encouraged to take the courses offered in English, thus contributing to the “day-to-day internationalization” of the faculty’s academic environment.2

It is within such an environment, then, that the 3 full-time English-for-Medical-Purposes (EMP) teachers (all native English speakers) are tasked with preparing both Japanese and non-Japanese students to participate at the international level as medical professionals and researchers. In addition to these duties, the EMP teachers offer extracurricular English activities to teaching and administrative staff to help develop their English skills, and to Japanese and non-Japanese students to promote friendly exchanges between them.

In the rest of this paper, we will first briefly introduce the office that forms the base for a significant portion of the English-language support provided by the EMP teachers. We will then outline the components and contents of the EMP courses and activities offered.

### 2. Medical English Communications Center (MECC)

This center was launched in April 2010, as a subdivision of the International Office of the Institute of Medical Science. The purpose of the center is to support medical faculty staff and students in their English-language professional activities in the international arena. To this end, the 3 EMP teachers provide editing and presentation practice services.

The editing services consist of manuscript, slide, and poster editing. Of these, the manuscript editing is the busiest, with an average of 65 editing requests per year. The EMP teachers work with authors through every step of the rewriting process, from preparation of the manuscript for the first submission to the prepublication final revision. In addition to editing authors’ writing, the EMP teachers work with the authors to explain the edits and to provide advice on how they can improve their writing.

The presentations practice service consists of assistance with practice of slide or poster presentations to be given at international conferences. This is also a popular service and has many repeat users.

With the launch in 2013 of our new MECC website (http://www.md.tsukuba.ac.jp/MECC/), we hope to further extend our educational reach through the “Self-Study” page, which offers worksheets on various aspects of scientific writing and communication for use by all visitors to the website.

### 3. Medical degree program (Table 1)

#### 3.1. Compulsory English courses

Medical School students have compulsory English classes for their first 2 years of study. The yearly intake of approximately 230 students, from the School of Medicine, School of Nursing, and School of Medical Sciences, is divided into 5 classes: A1, A2, B1, B2, and C, with about 45 students per class. A placement test, administered in early April, is used to divide the students.
into the 5 levels according to their English ability. These classes are organized by the university’s Foreign Language Center, giving students access to the center’s specialist language teachers and language learning facilities, such as the CALL labs, media library, and online learning resources.

First-year students have 3 English classes each week, which cover 3 basic programs of study: General English (総合英語), Principles of English (英語基礎), and Cross-Cultural Awareness and English (異文化と英語). This program of study is university-wide and designed for all first-year undergraduate students. In their second year, Medical School students take a compulsory course entitled “Seminar on Scientific English” (科学英語演習), which is a course designed to help students begin to engage in the more scientific/academic aspects of English. Within the framework of the general course aims it is left to the discretion of the instructor to decide the syllabi, materials, and so forth for each of these compulsory classes.

An EMP teacher (T.M.) from the Faculty of Medicine is also involved in teaching these first- and second-year classes, which allows for the delivery of some specific medical English education to the Medical School students alongside their general English education. These classes, consisting of 25 sessions, are held in 2 stages, which are divided by the spring and autumn semesters. Assessment is done at the end of each period of study, and the method of assessment is left to the discretion of the instructor.

### 3.2. Elective programs of study in EMP

From the second year, Medical School students can choose from a range of 10 elective EMP courses, given the general title of English for Specialized Subjects (専門語学 - 英語). Unlike the compulsory classes, these courses are organized by the Faculty of Medicine and are designed for those students wanting to further their medical English education.

The courses vary in length, class size, and scope and are taught by Japanese and non-Japanese teachers from the Faculty of Medicine, who cover various aspects of EMP, reflecting their respective fields of expertise. One class, for example, focuses on the subject of human care, another involves reading articles from The New England Journal of Medicine, another helps students to master medical terminology by studying Greek and Latin word parts, another teaches communication between doctors and patients, and another prepares students for the United States Medical Licensing Examination.

### 3.3. English History-Taking Workshop

(英語で病歴面接)

This workshop forms part of the Preclinical Clerkships program that students take in the spring semester of their fourth year. The focus of this program is on preparing the students for their hospital clerkships, which begin in the fall semester. Clinical communication skills training is an important component of the program, and the English History-Taking Workshop falls under its umbrella, albeit as an elective. Students can sign up for as many or as few of the 10 workshop sessions as they like; some sign up for only one, some for all ten.

The main activity of the workshop is history-taking role-plays in English, with students taking turns playing the part of the physician. The patient is played by a professional simulated patient (SP) from the Ibaraki SP Association. Workshop participants also engage in round-table discussion after each role-play, including self-reflection by the role-playing student and feedback from the observer-students, SP, and EMP teacher(s) (T.M. and F.M.).

This is the only EMP course to coincide closely in time, content, and objectives with courses in the Medical School curriculum and, as such, is immediately meaningful and motivating for students.
3.4. Workshop for Medical Science Students

(医科学グループワーク演習)

New for 2014, this 10-session workshop, held over the year, has 3 instructors: a medical science teacher and 2 EMP teachers (T.M. and B.K.P.). Five doctoral student teaching assistants (TAs) also provide peer instruction. The workshop, delivered entirely in English, aims to give students confidence to engage with others in English about their subject and to equip them with the skills to do so. It involves classroom work, with special seminars in current topics of medical science, group discussions and presentations, and TOEFL training. Some of the sessions are held as part of international conferences, field trips, and social events where students can engage with international researchers in the medical sciences.

4. Master’s degree program (Table 2)

4.1. English for Medical Science and Technology (EMST)

Students of the Master’s Programs in Medical Sciences, Public Health, and Nursing Sciences, known collectively as “the Frontier Program,” take this yearlong compulsory English class. The approximately 60 students are divided into 3 groups, each under the supervision of one of the EMP teachers. Approximately one quarter of the students are from overseas, so the class has a very international dynamic.

The students learn the essential skills of scientific communication in English, with particular emphasis on scientific presentation and oral communication. This innovative class incorporates multimedia, online, and social media projects, thus equipping students to communicate science in the digital age and on an international stage.

4.2. Lunchtime English Chat

This is an informal English conversation class held once a week during lunch break. The class aims to develop students’ fluency and to build their confidence to speak English in social situations and thus focuses on general English conversation, such as engaging in small talk and sharing ideas and personal opinions.

5. Doctoral degree program (Table 2)

5.1. About the program

The following degrees are offered: Doctoral Program in Biomedical Science, Doctoral Program in Clinical Science, and Doctoral Program in Nursing Sciences. All students are encouraged to take the G30 component courses taught in English. Students must publish at least 1 first-author original research article in an English-language peer-reviewed journal, achieve a TOEIC score of 750 before graduation, and defend their dissertation in English.

5.2. PhD Research Presentation and Discussion

This is a very international course: nearly all students (9 out of 11 in 2014) are from overseas and come from countries as diverse as Bolivia, Uganda, and Uzbekistan. Occasionally, they include a native English speaker. Students are in the second year of their studies and thus at a point in their careers where they have to present their research at international conferences. Therefore, the challenge is to integrate highly specialized science with highly specialized English. Our pedagogic solution is team-teaching by a Japanese medical science teacher and an EMP teacher (B.K.P.), who has long experience teaching scientific presentation skills, including to senior researchers.

Table 2. Graduate English Courses at the University of Tsukuba Medical Faculty

<table>
<thead>
<tr>
<th>Courses</th>
<th>Students</th>
<th>Elective/Compulsory</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>English for Medical Science and Technology</td>
<td>Master's students in Medical Sciences</td>
<td>Compulsory</td>
<td>Yearlong</td>
</tr>
<tr>
<td>PhD Research Presentation and Discussion</td>
<td>Doctoral students in Medical Sciences</td>
<td>Elective</td>
<td>Yearlong</td>
</tr>
<tr>
<td>Technical English in Medical Sciences</td>
<td>Doctoral students in Medical Sciences</td>
<td>Elective</td>
<td>Yearlong</td>
</tr>
</tbody>
</table>
The first half of the 12-week course starts with a lecture by the EMP teacher on presenting, questioning, and chairing. Then, each week an invited faculty member presents on his or her research, and students chair and ask questions. The EMP teacher corrects important errors in the students’ English and answers their many questions about the language.

The second half of the course starts with one lesson in which each student presents 2 slides and receives feedback on his or her presentation techniques and English. Thereafter, 3 students present per week, and feedback is given. This methodology of partnering a medical science teacher and an EMP teacher has proved to be very effective.

5.3. Technical English in Medical Sciences

This yearlong course is taught by an EMP teacher (F.M.). Students learn the principles of effective scientific writing, from the micro level of words, sentences, and paragraphs to the macro level of the IMRAD sections. This year, more than two-thirds of the students (11 of 15) are non-Japanese.

6. Faculty Development of English (FDE)

6.1. About FDE

To compete globally for students, a university needs faculty who can teach well in English. If they and/or their students are non-native speakers of English, it is necessary not only to support the English ability of the faculty, but also to research and practice strategies for English as a lingua franca in academic settings (ELFA). Therefore, the EMP teachers (T.M. and B.K.P.) read the literature, survey faculty and students about their experiences, and devise pedagogic strategies and practice tailored to their needs. This is part of the university’s campus-wide Faculty Development.

6.2. Monthly seminar

An EMP professor (B.K.P.) holds a monthly evening seminar for faculty members in which he leads discussion on relevant aspects of English and teaching. As a practice opportunity, each seminar one of the participants also does a short presentation-style lecture, which is videoed. The video is given to that presenter to study and to report on in the next seminar. The aim of the video component and the FDE in general is to encourage reflection on teaching in English and find practical answers to questions that arise.

6.3. Weekly 30-minute lesson

An EMP teacher (B.K.P.) provides a weekly 30-minute lunchtime lesson, mainly for faculty, initiating discussion on a variety of topics involving medical English and addressing important errors frequently made by this particular type of student. Busy faculty members find it convenient to “just drop in” for 30 minutes whenever they are able. Also, the brevity and variation in participants pushes up the energy level noticeably, creating a rewarding challenge for the instructor.

7. Overseas exchange programs

As part of the University of Tsukuba’s efforts to engage our students in the global community, the Medical Faculty organizes a number of collaborative programs with our partner universities overseas. Below is a list of those programs in which the EMP teachers are also involved in teaching activities.

<table>
<thead>
<tr>
<th>Program</th>
<th>Subject</th>
<th>Students</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Seminar</td>
<td>English and teaching, presentation</td>
<td>Medical Faculty</td>
<td>Yearlong</td>
</tr>
<tr>
<td>Weekly 30-minute lesson</td>
<td>Medical English</td>
<td>Medical Faculty</td>
<td>Yearlong</td>
</tr>
<tr>
<td>Lunchtime English Chat</td>
<td>General English conversation</td>
<td>Master’s students in Medical Sciences</td>
<td>Yearlong</td>
</tr>
</tbody>
</table>
7.2. Summer Research Program in Tsukuba

Since 2010, the Faculty of Medicine has hosted a 2-week summer school, now called the Summer Research Program in Tsukuba, for students from partner universities overseas. In 2014, 44 students came from France, Hungary, Indonesia, Taiwan, the UK, and Vietnam. They study in laboratories of their choice to conduct research in their field of interest. They also enjoy field trips and parties with the faculty’s students and professors.

The summer school climaxes in a presentation competition that simulates a conference. It is held in a state-of-the-art conference hall in front of fellow students, TAs, and teachers. Every participant gives an 8-minute oral presentation on his or her lab work followed by discussion. For this event, the participants are lectured and individually coached and rehearsed by an EMP teacher (T.M. or B.K.P.).

7.3. Molecular biology course at the Institute of Tropical Biology in Ho Chi Minh City

Since 2008, the Faculty of Medicine has sent a team annually to teach a 5-day intensive molecular biology course at the Institute of Tropical Biology in Ho Chi Minh City. The University of Tsukuba teachers give lectures, and the PhD and master’s students provide practical instruction in advanced laboratory techniques.

The course climaxes in a presentation competition that simulates a conference. From the start, the EMP teacher (B.K.P.) talks individually with the Vietnamese students, lectures on presenting, and coaches them in small groups. The Japanese students and faculty also help them prepare their presentations and the EMP teacher rehearses each one in the morning before the competition.

Prizes are awarded for best presenters, questioners, and answerers. Having English and presenting instruction integrated into this medical science course makes it more appealing for applicants, and the EMP teacher can support the students and professors who teach it.

7.4. Advanced molecular biology course at the University of Science, Ho Chi Minh City

In 2014, we started the 3-day intensive Advanced Molecular Biology Course at the University of Science in Ho Chi Minh City. Before the course, the Vietnamese students received a number of recent articles with comprehension questions from 3 medical science teachers. They sent back reports on the articles, giving the medical science teachers indications of their scientific proficiency and the 2 EMP teachers (T.M. and B.K.P.) indications of their English proficiency.

In Vietnam, the 3 medical science teachers each gave a lecture and led a group of students for 2 days through journal club discussion and chalk-talk sessions. The 2 EMP teachers assisted throughout and also gave an interactive lecture on presenting. All the teachers helped the students to prepare for small group presentations in a competition on the final day.

<table>
<thead>
<tr>
<th>Program</th>
<th>Subjects</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Research Program, Tsukuba</td>
<td>Clinical medicine, medical science, public health, nursing science, biology</td>
<td>10 days</td>
</tr>
<tr>
<td>Molecular Biology Course, Institute of Tropical Biology, Ho Chi Minh City</td>
<td>Molecular biology, scientific presentation in English</td>
<td>5 days</td>
</tr>
<tr>
<td>Advanced Molecular Biology Course, University of Science, Ho Chi Minh City</td>
<td>Molecular biology, scientific presentation in English</td>
<td>3 days</td>
</tr>
<tr>
<td>Tsukuba Global Science Week, Tsukuba (conference)</td>
<td>Medical science, public health, nursing science, biological science, sports science, food science, information science, politics, economics, humanities, the arts</td>
<td>3 days</td>
</tr>
</tbody>
</table>
7.5. Tsukuba Global Science Week

Since 2011, the Faculty of Medicine has held a conference every autumn in a conference venue in Tsukuba. In 2014, 1400 participants attended. Leaders in their fields from the University of Tsukuba and partner universities give presentations. Mini conferences in a growing number of diverse fields are held all over the conference venue. Student oral and poster presentation sessions are also held, with awards given. Both types of student presentations are judged by a faculty team, including the EMP teachers.

8. Future directions

A major weakness of the undergraduate medical degree course is that the EMP courses are all elective. Going forward, we hope to amend this credit system so that students must obtain a certain number of compulsory credits selected from the EMP courses to graduate.

Another goal is to increase the meaningfulness of the EMP courses by aligning them more closely with the medical courses so that they are offered within the same time frame and cover the same type of material. If in the process we can also initiate some kind of cooperation between the medical and EMP teachers in conducting these courses collaboratively, the overall program of learning for medical students at the University of Tsukuba will be considerably enhanced.

References
Submission Form

The undersigned authors submit the manuscript detailed below to the Editorial Board of the Journal of Medical English Education and request that it be considered for publication. If the manuscript is accepted, we agree to transfer copyright ownership to the Japan Society for Medical English Education.

Title 論文題名

Manuscript classification 分類（please circle 該当するのに〇印）:
1. Original article (research)
2. Original article (teaching methods)
3. Short communication (research)
4. Short communication (teaching methods)
5. Letter

Author(s) 著者
Name 氏名・Affiliation 所属

Signature 署名

Corresponding Author 通信著者
Name 氏名

Contact Address 連絡先・校正補送先

TEL FAX E-MAIL
日本医学英語教育学会
Japan Society for Medical English Education

入会のご案内

1. 下記のホームページで入会申し込みが可能です。
   <http://www.medicalview.co.jp/JASMEE/nyukai.shtml>

2. ゆうちょ銀行の振替口座（旧・郵便振替口座）に年会費を振り込んでください。
   [平成 26 年度年会費]
   個人会員 ￥9,000
   学生会員 ￥1,000
   賛助会員 ￥35,000
   [ゆうちょ銀行 振替口座]
   □座番号 00120 - 7 - 417619
   □座名称 日本医学英語教育学会

※ 入会申込書の受領ならびに年会費振込の確認をもって、入会手続きを完了とします。
※ 学生会員の年会費には会誌（年 3 回発行）の購読料が含まれておりませんのでご注意ください。
学生会員で会誌購入をご希望の場合は個別にお申し込みいただくことになります（1部 2,000 円）。

3. ご不明な点がございましたら、下記の事務局までお問い合わせください。

[問合せ先]
〒 162－0845
新宿区市場本町 2－30 メジカルビュー社内
日本医学英語教育学会 事務局（担当：江口）
TEL 03－5228－2274
FAX 03－5228－2062
E-MAIL jasmee@medicalview.co.jp
URL http://www.medicalview.co.jp/JASMEE/index.shtml

1. Prospective members can fill the forms and submit them online at:
   <http://www.medicalview.co.jp/JASMEE/nyukai_e.shtml>

2. Please transfer the Membership fee through the Japan Post Bank (post office).
   Annual fees are ¥9,000 for individual membership, ¥1,000 for student membership and ¥35,000 for supporting membership.

Japan Post Bank
Account No. 00120-7-417619,
Account Name “日本医学英語教育学会”.

Please note that individual membership fee includes three issues of the Journal, but that student membership fee does not include the journal which is available at an extra payment of ¥2,000 per issue.

3. Inquiries and postal applications, including application forms should be addressed to:

The JASMEE Secretariat (Attn: Mr. Junji Eguchi)
c/o Medical View
2-30 Ichigaya-hommuracho, Shinjuku-ku, Tokyo 162-0845, Japan
TEL +81-3-5228-2274
FAX +81-3-5228-2062
E-MAIL jasmee@medicalview.co.jp
URL http://www.medicalview.co.jp/JASMEE/index.shtml
Editor’s perspectives

5 Bumper issues

Timothy D. Minton

Chairman’s message

6 Journal of Medical English Education に期待する

My expectations of Journal of Medical English Education

Isao Date

Original articles

8 Greetings from the former chair

Shigeru Nishizawa

Volunteering as an aid to better EMP teaching: My experience as a hospital interpreter

Thomas Mayers

15 Assessing English needs of medical students using Can-Do statements: Responses of teachers

Shigeki Togawa

25 The efficacy of the etymological approach in English as a Foreign Language instruction for Japanese medical students

William Tait MacDonald

Conference plenary

The 17th JASME Academic Meeting (第17回日本医学英語教育学会)

Flaminia Miyamasu, et al

Special lecture (特別講演): Developing argumentation skills in English writing classes

Kyoko Oi

Dramatic: Medical student education in Japan: The students in question and their future

Judy Noguchi

Keynote lecture 1: Global language teaching trends and English for medical purposes

Judy Noguchi

Keynote lecture 2: Effective learning of foreign languages based on cerebral mechanisms

Judy Noguchi

EMP at work

63 University of Tsukuba Faculty of Medicine

Flaminia Miyamasu, et al