

Journal of Medical English Education

Vol. 7 No. 1, February 2008

Editor's Perspective: Can We Sharpen Our Journal-Reading Acuity? 6

Original Articles

Causative Language in Medical Context Masanori Kameda 13

医学論文における Reporting Verbs の用法 西村月満 19

Some Synonymous Expression and the Omission of Articles
in Medicine Kenji Sonoda 23

Problem-Based Learning in Medical Ethics to Integrate
Critical Thinking Ruri Ashida and J. Patrick Barron 30

A New Willingness-Based English Curriculum Versus
the Conventional Proficiency-Based Curriculum Midori Kimura 36

「対訳君」医学版の医学英語教育への応用 村田桂子, 平井由里子, 福島雅典 46
The Application of "Taiyaku-kun" in Medical English Education

新刊案内 53

特集：日本医学英語教育学会 第9回総会

【特別講演】The Current Situation of English for Medical Purposes
in China Bai Yongquan 55

【Symposium】米国留学準備教育 62

1. 海外臨床実習とその準備教育 松井秀親 62
Overseas Clinical Clerkship and English Education

2. 米国のレジデント研修に日本人医師が参加する方法 大石 実 66

Continuing Professional Education:
Some Little Words That Make Us Stumble 70

会告 Announcements 77

開催案内 Notices 77

Journal of Medical English Education

Vol. 7, No. 1, February 2008

Journal of Medical English Education, the official publication of The Japan Society for Medical English Education, was founded in 2000 for the purpose of international exchange of knowledge in the field of English education for medical purposes. For citation purposes, the registered name of the Journal replaced the dual name that had appeared on the cover before Vol. 6 No. 1. The *Journal of Medical English Education* is a continuation of Medical English, Journal of Medical English Education and is the registered name of the Journal.

Copyright © 2008 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 03-5228-2057 (outside Japan: +81-3-5228-2057)

FAX 03-5228-2062 (outside Japan: +81-3-5228-2062)

E-MAIL jasmee@medicalview.co.jp

WEBSITE <http://www.medicalview.co.jp/>

Published by Medical View Co., Ltd.

2-30 Ichigaya-hommuracho, Shinjuku-ku, Tokyo 162-0845, Japan

Journal of Medical English Education

The official journal of the Japan Society for Medical English Education

jasmee@medicalview.co.jp

Executive Chair, JASMEE Publications

大井静雄

Shizuo Oi, Tokyo

Editor-in-Chief

Nell L. Kennedy, Hokkaido

Associate Editor

Haruko Hishida, Tokyo

Assistant Editor

Hisashi Naito, Hokkaido

Editorial Executive Board

J. Patrick Barron, Tokyo	Tsutomu Saji, Tokyo	Reuben M. Gerling, Tokyo
Shigeru Nishizawa, Fukuoka	Masako Shimizu, Okayama	Chiharu Ando, Tochigi
Minoru Oishi, Tokyo	Toshimasa Yoshioka, Tokyo	Tsuneya Ohno, Tokyo
Masanori Kameda, Fukushima	Yasuko Iida, Saitama	Kazuhiro Hongo, Nagano

Editorial Advisory Board

Jeremy Williams, Chiba	Akira Takahashi, Miyagi	Christopher Holmes, Tokyo
Mitsuko Hirano, Shizuoka	Nakaya Saito, Hawaii USA	Hiroshi Ohtake, Kyoto
Toshio Oki, Shizuoka	Sachiko Ohtaki, Ishikawa	Kinko Tamamaki, Hyogo

Former Editor-in-Chief

大井静雄

Shizuo Oi, M.D., 2000–2004

Executive Adviser Emeritus

植村研一

Kenichi Uemura, M.D.

1. Article categories and *Journal* aims

Journal of Medical English Education, the official publication of the Japan Society for Medical English Education (JASMEE), is interested in articles on English education for medical purposes, including *clinical medicine, nursing, rehabilitation, dentistry, laboratory technician work*, research, and *international* medical activities such as reading and writing medical papers, making oral presentations, participating in forums, seminars, symposiums, workshops, international conferences, and continuing professional education. Categories are the *Special Article, Original Article, Short Communication*, and *Letter*. The Special Article is by invitation from the editor or is the address by a guest speaker or symposium participant at the annual JASMEE conference.

2. Preparing the manuscript

- 2.1. Articles may be submitted in English or Japanese.
- 2.2. The manuscript should be prepared on either Macintosh or Windows/DOS.
- 2.3. Use Page Layout *25-to-26 lines per A4 page, 12-point typeface* of a common font such as Times New Roman, Arial, Times, or Century. **Margins:**
Left 30 mm; **Right** 25 mm;
Top 30 mm; **Bottom** 25 mm.
Maximum length: about 20–24 pages, including the Title Page, text, figures, tables, and References.
- 2.4. *Number all pages consecutively*, beginning with the Title Page as p. 1 and including each page that has a Table or Figure.
- 2.5. Submit the manuscript in normal Page Layout *without the tracking protection tool*.
- 2.6. Do not use footnotes, op cit, or Ibid.

3. Title Page

Order of information on the Title Page:

- 3.1. A concise, informative title, centered near the top of the page. The 1st line of the title ought to be slightly longer than the 2nd line. Avoid abbreviations and formulae where possible. For example, *instead of SLA, write Second-language Acquisition*. A subtitle is seldom necessary, as the key information can usually be included in the base title.
- 3.2. Author names and affiliations. In the order agreed

upon by the authors, write the full names without academic degrees. Use asterisks to designate authors from more than one institution, as in 3.3 below; the asterisk goes AFTER the author's name and AFTER the comma. Example: Jun SUZUKI,* Arnold PALMER** and Helen KELLER*

- 3.3. Full names of the *institutions* and *departments* where the research was done, and City, and Prefecture (State and Nation if outside Japan). If authors are from different institutions, put one or more asterisks BEFORE the institution name. Example:
* ABC Medical University, English Department, Nanai, Hokkaido
** XYZ Medical University, School of Nursing, Gunma
- 3.4. *Keywords*. A maximum of six keywords or short phrases that would help in indexing the article.
- 3.5. *Corresponding author*. Name of the author (with job title, e.g., Professor, M.D.) who will handle correspondence throughout the editorial process; name the university and department affiliation, full address, telephone and fax numbers, and e-mail address.
- 3.6. *For all authors*, give the e-mail address, telephone and fax number.
- 3.7. If part of the paper was presented orally or as a poster at a meeting, then at the bottom of the Title Page put *the title of the meeting, sponsoring organization, exact date(s), and the city where the meeting was held*.

4. Abstract

- 4.1. A maximum of 250 words (about one A4-size page). May be in 11-point typeface if necessary, to contain the Abstract on a single page.
- 4.2. State the **background** in one or two sentences (see 6.3 below), **objective** of the investigation in one sentence, then describe the **Methods** (study design, study population, protocol) in the past tense; **Results** (main finding or major contribution) in the past tense; and finally the **Conclusion** (or recommendations) in the present tense. Be concrete and avoid saying merely, "... was investigated" or "This paper describes"

5. Text

- 5.1. Use either American or British English, but do not mix the two in the same article.
- 5.2. *Indent* the first line of each new paragraph.
- 5.3. *Abbreviations* should be kept to a minimum and spelled out at first mention, giving the full term first, followed by the abbreviation in parentheses. Example: *English as a foreign language (EFL)*. In both humanities and natural science, *e.g. (for example)* and *i.e. (that is, namely)* are preceded and followed by a comma. Standard metric units (*mm, cm, μL, L, mg*) can be used without definition but must be accompanied by a numeral; symbols and metric units do NOT take a period. Common units such as *sec, min, h* (units of time do not use the plural form) are used only in combination with a numeral. Example: *The test was 80 min long. But NOT "The test took several min."* NOT *"For most students, an h was enough time."* Abbreviations requiring a period are those that could be confused with an existing word, such as **in.** for *inch*, were it not for the period.
- 5.4. **Reference citation.** Cite each reference as a superscript number matching the number in the References section of your paper. The superscript citations usually appear, without parentheses, at the **end** of the sentence, the **end** of the paragraph, or the **end** of a quotation. If more than one is used, the superscripts are separated by a comma but no space. The superscript goes **AFTER** the comma or period.
- 5.5. Author-and-date citation in parenthesis, i.e., the Harvard system, known also as the American Psychological Association (APA) system, is **NOT** used in this *Journal* now.

6. Arrangement of the article

- 6.1. Divide your article into clearly defined and/or numbered sections. Subsections may be numbered 1.1 (then 1.1.1, 1.1.2) etc.
- 6.2. Each subsection should be given a short heading. Subsections are helpful for cross-referencing within the paper. Instead of just saying, "... as mentioned above," we try to guide the reader by saying "... as shown in 1.1.3 above" or "as aforementioned (1.1.3)," or "as explained under *Evaluation* above."

- 6.3. **Introduction.** First, give the general topic, or territory, of the research in one or two sentences. Example: *How to help students hone their English listening skills is a standing concern of teachers, and especially for those teaching medical students.* After that, explain your rationale and lead up to the problem the paper is addressing, then state *the objective of your research or of your classroom approach.* References are necessary in the Introduction, but subheads are not (if you think subheads are needed, your Introduction is probably too long).
- 6.4. **Methods.** In the past tense, briefly describe your study design or classroom trial succinctly. Tell explicitly what was done, how many students were involved, what academic year they were in, what materials were used, how much time the study took (from when to when, if appropriate). Subheads are helpful in lengthy Methods.
- 6.5. **Results. (Results and Discussion** may be a single division of the paper, depending on author's preference.) Although each result is stated in the past tense, the discussion and generalization of the results are in the present or present progressive tense.
- 6.6. **Conclusion.** The Conclusion is usually the last subdivision or final paragraph of the **Discussion**, but a separate Conclusion is permissible. The conclusion is NOT a repetition of the Results but a (present-tense) generalization derived from the results.
- 6.7. **Acknowledgments.** If you express appreciation to someone for help with the data collection, analysis, manuscript, or for a grant, a brief Acknowledgments section is appropriate between the main text of the paper and the References.
- 6.8. *Figure legends, tables, figures*—in that order—may be collated at the end of the article, provided the text is marked to indicate the approximate location where each figure and table is intended. At the TOP of each **table**, number the tables consecutively according to their order of mention in the text and make a short title for each. Place table footnotes immediately below the table. Vertical lines are not necessary inside the table except in special cases. For figures embedded in the text, put the figure number and legend BENEATH each **figure**.

7. References

7.1. Switch off any automated Reference Manager, such as EndNote, ProCite, or other software you may have used, thus allowing editors to make stylistic conformation of the References if necessary.

7.2. a. **Preferred order:** *Citation order (the Vancouver method, modified slightly)*. List the references according to *the order cited in your text*, putting the **family name** of the authors first, followed simply by the initial or initials of the person's name without punctuation (Examples 7.9 below).

b. **Alternative order:** *Alphabet and number*. The references may be listed *alphabetically*, provided the entries are also numbered consecutively. Although the citation order is preferred, *Journal of Medical English Education* currently allows either style as a way to meet the needs of the unique JASMEE blend of social science and natural science scholars.

7.3. **Journal article** (Example 1 below). **Author(s)**. **Year**. **Article title**. *Journal Name* **Volume (Issue number, optional)** **page numbers**. The article title is written in *lowercase* except for the first word and proper nouns. In the *Journal Title*, the first letter of each word is in *uppercase*, and the *Journal Title* is italicized. The full *Journal Title* is preferred. The word "Vol." does not appear but the volume number is in **boldface**, followed by a non-bold colon, then the page numbers. Caution: 5(1): 64–65 but NOT 64–5. Note: p. or pp. is NOT used in *Journal* entries.

7.4. **Book** (Example 2). **The Book Author(s) or Editor(s)**. **Year**. **Book Title**. **City: Publisher Name**, **p. number** (optional if several scattered portions were used).

7.5. **Book chapter** (Example 3). **The Chapter Author(s)**. **Chapter title**. **In: Editor Names (Eds.)** **Year**. **Book Title**. **City: Publisher Name**, **pp. numbers**. The chapter title is written in lowercase except for the first word and proper nouns, and is followed by **In: Book Title**. In the **Book Title**, uppercase is given to the first letter of each word except prepositions and articles, and *the Book title is italicized*. Page numbers for the full chapter are designated by **p.** or **pp.**

followed by the numbers. Caution: pp. 128–136 but NOT pp. 128–36.

7.6. Journal *articles* or book *chapters* having 7 or more authors may list the first 4 authors followed by et al.

7.7. Japanese references. **Preferred:** If your article is written in English, then in your References put the Japanese author names in Roman characters and paraphrase the title of the Article referred to. At the end, say *In Japanese* (Example 5). **Alternative:** Currently, the References may use either Japanese or Roman characters; even if you write the reference in Japanese characters (Example 6), enter it into the single list of References either by citation order or by alphabet and number.

7.8. Numbered references to personal communications, unpublished work, or manuscripts "in preparation" or "submitted" are unacceptable.

7.9. Examples:

1. Gledhill C. 2000. The discourse function of collocation in research article introductions. *English for Specific Purposes* 19: 115–136.
2. Sinclair JM. 1991. *Corpus, Concordance, Collocation*. Oxford: Oxford University Press. p. 78.
3. Nylenna M and Hagve TA. Small journals and non-English language journals. **In:** F. Godlee, T Jefferson (eds). 1999. *Peer Review in Health Sciences*. London: BMJ Books. pp. 112–121.
4. Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, and Richardson WS. 1999. Evidence-based medicine: What it is and what it isn't. <http://www.cebm.net/ebm_is_isnt.asp> (Accessed December, 2004).
5. Hishida H and Hirano M. 2003. Teaching material using Web site information on nursing. *Medical English* 4(2): 41–44. In Japanese.
6. 井上真紀, 佐藤利哉, 神田和幸. 2004. コミュニケーションから見た看護事情の改善の必要性. *Medical English* 5(1): 51–58.
7. SAS Use's Guide. 1989. 4th edn. Vol. 1, Version 6. Cary, NC: SAS Institute.

8. Submission of the paper

8.1. A manuscript will be considered for publication with the understanding that it is being submitted solely to the *Journal of Medical English Education*

and that all pertinent sources of support and information have been acknowledged. Submission of an article implies that the work has not been published elsewhere (except perhaps as an Abstract in a conference Program or Proceedings) and that the work does, in fact, belong to the author(s) named on the Title Page.

- 8.2. Submit the manuscript by e-mail attachment to <jasmee@medicalview.co.jp>.
- 8.3. If the manuscript cannot be sent by e-mail attachment, then send the file on CD or floppy disk accompanied by three sets of the printed manuscript, to:

**Editorial Section, *J Med Eng Educ*,
Medical View Co., Ltd.**
2-30 Ichigaya-honmuracho, Shinjuku-ku
Tokyo 162-0845, JAPAN
Phone +81-3-5228-2057 Fax +81-3-5228-2062
E-mail jasmee@medicalview.co.jp

These materials will not be returned unless a return envelope and sufficient postage are provided by the author(s).

- 8.4. The "Transfer of Copyright" must be signed by all authors and sent to the JASMEE office (8.3 above) by regular post. The *Consent of Submission* form appears near the end of this *Journal*.
- 8.5. The authors are responsible for obtaining written permission to reproduce materials that have been published or that involve the property or privacy of anyone other than the authors. Infringement or violation of rights includes the use of copyrighted materials such as figures or tables, the use of photographs that may identify an individual, and quotation of unpublished results or private communications.

9. Japanese Articles

When writing an article in Japanese, follow the English Guidelines in addition to providing English in 4 places: (1) Just beneath the Japanese title of the article, provide an **English Title**, (2) put the **Author Name(s)** in Roman characters under the Japanese Name(s), (3) name the **Institution and Department** in Roman characters just below the same author affiliations in Japanese, (4) provide

the **Abstract** in English only.

10. Student submissions

- 10.1. Articles prepared by students will be considered on a limited basis. All manuscripts are subject to the Guidelines for Authors, and the Title Page must include the name of a teacher, possibly a co-author, who will serve as the contact person throughout the editorial process. Provide e-mail addresses and telephone and fax numbers where the Editors might reach someone for consultation even after the student author has graduated.
- 10.2. WJEMA articles, speeches, presentations, debates, and short communications must include a Title Page listing a teacher and/or other contact person with e-mail addresses and telephone and fax numbers where the Editors might reach someone for consultation even though the student author may have graduated.

11. Review of Manuscripts

All manuscripts except Special Articles will be evaluated by 1 or 2 reviewers assigned by the Editors.

12. Proofreading

Galley proofs of accepted manuscripts will be sent to the authors shortly before publication of the *Journal*. Typographical errors and errors in the data will be corrected upon return of the proofs, preferably by e-mail attachment or fax, to the JASMEE Office.

13. Reprints

Reprints are available free of charge for 20 copies or fewer when ordered with the returning of the proofs. The cost of copies exceeding the first 20 will be charged to the author(s).

* *Guidelines for Authors* in both English and Japanese can be downloaded from the following webpage (本ガイドラインならびに日本語投稿用のガイドラインは、下記のホームページでもご覧いただけます) :
<<http://www.medicalview.co.jp/jasmee/journal.shtml>>

Editor's Perspective

Can We Sharpen Our Journal-Reading Acuity?

Do you *have fever*, *have a fever*, or *have a temperature*?

What is the difference between *have fever* and *have a fever*? Some JASMEE members were recently questioning when to say *fever* and when to say *a fever*. By coincidence, an article in this issue of the *Journal* provides a useful profile of *fever*, *flu*, *diagnose*, *diagnosis*, *operation*, *surgery*, and other common terms used at hospitals. Unfortunately, however, authors have to fit their work into the limited space available in the journal, and this limitation can place a heavy burden on the readers to evaluate for themselves the plausibility of the research findings and determine how to apply what the papers are saying.

Although the study on like expressions sheds light on the indefinite article *a* and the definite article *the*, it also raises critical questions about what comprises actual usage. The study is based on corpora of BNC Online and WordbanksOnline, but big questions arise over whether the results of the search really support the author's conclusions and whether the conclusions alone are reliable without discussion. The author rightly draws the conclusion that in the usage for *have a temperature*, the article *a* is usually not omitted. The qualm I have with this statement is that unless further explanation is made, such generalization could become a stumbling block for readers caught off guard and for those who would mimic the usage when writing a medical research paper. The American Medical Association (AMA) cautions that *have a temperature* is not interchangeable with *have a fever* or *have fever*, because every living person has a temperature, either normal or abnormal, whereas *fever* is the correct word for denoting an abnormally high temperature (see Continuing Professional Education, Part 2 No. 13). Therefore, we can say the patient *has a temperature of 39.8°C* but we cannot say the patient *has a fever of 39.8°C*. The sample cited in the article, however, *I've got a temperature*, disregards the AMA standard altogether and does not disclose the contexts in which the expression was used. Studies on corpora usually identify the target sources of the search, for example, 750 abstracts in medical journals published between 2000 and 2008, or 250 full papers published on orthopedic arthroplasty between 1990 and 2007. *I've got a temperature* sounds as if it came from a movie or maybe from a patient-and-doctor dialogue or patient-and-nurse dialogue. If our readers were to adapt this expression for use in a formal research paper such as a clinical trial, e.g., *the patient presented with a temperature*, the statement would be meaningless and would betray the user's ability in the language. Ultimately, the burdens of discernment and practical application lie on each reader.

Another question is raised by the conclusion that *have a fever* is used almost five times as often as *have fever*. If that is a global generalization, then why do we repeatedly run into *have fever* in the *New England Journal of Medicine*, which is one of the world's prestigious standard bearers for what constitutes a reliable medical paper? In clinical trials and case studies reported by eminent physicians from countries around the world, almost never does *have a fever* appear in *N Eng J Med*, whereas *have fever* appears in almost all 52 issues the year round. The study in our present issue of *Journal of Medical English Education* is based on 24 hits for *have fever* and 5 hits for *have a fever*. Rather than stopping short by summarizing the results of 29 samples, most of which were from a single European country, adding an informative discussion would have attached immense value to the paper. A discussion could have mentioned the AMA guideline for *have a temperature* versus *have a fever*, thereby helping readers grasp the recommended usage and avert attempts to mimic unnatural terms in their own formal research papers as well as in the hospital setting. In any research paper, an insightful discussion generally adds a wider view and helps the reader apply the principles that have been found. No article can single-handedly cover every angle and every situation, but the discussion can help the readers examine the results from various vantage points.

A random sampling of *have fever*, independent of the article *a*, could sharpen our reading acuity and broaden our professional experiences, as suggested by these samples:

- The patient had a 1-month history of *slight fever*, before which she had been well [*N Eng J Med* (2006) 355(23):2467].
- A 67-year-old man presented with a 1.5-year history of persistent cough with secretions, progressive shortness of breath, sore throat, bloated stomach, *low-grade fever*, malaise, and weight loss [*N Eng J Med* (2008) 358(5):536–537].
- Evidence supporting the pivotal role of FDG-PET in the diagnosis of *fever of unknown origin* is increasing steadily [*N Eng J Med* (2008) 358(5):536–537].

In other instances, we could expect to find *a high fever*, *a low fever*, *a persistent fever*, in which a qualifier combines comfortably with *a fever*. We call on you the reader to test what you read. The essential testing ground for any term is the reader's usage in practical situations. The more one understands, the easier it is to see more profound problems and arrive at new solutions. Anyone who wants to become a responsible writer must first become a responsible (response + ible) reader.

Caring, communication, and professionalism in this issue

One of the hallmarks of the papers in this issue of the *Journal* is the warm, caring attitude of the authors. All are obviously putting out great effort to make English classes interesting to the students, manageable for the teachers, and meaningful to their respective universities and specific to the needs of the students of the various departments. This sort of tender loving care (*TLC*) goes a long way toward achieving one of the highest goals of JASMEE, i.e., the betterment of healthcare worldwide.

Because excellence in communication is one of the cornerstones of professionalism, we have wanted *J Med Eng Educ*, the flagship journal of JASMEE, to be synonymous with good writing and clear communication. To that end, the first few papers in this issue deal with the close relationship between reading and writing, including the first article, which centers on precision, exactness, and subtleties of the language; another pays special attention to medical-related ethics in English; and all contribute something profoundly concrete and valuable to the teaching/learning environment. I wish the minister of Education, Science and Technology would read these articles. Advances in the quality and thematic variety of the papers are testament to the drive and relentless effort of the authors to build up the communication skills of today's students. With the cutting-edge English skills and medical competence these students are acquiring, tomorrow's healthcare professionals will surely be better equipped to face the abrasive juxtaposition of life's experiences in the clinical setting as well as in the politico-social arena.

The *J Med Eng Educ* is showing some promising growth trends. First, more and more authors are bravely submitting papers written in English. This is a strong sign that they are willing to use the real language in actual professional and practical situations rather than just study it or theorize the principles. Remember 25 years ago when a lot of English classes used to be more "about" English than really using or applying the language? Second, but equally important, the *Journal* papers are coming to be more in line with the unique needs and nature of the JASMEE hybrid membership, which comprises a constituency of natural scientists on the one hand and a constituency of English teachers on the other. Rather than submitting an essay that uses *Ibid* and *op cit* in the References, the language teachers are willing to adjust their papers to a modified IMRD structure instead of holding fast to the essay line, thus making the papers comfortable for members in either constituency to read. The near-IMRD format contributes noticeably to the overall aims and unity of the *J Med Eng Educ*.

Can we say *very fun*, *very worse*, *very sealed*?

Admittedly, the *Journal* is still going through some growing pains. We get inundated with overuse of the pedantic *should*, the adverb *very*, and the catchall *etc*. Nothing is intrinsically wrong with any of these terms, but confronting them over and over in almost every manuscript submitted, we do grow

weariness and, as a result, risk misinterpreting what the author is really saying. Used unnecessarily, *teachers should* begins to get preachy, so we brainstorm with the authors to come up with alternative wording in certain spots as a way of keeping the readers engaged in the message of each paper rather than distracted by the style. The adverb *very* gets stuck into odd combinations such as these: *the lesson should be very fun, they felt very cheated, their scores were very worse, the reactions were very different, we kept the examinations very sealed*. If *very* is truly helpful, use it; if emphasis is necessary, would another word work better, e.g., *a very strong contender for ...* would probably not engage the reader as effectively as *an increasingly strong contender for*. Challenging ourselves to jot down 20 or more possible substitutes for *very* might prove fruitful as well as fun. The abbreviation *etc* almost never appears in the top medical journals, but papers submitted to our *J Med Eng Educ* often use the term unnecessarily (see Continuing Professional Education, Part 2 No. 6) and, in formal papers, switching to *et cetera* or *and so on* does nothing but exacerbate the condition.

In Conference Proceedings, we wish the symposium had recommended some journal articles whereby we might glean further understanding of the clinical clerkships. Journals are wise teachers. For the perusal of anyone interested in the ongoing debate over whether the clinical clerkships ought to keep their participants in a single specialized discipline or to keep rotating them through several unrelated specialties, we offer two quick reads, including a short editorial and a Sounding Board article that lists 55 references:

- Irby DM. 2007. Educational continuity in clinical clerkships (editorial). *N Eng J Med* 356(8): 856–857.
- Hirsh DA, Ogur B, Thibault GE, and Cox M. 2007. “Continuity” as an organizing principle for clinical education reform (a Sounding Board article). *N Eng J Med* 356(8):858–866.

We have had fun editing the *Journal of Medical English Education*. Through the years, each and every growing pain along the way has played a pivotal role in making this JASMEE flagship *Journal* a creditable publication with scholarly and informative articles. We truly appreciate the ardor with which both new and repeating authors have responded to our Call for Papers, and we are exceedingly grateful to our predecessor, Dr. Shizuo Oi, who was the founding editor of the journal, to the Board of Directors for their encouraging support and cooperation, to the behind-the-scenes persons who painstakingly transcribed conference tapes, and to each and every reviewer. We count it a privilege to have served as the editors and to work with Medical View in the shaping and continuation of the *Journal*.

Two special requests

Finally, to all, we have two special requests:

1. Keep up the good work you have started, enlivening your writing, sharpening your journal-reading

acumen, and keeping the *J Med Eng Educ* moving forward.

2. When abbreviating the name of this *Journal*, please use *J Med Eng Educ* and do not ever give this flagship *Journal* the flippant nickname "jamee." Not only would such a nickname label the *Journal* with the unwanted image of a bashful boy named Jamie who never grows up but, more importantly, no reader living abroad could possibly imagine what such an acronym stands for. As JASMEE continues to grow and reach out to future needs, particularly the eradication of diseases and the betterment of health worldwide, the *J Med Eng Educ* could someday reach international status. In addition, we truly hope the minister of Education, Science and Technology will someday read the *Journal* and get ideas for improving English education or call on some of us in JASMEE to offer concrete and workable solutions to problems the ministry faces. However, if the *Journal* ever happened to get stuck with a disrespectful nickname such as "jamee," it would be impossible for anyone in the Ministry of Education, Science and Technology to connect the journal with an Academic Association of such serious aims as those of JASMEE. So far, two e-mail attachments named "jamee" have arrived at the editor's desktop, but I quickly renamed them on my computer because the *J Med Eng Educ* has worked hard to attain and maintain the scholarly, creditable status deserved by the authors and other contributors through the years.

We invite reader feedback.

The *J Med Eng Educ* is receiving new submissions now for consideration and scheduling in the forthcoming issue. Use the <jasmee@medicalview.co.jp> e-mail address please.

Nell Kennedy, Editor-in-Chief

Haruko Hishida, Associate Editor

e-mail: jasmee@medicalview.co.jp

kennedy@rakuno.ac.jp

haruko-hishida@slcn.ac.jp

Abbreviations and Acronyms Occurring in Studies on English Education

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

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

Boldface indicates terms sometimes found in *Journal of Medical English Education*.

This list was compiled by the editors.

*Causative Language in Medical Context**

Masanori Kameda

Division of Integrated Arts and Sciences, Fukushima Medical School, JAPAN

The purpose of this article is to elucidate the characteristics and practical usage of causative language especially focusing on the causative verb *cause* and the causal connective *because* that are so frequently used in medical contexts and that are of crucial importance for understanding medical English as the language of science. The necessary procedures I have taken to accomplish this purpose are (1) to analyze some logico-linguistic characteristics of the causative verb *cause*, referring to its use in medical statements; (2) to illuminate the reason why we confuse causal statements with logically necessary statements; (3) to seek possible ways of translating, or interpreting, causal statements into some other semantically equivalent medical statements; and (4) to show that there are basically two ways of using the causal connective *because* in medical context along with the results of contemporary logico-linguistic studies. The results of the study show that causative language is inextricably interwoven with scientific thinking/logic of the causal relation. Using causative language, therefore, is full of difficulties unless the user is well-trained scientifically and well versed in scientific statements.

J Med Eng Educ (2008) 7(1): 13–18

Key Words: causative language, *cause* (causative verb), *because* (causal connective), logico-linguistic analysis

1. Introduction

The characteristics of scientific discourse ... are not arbitrary. They evolved to meet the needs of scientific method and of *scientific argument* and theory. They suit the expert; and by the same token they cause difficulty to the novice. In that respect, learning science is the same thing as learning the language of science. Students have to master these difficulties; but in doing so they are also mastering scientific concepts and principles.¹

One of the key characteristics of scientific discourse that plays a key role in meeting the need of scientific argument is the use of causative language. Causative language is varied and is frequently used in medical English

as the language of science because much of medical thinking involves questions of causality. However, do we really know how, why and what causative language should be used in a given medical context? The present article, especially focusing on fine-tuned examples of the causative verb *cause* and causal connective *because*, illustrates the logico-linguistic characteristics and practical usages of these terms in medical contexts.

2. Characteristics and Usage of the Causative Verb *Cause* in Medical English

The causative verb *cause*, in general, means to *make something happen, especially something bad* in a medical context such as *A protein gets into animal cells and attacks other proteins, causing disease to spread* and *Most heart attacks are caused by blood clots*;^{2,3} and used in formal scientific and technical descriptions.⁴ The verb *cause* is employed in a much more elaborate syntactic style of medical statement than other causative verbs such as *make, let, have, and get*, and therefore is used preferentially in medical writings. For example, in the medical statement **1.0** below, *cause* specifies the relationship between *a virus* and *pneumonia*:

Corresponding author:

Masanori Kameda

Professor in Foreign Languages

Division of Integrated Arts and Sciences

Fukushima Medical School

1 Hikarigaoka, Fukushima, 960–1295 JAPAN

Telephone and Fax: +81–24–547–1840

E-mail: albertm@fmu.ac.jp

*This paper was originally given at *2006 International Symposium on English for Medical Purposes* (Beijing, China. July 18–19, 2006) under the title “Some Types and the Usages of *Causative Language*: A Logico-linguistic Approach.”

1.0 A virus *causes* pneumonia.

Here, the causative verb *cause* shows that the association between a virus and pneumonia is *definitely causal*.⁵ That is, if a virus, which has the role of external causer in this medical statement, *causes* pneumonia (effect), it implies that the virus exists earlier than the pneumonia. In this case, the external causer, *a virus* in **1.0** “expresses the unwitting (generally inanimate) cause of an event.”⁶ The temporal relationship between *a virus* and *pneumonia* in **1.0** will be, using Davidson’s idea of causal connections, expressed as follows:

1.0a There exist time t^1 and t^2 such that a virus exists at t^1 , a virus causes pneumonia at t^2 , and t^1 preceded t^2 .⁷

Thus, when stating that something scientifically observable or confirmable is a particular cause between two entities such as in **1.0**, then *cause* is used preferentially in medical writings for its logico-linguistic precision. If the sentence uses the existential quantifier (\exists) that reads *there is at least one thing*, the logico-linguistic connection that is latent in **1.0** will emerge:

1.0b $\exists x [x \text{ is a virus} \rightarrow x \text{ causes pneumonia}]$

This reads that there is at least one virus that *causes* pneumonia. A predicate interpretation of **1.0** will be: $\exists x [Vx \rightarrow Cxp]$, where V , C and p mean virus, causes and pneumonia, respectively. In this logico-linguistic form, \rightarrow stands for sentential connective/conjunction.

Certainly, we can see that there is another possible way to analyze the logico-linguistic structure of **1.0**. **1.0**, in which the causative verb *cause* is used as an event type verb, has a logico-linguistic structure $[\phi \text{ cause } \varphi]$ where ϕ and φ are sentences. Since “in most cases ϕ is a becoming-sentence or one that contains an activity predicate, and φ is a becoming sentence,”⁸ then **1.0** is considered to have the logical structure of **1.0c** below:

1.0c [A virus does something] CAUSE [BECOME (pneumonia occurs)]

However, it is clear that **1.0c** is logico-linguistically not so informative as **1.0b**. **1.0c**, in actuality, does not show us scientific characteristics of the medical statement **1.0**. What the logico-linguistic form of **1.0b** shows is that **1.0**, in which the association between a virus and pneumonia is *definitely causal* is true only when ‘ x is a

virus’ is true and ‘ x causes pneumonia’ is true. This means that **1.0** is semantically true in *some* possible medical conditions and false in others.

Readers and writers who are not scientifically well-trained often confuse a logically possible medical statement with a logically necessary statement. The following **1.01** and **1.02** are, for example, logically necessary medical statements:

1.01 Either she is sane or she is not sane.

1.02 Nothing can be chickenpox and not chickenpox at the same time.

Suppose p stands for *she is sane*, then the logico-linguistic form of **1.01** will be:

1.011 $p \vee \neg p$

In this logico-linguistic form, \vee is a logical symbol for *or*, and \neg for *not*.

The logico-linguistic form **1.011** shows that **1.01** is semantically true precisely if *Either she is sane or she is not sane is true* in *every* possible medical condition. How about **1.02**? Suppose q stands for *There is something that is chickenpox*, then its logico-linguistic form will be:

1.021 $\neg (p \wedge \neg p)$

1.021 also shows that **1.02** is also semantically true if it is true in every possible medical condition. This discloses that necessary true statements such as **1.01** and **1.02** are scientifically non-refutable and necessarily *uninformative*,⁹ that is, they provide nothing useful, or no valuable medical information.

Logical possibility versus logical necessity

Most medical statements, in so far as they are within the category of natural science, are *unnecessary* ones, or *contingent*.⁹ Nevertheless, as mentioned above, those who cannot make a clear distinction between logical possibility and logical necessity regard **1.0** (a virus causes pneumonia) as a logically necessary medical statement. The reason is simple: they think that when the cause, *a virus*, brings about the effect *pneumonia*, there must be a logically necessary connection between them. In that case, the logico-linguistic form of **1.0** they adopt, for example, will be as follows:

1.0d If there is the case that a virus exists, then there is the case that pneumonia also exists. This should be logically equivalent to *If there is not the case that pneumonia*

Much of medical thinking involves questions of causality.

is, then there is not the case that a virus exists.

However, a problem of *asymmetry* of cause and effect arises from the logico-linguistic form **1.0d**; as Hanson points out, “We certainly do not think that effects explain causes in the way in which causes explain effects.”⁹ According to Hanson:

The asymmetry is this: “Why” questions are answered only by reference to causes, not by reference to effects. (For example), the *wound* explains both the pain and the scar. The wound and the pain are both inferrable precursors of the scar. But only one of them is the cause of the scar. From both the wound and the pain, we can infer the scar. But the pain does not explain the scar as the wound does.⁹

So, considering the case of **1.0d**, we could conclude that a virus may be the cause of pneumonia, but we should not normally regard the fact that the non-occurrence of pneumonia is a cause of the absence of a virus.¹⁰ This logical reasoning confirms that **1.0** is not a logically necessary medical statement but a logically possible medical statement. **1.0** is semantically true in some possible medical conditions and false in others, because there is a possibility that anti-cancer drugs, interferon, chlamydia, mycosis, and other influences, also may cause pneumonia.

Modal auxiliary verb *must*

From this reasoning, the following two interpretations of **1.0**, in which the modal auxiliary verb *must* is used in an epistemic sense to express a logical necessity, are not easily acceptable unless they are used in a *pragmatic sense* in a clinical scene. Imagine a medical scene in which a doctor tells his/her client about the diagnosis of pneumonia that is very likely caused by a virus.

1.04

Doctor: A virus *must* cause pneumonia / A virus *must* be the cause of pneumonia.

Client: Are you sure?

Modal qualifier *can*

Next, let us examine the following causative medical statements (**1.1** and **1.2**) in which the modal qualifier *can* is employed and see what is really stated in them from a logico-linguistic point of view.

1.1 High-fat diets can cause heart disease.⁴

1.2 Viruses can cause huge numbers of deaths.

It is evident that both **1.1** and **1.2** are empirically possible medical statements. We need to grasp, however, what they state more precisely: (a) *what* the modal qualifier (modal auxiliary verb) *can*, which is employed to mark the degree of possibility or certainty of those medical statements, implies and (b) *what* the plural forms of the subject words *high-fat diets* and *viruses* imply. Syntactically, *can* belongs to the category of modal verbs, but logico-linguistically I call it a *modal qualifier* that marks the degree and kind of certainty of what medical statements state.¹¹

Considering (a), that is, what the semantic domain the modal qualifier *can* indicates, it is clear that **1.1** does not state that high-fat diets are the only cause of heart disease but a major cause of heart diseases; and likewise, **1.2** does not state that viruses are the only cause of huge numbers of deaths but a major cause of huge numbers of deaths.

Considering (b) in relation to (a), it is not certain what the plural form of the subject *high-fat diets* in **1.1** and *viruses* in **1.2** indicate concretely. We know that there is more than one high-fat diet that can cause heart disease and more than one virus that can cause huge numbers of deaths but we do not know *what kind of high-fat diets* can cause heart disease and *what kind of viruses* can cause huge numbers of deaths. It is also not clear whether the plural form of the subject *high-fat diets* in **1.1** and *viruses* in **1.2** mean *every* high-fat diet or *all* high-fat diets and *every* virus or *all* viruses that are logico-linguistically expressed by the *universal quantifier* (). This is, after all, because of what the lexical ambiguities of those plural forms of subject words mean. So it is *inappropriate* to form the logico-linguistic structures of **1.1** and **1.2** as follows:

1.11 x [x is a high-fat diet x causes heart disease] (For every/all of x , if x is a high-fat diet, x can cause heart disease.)

1.21 x [x is a virus x causes huge numbers of deaths] (For every/all of x , if x is a virus, x can cause huge numbers of deaths. In this logico-linguistic form, can is a possibility operator.

Consequently, both **1.1** and **1.2** that contain lexical ambiguities can be translated merely into the following possible medical statements:

1.111 It is possible that high-fat diets *cause* heart disease.

1.211 It is possible that viruses *cause* huge numbers of deaths.

3. Translatability of the Causative Verb Cause into Other Causative Language

Causative language in the forms of verbs and phrasal verbs is, in general, categorized into three types:

- (1) to cause something to happen (*make, cause, lead to, result in, create, bring about, give rise to, generate, be responsible for, set off, trigger*),
- (2) to say that something is caused by other things (*be caused by, be the result of/ result from, arise from, stem from*) and
- (3) to be one of the things that cause something to happen (*play a part, be a factor, contribute to, influence*).⁴

So **1.0**, **1.1** and **1.2** (mentioned heretofore) belong to category (1). However, there is a causative medical statement we logico-linguistically cannot consider the same way as we did **1.0**, **1.1** and **1.2**: it is a medical statement that concerns a *genetic account* such as **1.3**.

1.3 A cancer is caused by DNA abnormalities.

This medical statement belongs to category (2). Though both **1.1** and **1.2** simply state the *efficient cause* of heart disease and huge number of deaths, what **1.3** states is that DNA abnormalities are both *efficient cause* and *ultimate cause*, 'a forward-looking present purpose of DNA abnormalities that reflects the present state of a human organism.'¹² Logico-linguistically the medical statement **1.3** refers to a *genetic account* that concerns a future event based on the present state of a human organism. This is the dimension which gives us the ground for translating **1.3** into other medical statements that state actually possible medical conditions in future time such as:

1.31 A cancer is the result of DNA abnormalities.

[N of N]

1.32 A cancer results from DNA abnormalities.

[V from N]

1.33 A cancer arises from DNA abnormalities.

[V from N]

1.34 A cancer stems from DNA abnormalities.

[V from N]

The phrasal verbs *result from* (**1.32**), *arise from* (**1.33**) and *stem from* (**1.34**), as well as, *be responsible for, result in, lead to, bring about*, are syntactically not categorized as causative language, but pragmatically they are used in a causative sense.

1.31 and **1.32** mean that cancer appears/starts because of DNA abnormalities that happened first. **1.33**

means that a cancer arises from DNA abnormalities or starts/appears because of it. **1.34** means that a cancer develops from DNA abnormalities and that there is a direct link between DNA abnormalities (causes) and a cancer (effect/result), even though this link is not always immediately obvious.⁴ The relationship between DNA abnormalities (causes) and a cancer (effect/result) stated in **1.3** becomes more ambiguous in the medical statement **1.35** below:

1.35 DNA abnormalities play a part in the aetiology of a cancer.

Aetiology is said to be "a branch of medical science which investigates the causes and origin of a disease; the scientific exposition of the origin of any disease,"¹³ or "aetiology of a disease or problem is the study of its causes."² As Goodman and Edwards point out, however, "aetiology is not the cause itself. The word *aetiology* does not get used much for its strict meaning."⁵ This turns out to be true in **1.35**, because what **1.35** states is that DNA abnormalities are, unlike what **1.31** to **1.34** state, not direct causes of cancer: it states that DNA abnormalities are nothing but a part of the main causes of cancer.

On the other hand, considering that 'temporal and causal-conditional clause complexes are formed with *when, if, because*,'¹ it may be possible to translate **1.3** (A cancer is caused by DNA abnormalities) as follows:

1.36 If there are DNA abnormalities (that reflect the present state of a human organism), there is a possibility that they will give rise to a cancer in future time.

Here, *give rise to* is a formal phrase and is used when an event or action makes a feeling or problem start to exist.

How about the medical statement **1.4** below? What does the relational verb *be associated with* mean? Does it mean *caused by* or does it mean *cause*?¹⁴

1.4 Epstein-Barr virus (EBV) is associated with a high incidence of lymphomas in people with HIV and people who have taken drugs to suppress their immune system after undergoing organ transplants.¹⁵

This is a typical example of academic prose frequently employed by medical scientists but containing some logi-

co-linguistic ambiguities. In actuality, as I pointed out in *Logico-linguistic analysis of medical English* (2005),¹⁴ what the relational verb *be associated with* means is often indeterminate.

To make things more perspicuous, suppose *P* stands for *Epstein-Barr virus (EBV)* and *Q* for *a high incidence of lymphomas in people with HIV and people who have taken drugs to suppress their immune system after undergoing organ transplant*. Then we can more clearly state what is latent in the medical statement 1.4: in comparison with the medical statements 1.0 to 1.3, it is not clear whether 1.4 means that *P* is *caused by Q* or whether *P* *causes Q*. Does 1.4 state that *P* and *Q* are connected because they might happen together? This is not clear either. That is why the author used the relational verb *be associated with*: he or she was *wary of ascribing causation without good evidence*.⁵ And it is natural that we logically cannot state that *P* occurs earlier than *Q* occurs but also that *P* is always present if *Q* is. Therefore, in present medical conditions, we cannot translate 1.4 into other medical statements whose semantic domain is the same as 1.4.

3.1 Characteristics and Usage of Causal Connectives that Function as Adverbial Phrases in Medical English

Causal connectives generally encountered are these: *because, as, since, that, now (now that) and for*. However, given the logico-linguistic accuracy and practical usages of these causal connectives, *because* has a much more elaborate syntactic style of medical English than other causal connectives. Goodman and Edwards noted that, in practical usage, the causative connectives *as, since, for, due to, owing to, by reason of (the fact that), in view of (the fact that) and the reason is because (of) the fact that* are all variations of *because*.⁵ In addition, they said:

We have the impression that *because* is gradually disappearing from medical writing. Could this be because it incorporates the terrible word *cause*? Causation in attributing causality may be praiseworthy in any science but using *because* does not imply anything but a most general type of this attribution. And anyway *all the alternatives do the same, but less accurately or more euphemistically*.⁵

Goodman and Edwards maintain that *because* should

be given priority over other causal connectives that might produce linguistic ambiguities and is used preferentially in medical writing.⁵ For example, in what sense is *because* used in medical statement 2.0 below?

2.0 Toxemia of pregnancy is called the disease of theories because, over decades of research, numerous causes have been proposed but none proved.¹⁶

In this medical statement, the syntactic function of the causal connective *because* (clause) is not only to introduce a *subordinate idea to the main clause* but also to give a *reason* (evidence) for believing that toxemia of pregnancy is called the disease of theories.¹⁷ Grammatically, there is a temporal sequence such that the medical condition in the subordinate clause precedes in time that of the matrix clause of 2.0.⁶ So we will be able to translate 2.0 into the following medical statement (2.01) that expresses the author's inference of a connection between the reason and the consequence of 2.0:⁶

2.01 The reason that toxemia of pregnancy is called the disease of theories is that over decades of research numerous causes have been proposed but none proved.

The reason why the causative connective *because* in 2.0 does not mean a *causal explanation* can be explained by the sentence structure of 2.0 itself: the subordinate clause '*because, over decades of research, numerous causes have been proposed but none proved*' is not the cause of the event in the main clause, "Toxemia of pregnancy is called the disease of theories."

In the following set of medical statements, however, the *because* clause is giving a *reason* why the cells in our bodies inevitably acquire change in their DNA, but the clause is not telling us what causes the cells in our bodies to inevitably acquire change in their DNA:

2.1 Over time, the cells in our bodies inevitably acquire changes in their DNA. Partly, this is *because* they are being continuously bombarded by external factors, such as chemicals, radiation and viruses; and partly, it is because mistakes occasionally occur during the process of cell division.¹⁵

Suppose *P* stands for *The cells are being continuously bombarded by external factors, such as chemicals, radiation and viruses over time*; *Q* for *Mistakes very occasionally occur during the process of cell division*; and *R* for *The cells in our bodies inevitably acquire changes in their DNA*. Then we can see that what **2.1** states is not only a causal explanation but also an inter-subjectively observable and empirically possible truth. It is a causal explanation in that *P* and *Q* cause *R* will be translatable into “The cause for the cells in our bodies inevitably acquiring changes in their DNA over time is that they are being continuously bombarded by external factors such as chemicals, radiation and viruses and because mistakes occasionally occur during the process of cell division.”⁶ At the same time, **2.1** is an inter-subjectively observable and empirically possible truth, as shown by the logico-linguistic form **2.11** below:

2.11 *P* and *Q*, that is why *R*.¹⁸

2.11 shows that when our reasoning is about a *causal explanation*, we sometimes signal this by saying *explains why, that is why, and the causes are*.¹⁸ That is not all; through **2.11** we are able to discern that there is an *evidential connection*¹⁹ among *P*, *Q* and *R* in **2.1**:

2.12 $\neg (P \rightarrow Q) \rightarrow \neg R$ (If *P* \rightarrow *Q* were not true, *R* would not hold.)

The mood of the verb in **2.12** is *subjunctive*, expressing a *logical possibility and a hypothesis in some possible medical condition*; and, in that sense, **2.12** provides a rule for anticipation of inter-subjectively agreeable scientific confirmation or refutation.¹¹ **2.12** is therefore a good example that shows how medical statements and reasoning employed in medical articles deeply concern semantics rather than grammar.

4. Conclusion

In conclusion, the present study bears out the urgency of understanding the characteristics and practical usage of the causative verb *cause* and of the causal connective *because* in medical contexts if we are to understand the precision of the science as readers or to convey the precision intended as writers. Causative language is inextricably interwoven with scientific thinking and with the logic of the causal relation.

ACKNOWLEDGMENTS

I am very grateful to Dr. Nell L. Kennedy for her insightful comments and valuable suggestions on the earlier version of this paper.

References

- Halliday MAK. 1989. *The Language of Science*. New York: Continuum. pp. 144, 178.
- Collins-Cobuild Advanced Learner's English Dictionary*. 2003. Glasgow: HarperCollins. p. 215. modified, 483.
- Cambridge Advanced Learner's Dictionary*. 2003. Cambridge: Cambridge Univ Press. p. 235.
- Longman Exams Dictionary*. 2006. Sussex: Pearson Longman. WH62.
- Goodman NV, Edwards MB. 1999. *Medical Writing: A Prescription for Clarity*. Cambridge: Cambridge Univ Press. pp. 92, 94, 110–113.
- Quirk R, Greenbaum S, Leech G, and Svartvik J. 1985. *A Comprehensive Grammar of the English Language*. London: Longman. 10.21, 15.45(a) (b)
- Davidson D. 2001. *Causal Relations. Essays on Actions and Events*. Oxford: Oxford Univ Press. p. 154.
- Abusch D. 1986. *Verbs of Change, Causation, and Time*. Center for the Study of Language and Information: Leland Stanford Junior Univ. pp. 9–10.
- Hanson NR. 1969. *Perception and Discovery: An Introduction to Scientific Inquiry*. San Francisco: Freeman, Cooper & Company. pp.18–19, 38, 296.
- Wright GH von.1993. On the Logic of the Causal Relation. *Causation*. (E Sosa and M Tooley, eds), Oxford: Oxford Univ Press. p.107.
- Kameda M. 2007. Logico-linguistic functions of the *Modal Qualifiers* and the *Reason and Conclusion Indicators* in medical English: A study of medical English as the Language of Science. *J Med Eng Educ* 6(2): 11–21.
- Quine WVO and Ullian JS. 1978. *The Web of Belief*. New York: Random House. p. 116.
- The Oxford English Dictionary*. 2nd edition. 2001. Oxford: Clarendon Press. Vol. I. p. 207.
- Kameda M. 2005. Logico-linguistic analysis of medical English. *Sino-US English Teaching* 2(5): pp. 57–58.
- Jeremy S. 2005. Microbiology, Viruses and Their Threats: *In Conversation with Dorothy Crawford. What Scientists Think*. London and New York: Routledge. pp. 103, 111–112.
- Maine D. 2000. Role of nutrition in the prevention of toxemia. *Am J Clin Nutr* 72(5): 298ff.
- Fisher A. 2004. *The Logic of Real Arguments*. Cambridge: Cambridge Univ Press, p. 18.
- Fisher A. 2006. *Critical Thinking: An Introduction*. Cambridge: Cambridge Univ Press, pp. 27, 43.
- Kameda M. 2003. Remarks on logico-linguistic structure of medical English. *Studies in Comparative Culture* 60: 4.

医学論文における Reporting Verbs の用法¹

Reporting Verbs in Medical Research Articles

西村月満

Tsukimaro Nishimura

北里大学一般教育部

Kitasato University, College of Liberal Arts and Sciences,
Sagamihara, Kanagawa Japan

Background and Objective. Citation of previous research is an integral part of medical articles. Incorporating references, scientists can indicate a gap in the previous research or extend previous knowledge and they contextualize local knowledge within an ongoing history of disciplinary knowledge making. In most cases, researchers employ various types of reporting verbs when they refer to related studies. This paper (1) shows classification of reporting verbs, (2) explains how medical scientists use reporting verbs in their research articles and (3) brings out pedagogical implications for medical English education.

Methods. From a corpus of 48 articles consisting of 12 papers each from four leading medical journals (*New England Journal of Medicine*, *Journal of American Medical Association*, *Cancer Research*, and *Journal of Psychosomatic Research*), the quantitative data were analyzed according to the taxonomy of Thomas and Hawes.

Results. All the categories of reporting verbs classified by Thomas and Hawes except qualification verbs were found to be present in the 48 articles, and the reporting verbs were found to possess distinguishing features of choice among the four journals.

Conclusion. Systematic instruction of varieties and categories of reporting verbs is necessary for medical students to better understand and write research articles. In addition, before submitting an article to a target journal, writers need to be aware that each journal has its preferences with respect to the style and use of reporting verbs.

J Med Eng Educ (2008) 7(1): 19–22

Key Words: medical research articles, citation, reporting verbs, medical English education, English for specific purposes

1. 序・INTRODUCTION

学術論文においては、先行研究への言及を欠かすことができず、医学論文においても先行研究に示された成果や見解を示すことは重要な役割を果たしている。“You are what you cite”¹という表現もあるように、引用は、引用者の研究の当該研究分野における位置づけを明らかにする役割を持っている。医学者の一研究室での活動が、世界の医学の潮

流とどのように関わっているかを通時的に示す機能が引用にはある。学術論文における引用は、1980年代以降応用言語学の一つの研究領域としてさまざまな角度から論じられてきた。^{2,4} 引用には integral citation と呼ぶ著者名を示すやり方と、non-integral citation と呼ぶ著者名を示さないやり方があるが、⁵ いずれの場合にも reporting verbs と呼ばれる一群の動詞を使うことが多い。特に non-integral citation では reporting verbs の使用と reference を示すことによって citation であることがわかり、reporting verbs は citation のマーカーとしての役割がある。こうした重要な役割を持つ reporting verbs の、医学論文における用法の特色を調べ、医学英語教育への指針を探ることとした。

Corresponding author:

西村月満

〒228-8555 神奈川県相模原市北里 1-15-1

北里大学一般教育部 外国語単位

Phone: 042-778-8111

E-mail: nmonona@jcom.home.ne.jp

¹ 本稿は、日本医学英語教育学会 (JASMEE) 第 8 回総会 (2005 年 7 月 10 日、こまばエミナス) において口頭発表した内容を元に文章化したものである。

2. 研究方法・MATERIALS AND METHODS

最初に、reporting verbs の種類と分類を示すために、これまで発表されてきた分類法を調べた。筆者の知るかぎり、

これまで以下の3種類の reporting verbs の分類法が発表されている。第1は、Thompson and Ye⁶によるもので、文系・社会科学系・理系のさまざまな分野にわたる約100の学術論文の Introduction の分析に基づいている。第2は、Thomas and Hawes⁷が、*Journal of Psychosomatic Research* の11の論文の Methods を除くすべてについて分析したものである。第3は、Hyland⁸が文系・社会科学系・理系の8つの各分野ごとに10種類計80の論文の Abstract を除くすべてについて調査したものである。この3種類を比較し本研究にふさわしい分類を検討した。

次いで、医学論文における reporting verbs の使用実態として、医学雑誌4誌に見られる reporting verbs の用例を数量的に調査した。今回の調査対象としては、世界的に読まれている医学誌の中から総合分野の雑誌としては *the New England Journal of Medicine (NEJM)* と *Journal of American Medical Association (JAMA)* を選び、特定分野の雑誌としては *Cancer Research (CR)* と Thomas and Hawes⁷ が扱った *Journal of Psychosomatic Research (JPSR)* を選び、各12編ずつ計48編の論文の Introduction と Discussion のセクションを調査・分析の対象とした。

3. Reporting Verbs の種類と分類

Thompson and Ye⁶、Thomas and Hawes⁷、Hyland⁸による reporting verbs に関する3種類の分類法を比較検討した結果、Thomas and Hawes⁷の分類法が最も明快で、医学論文中に利用されているものの検討には向いていると判断した。そこで、以下に、Thomas and Hawes⁷の分類法を簡単に紹介する。その前に一つ言葉遣いについて述べておく必要があるが一点ある。引用には2種類の筆者が関わっており、引用されている論文の筆者は cited author と呼ばれ、引用している筆者は citing writer と呼ばれてきた。本稿においても「引用文献著者」と「引用者」という区別をしておく。

3.1 Thomas and Hawes⁷ による Reporting Verbs の分類法

大分類

1. Experimental Activity Verbs (real-world verbs)
2. Discourse Activity Verbs
3. Cognition Activity Verbs

大分類のサブカテゴリー

1. Experimental Activity Verbs (real-world verbs)

1.1 Procedural Verbs

実験行為、実験手順などに言及する動詞。

例：test, examine, use, study, compare

1.2 Findings Verbs

研究結果から導き出された発見を述べる時に使う動詞。

例：find, observe, obtain

1.2.1 Objective Verbs

報告されている情報の acceptability について論文筆者の評価が中立的であるか、または特に評価が示されないもの。

例：observe, associate

1.2.2 Effect Verbs

引用文献の著者が、引用する筆者に影響を与えている、という意味でこう呼ばれる。つまり、引用者が、引用文献に示された研究成果の妥当性を確信している。

例：show, demonstrate, establish, reveal

2. Discourse Activity Verbs

言語活動を示す動詞

2.1 Tentativity Verbs

暫定的な見解を示す動詞。

2.1.1 Pre-experimental Verbs

実験に着手する前の仮説、前提、研究の出発点を示す。

例：propose, hypothesize, postulate

2.1.2 Post-experimental Verbs

実施された実験や研究によって得られたデータや結果から導き出された見解や結論、あるいは研究が全体として示すことを述べる時に使われる。

例：suggest, indicate, implicate

2.2 Certainty Verbs

Tentativity Verbs と比べたらより断定的に見解を示す動詞。

2.2.1 Informing Verbs (recording verbs)

引用文献著者が与える情報を中立的な立場で読者に示す、客観的な報告。

引用者は、伝達内容に対する解釈を示さない。

例：report, note, document, state

2.2.2 Argument Verbs

引用文献に示された見解に対する、引用者の態度が表れている。たいていは、支持する姿勢で、引用者自身が主張したいことへのサポートとして引用していることが多い。

例：provide evidence, maintain

2.2.3 Qualification Verbs

引用文献著者が自身の見解の一般性について限定を加えていることを示す時に用いる。

例：cautioned, raised the question

3. Cognition Activity Verbs

引用文献著者が行った知的活動を示す動詞。

例：consider, assume, recognize, think, know

4. 結果・RESULTS

4.1 医学雑誌 4 誌に見る Reporting Verbs の用法

New England Journal of Medicine, *Journal of American Medical Association*, *Cancer Research*, *Journal of Psychosomatic Research* の 4 誌各 12 編ずつ計 48 編の論文の Introduction と Discussion のセクションを対象として reporting verbs の用例を調べた結果次のようなことがわかった。

4.2 数字的結果

上記全 48 編の論文中に、合計 426 の reporting verb が使われていた。うち、Experimental Verbs (53%), Discourse Verbs (42%), Cognition Verbs (5%) であった。

項目別に使用頻度の高い順に並べると、以下の通りである。

Effect Verbs	24%
Informing Verbs	18%
Post-experimental Verbs	15%
Procedural Verbs	15%
Objective Verbs	14%

動詞別順位

show	19%
report	12%
suggest	11%
find	9%

4.3 調査対象の 4 誌間における Reporting Verbs の用法の比較

Reporting Verbs の使用に関し、4 種類の医学誌は共通性があるのかそれともそれぞれに特徴があるのか、分類項目別及び動詞別に調べてみた。その結果、4 誌それぞれに Reporting Verbs の使用上の特徴があるのがわかった(表 1)。

4.4 分類項目別特徴

1. **Experimental Activity Verbs** は全体としては、比率的に大きな差はないが、サブカテゴリー上は違いがある。

- 1.1 **Procedural Verbs** は *Cancer Research* において、他誌の約半数しか使用されていない。
- 1.2 **Findings Verbs** のうち、Objective Verbs は *Cancer Research* が目立って少なく、逆に Effect Verbs は *Cancer Research* が最も多い。

2. **Discourse Activity Verbs** も総数の比率は 4 誌大きな差はないが、細かく見ると違いがある。

- 2.1 Pre-experimental Verbs は、*Journal of Psychosomatic Research* が最も多く他誌は少ない。
- 2.2 Post-experimental Verbs は *New England Journal of Medicine* が最も多い。
- 2.3 Argument Verbs は *Journal of Psychosomatic Research*, *Cancer Research* は多いが、他誌は少ない。

3. **Cognition Activity Verbs** は、*Cancer Research* が最も多く、他誌は少ない。

4.5 動詞別特徴

Reporting Verbs のうち、4 誌で特徴的な違いが認められるものは以下の通りである。

4.5.1 find と show の使用頻度

Cancer Research は find がとりわけ少なく、他方 show は非常に多い。*New England Journal of Medicine* は *Cancer Research* ほどではないが、同様の傾向がある。*Journal of American Medical Association* と *Journal of Psychosomatic Research* は、find と show の使用がほぼ同数である(表 2)。

表 1. Reporting Verbs 分類項目別頻度

Verb Type	NEJM	JAMA	CR	JPSR	4 誌合計
	%	%	%	%	%
Experimental activity	60	55	50	50	53
Procedural	17	17	10	17	15
Findings	43	38	40	33	38
(Objective)	14	20	7	16	14
(Effect)	29	18	33	17	24
Discourse activity	38	40	42	46	42
Tentativity	21	18	17	17	18
(Pre-experimental)	1	1	2	5	3
(Post-experimental)	20	17	15	12	15
Certainty	17	22	25	29	24
(Informing)	13	21	16	19	18
(Argument)	3	1	9	9	6
Qualification	0	0	0	0	0
Cognition	2	5	8	4	5

表 2. 4 誌別 find 並びに show 使用頻度.

Journal	Find		Show		Show の受動態の比率 %
	%	数	%	数	
CR	3	4	30	37	43
NEJM	8	7	21	19	47
JAMA	13	10	12	9	11
JPSR	14	19	13	18	28

4.5.2 report の使用頻度

動詞 report の使用については、医学誌ごとの特徴がある。*Cancer Research* は使用数が特に多いだけでなく、その4分の3が受動態である(表3)。受動態を用いると、agentを示さないことで author visibility が下がり、一般に自然科学系の論文の特徴とされている impersonalization が強まる。

表3. 4誌別 report 使用頻度.

Journal	数 %	受動態の数 %	受動態の比率 %
CR	20	15	75
JPSR	15	5	33
NEJM	11	3	27
JAMA	9	2	22

4.5.3 Discourse Activity Verbs 中の Argument Verbs の使用頻度

provide evidence, maintain, argue, clarify, support 等の Argument Verbs は医学誌によって、好んで使用する雑誌と、そうでない雑誌とがあるのがわかる。

4誌別 Argument Verbs 使用頻度

	数
JPSR	13
CR	11
NEJM	3
JAMA	1

5. 考察・DISCUSSION

5.1 医学英語教育への示唆

- Citation が果たす重要な役割からすると、Reporting Verbs の種類と分類を学生に紹介することは、医学論文の読解と執筆に役立つであろう。
- 特に、医学誌ごとに Reporting Verbs の使用に特色があることをわきまえておくことは、投稿する際に必要な知識と言える。
- 個々の Reporting Verb の性質を理解しておく必要がある。

例えば、demonstrate と show の区別を挙げることができる。‘demonstrate’ について、Thomas and Hawes⁷ は「引用論文著者の意図が成功を収めたことを意味する」と指摘している。また、森實敏夫 and Martin Peters⁹ は

「医師のための英語論文講座」において「demonstrate は少々感情的意味合いを込めた言い方になる。一般的には show の方が適切」と述べている。英英辞典¹⁰においても、‘demonstrate’ は ‘clearly shows the existence or truth of something by giving proof or evidence’ と説明されている。

今回調査した4医学誌における demonstrate の使用数は、以下に見られるように雑誌ごとの特徴がある。*NEJM* (6), *JAMA* (3), *JPSR* (2), *CR* (0)。

したがって、‘demonstrate’ は使用について注意を必要とする動詞と言える。

- Reporting Verbs をとる主語が多様であることを知っておき、適切に用いることができるようにする必要がある。

animate subjects としては、人名、人名以外の人間を表す名詞(例: researchers, investigators, authors)があり、inanimate subjects には、研究(例: study, studies, finding, analysis, data, reports, efforts, search)、物質、病名などがある。

以上に見てきたように、医学論文には、多種類の reporting verbs が先行研究の成果や見解に言及する際に用いられ、医学生はその用法を理解しておく必要がある。

文献・References

- Berkenkotter C and Huckin TN. 1993. You are what you cite. In: NR Blyer and C Thralls (eds). *Professional Communication*. Newbury Park CA: Sage. pp. 109-134.
- Swales JM. 1986. Citation analysis and discourse analysis. *Applied Linguistics* 7:39-56.
- Bazerman C. 1988. *Shaping Written Knowledge*. Madison WI: Univ Wisconsin Press.
- Liu M. 1993. The complexities of citation practice. *Journal of Documentation* 49(4): 370-408.
- Swales JM. 1990. *Genre Analysis*. Cambridge: Cambridge Univ Press.
- Thompson G and Ye Y. 1991. Evaluation in the reporting verbs used in academic papers. *Applied Linguistics* 12(4): 345-382.
- Thomas S and Hawes TP. 1994. Reporting verbs in medical journal articles. *English for Specific Purposes* 13(2): 129-148.
- Hyland K. 1999. Academic attribution: Citation and the construction of disciplinary knowledge. *Applied Linguistics* 20(3): 341-367.
- 森實敏夫, Peters M. 1999. 医師のための英語論文講座. 日本アクセル・シュプリンガー出版.
- Oxford Dictionary of English*. 2003. Oxford: Oxford Univ Press.

Some Synonymous Expressions and the Omission of Articles in Medicine

Kenji Sonoda

Nagasaki University Graduate School of Biomedical Sciences

Background and Objective. When we write or speak English as a non-native speaker, we often face a variety of difficult problems, and among them could be numbered synonymous medical expressions and the problems of articles in everyday English medical expressions. Having a good knowledge of these would be helpful in writing or speaking English. This article aims, first, to clarify how some synonymous medical expressions are used now such as *be diagnosed as* and *be diagnosed with*, and *operation* and *surgery*, and, second, to find out whether and to what extent articles are omitted in common medical expressions such as *catch a cold*, *have a fever*, and *have the flu*.

Methods. A large number of examples were examined and classified based on the corpora of the BNC Online and the WordbanksOnline.

Results. Numerous differences were observed in the way the synonymous medical expressions were used. The omission of articles was often seen in the common medical expressions.

Conclusion. The results of my study show that overall each synonymous medical expression investigated seems to have a role of its own and is used differently from the other expression in the pair, that generally the articles (*a*, *an*, *the*) tend to be dropped in the common everyday medical expressions investigated, and that in some expressions *a* tends to be omitted more noticeably than others.

J Med Eng Educ (2008) 7(1): 23–29

Key Words: synonymous medical expressions, omission of articles, everyday medical expressions

1. Introduction

When we write or speak synonymous English medical expressions as a foreigner, we are often puzzled as to which of two synonymous expressions to choose, or as to whether we can omit articles that occur in some everyday English medical expressions. Based on the BNC Online and the WordbanksOnline, this article aims to clarify how some synonymous English medical expressions are actually used and to find out whether and to what extent articles are omitted in everyday English medical expressions. Having a correct knowledge of these matters will help us write or speak common English medical expressions. The first half of this article is

devoted to the clarification of some similar English medical expressions such as *be diagnosed as* and *be diagnosed with*, *diagnose ... as* and *diagnose ... with*, *be hospitalized* and *be admitted to (the, a) hospital*, and *operation* and *surgery*. The second half of this article deals with the omission of articles in such common medical expressions as *catch a cold*, *have a fever*, *have a temperature*, *have a pain*, *feel a pain*, *have a stomachache*, *have an earache* and *have a toothache*; *have the flu*, *have the measles* and *have the mumps*.

2. Synonymous Expressions

2.1 Be diagnosed as, Be diagnosed with; Diagnose ... as, Diagnose ... with

2.1.1 Be diagnosed as, Be diagnosed with

Be diagnosed as and *be diagnosed with* are similar expressions, but if we examine them in the BNC Online (BNC) and the WordbanksOnline (WBO), we will find that *be diagnosed as* is used far more often than *be diagnosed with*. There is an area in which *be diagnosed as* and

Corresponding author:

Kenji Sonoda

Department of Physical and Occupational Therapies, Health Sciences, Nagasaki University Graduate School of Biomedical Sciences 7-1, 1-chome, Sakamoto-machi, Nagasaki-shi 852-8520 Japan

Phone: 095-819-7922

E-mail: kenji-s@nagasaki-u.ac.jp

be diagnosed with are commonly used, and there are areas in which *be diagnosed as* is predominantly used. *Be diagnosed as* has some areas in which *be diagnosed with* is less often used or is not used at all. That will be why *be diagnosed as* appears far more often of the two.

Both *be diagnosed as* and *be diagnosed with* are commonly followed by a noun phrase: *be diagnosed as* can be followed by a sufferer of a disease, whereas *be diagnosed with* by a name of a disease:

- (1) a. Children suffering fainting attacks are being wrongly diagnosed as epileptics. (BNC)
 - b. In the same month, he was officially diagnosed as narcoleptic. (BNC)
- (2) a. Even after she was diagnosed with cancer, she continued to smoke, though less often. (WBO)
 - b. Two years ago she was diagnosed with Graves' disease, an illness affecting the thyroid. (WBO)

Although *be diagnosed with* cannot be followed by a verb phrase, *be diagnosed as* can:

- (3) a. In 1963, she was diagnosed as having cancer, and died two years later. (BNC)
 - b. Two and a half years ago I was diagnosed as being HIV positive. (BNC)
 - c. Wilfred Harper was diagnosed as suffering from Parkinson's disease. (BNC)
 - d. She has also helped a man diagnosed as carrying AIDS antibodies in his blood. (BNC)

The gerunds that come after *be diagnosed as* are chiefly *having*, *being*, *suffering* and *carrying*, of which *having* comes most often, followed by *suffering*, *being* and *carrying*.

Unlike *be diagnosed with*, *be diagnosed as* can be followed by an adjective phrase:

- (4) a. In 1984, he was diagnosed as intolerant to four foods. (BNC)
 - b. Firstly, the old person must be clinically diagnosed as mentally ill. (BNC)
 - c. She had been diagnosed as dangerous five years before she first struck. (BNC)

The subject of *be diagnosed with* is invariably a person, but the subject of *be diagnosed as* can be a thing as well as a person, although the cases in which the subject is a person are far larger in number:

- (5) a. This was diagnosed as impetigo, an unpleasant

and contagious affection. (BNC)

- b. For most of his adult life he suffered in wrists and leg, a condition diagnosed as "gout." (BNC)
- c. She was taken to Crosshouse Hospital in Kilmarnock, where her head injury was diagnosed as a depressed fracture to the skull. (BNC)

The foregoing samples show that *be diagnosed as* can be used in four ways, and *be diagnosed with* in only one way. That may explain why *be diagnosed as* appears far more frequently than *be diagnosed with*.

2.1.2 Diagnose ... as, Diagnose ... with

Diagnosed ... as and *diagnosed ... with* are most often used in the passive, but there are times when they are used in the active.

Of the two types *diagnose ... as* and *diagnose ... with*, *diagnose ... as* is used far more often. In *diagnose ... as*, the object of diagnose is either a thing or a person:

- (6) a. Many people wrongly diagnose a more serious scaling condition as dandruff, which couldn't cause redness. (BNC)
 - b. Janice was only 13 when the doctor first diagnosed her headache as migraine. (BNC)
- (7) a. One doctor even diagnosed Mr. Page as a paranoid schizophrenic. (BNC)
 - b. Understandably there is reluctance with the authorities to diagnose a child under 5 as having a mental handicap. (BNC)

The *with* in *diagnose ... with* means "as having," and the object of *diagnose* is necessarily a person. However, it does not seem to be often used. (8) is the only instance of *diagnose ... with* in the BNC, but here the meaning of the latter part is obscure: it can be interpreted either as ... *diagnosed the highest number of patients who have both H pylori ...* or as ... *diagnosed the highest number of patients as having both H pylori ...*:

- (8) However, Pyloriset Latex identified the lowest number and the Bio-Rad GAP test diagnosed the highest number of patients with both H pylori and chronic superficial gastritis. (BNC)

Yet, when a personal pronoun is used as the object of *diagnose* in *diagnose ... with*, the meaning becomes clear:

- (9) A doctor in Lahore diagnosed him with Type 1 diabetes and told him to go on insulin at once. (TIME, Dec. 9, 2002, p. 47)

2.2 Be hospitalized, Be admitted to (the, a) hospital

Be hospitalized and *be admitted to (the, a) hospital* are similar expressions. *Be hospitalized* and *be admitted to (the, a) hospital* are not the only expressions we use when we stay at a hospital as a patient. There are many other expressions similar to these two, like *be admitted*. However, regarding these two expressions, according to the BNC, in the U.K. *be admitted to (the, a) hospital* is used more often than *be hospitalised* (or *hospitalized*). In the BNC, *be admitted to (the, a) hospital* occurs 175 times, whereas *be hospitalized* and *hospitalized* 108 times.

Of the three forms *be admitted to hospital*, *be admitted to the hospital*, and *be admitted to a hospital*, in the U.K. *be admitted to hospital* is overwhelmingly used. It is used in 163 instances, followed by *be admitted to the hospital* (nine instances) and *be admitted to a hospital* (three instances).

With regard to the spellings, the BNC shows that in the U.K. *hospitalised* is used a little more often than *hospitalized*. That is, in the BNC *hospitalised* occurs 62 times and *hospitalized* 46 times. What about in the U.S.? The WBO shows that in the U.S. *hospitalized* occurs 63 times and *hospitalised* does not occur at all.

Usually, both *hospitalise* (or *hospitalize*) and *admit* are used in the passive:

- (10) a. He was hospitalised for a week. (BNC)
 b. Unconscious and with a fractured thigh, he was hospitalised. (BNC)
 c. At least three people were admitted to hospital. (BNC)

But at times they are used in the active:

- (11) a. An accident could hospitalise you tomorrow—and your life could be turned upside down for months. (BNC)
 b. Steve recalls how his brother (an accountant) hospitalised a burglar with one of his golf clubs. (BNC)
- (12) a. ... nurses should be given the authority to admit patients to hospital (BNC)
 b. There are also times when there may be no option but to admit someone to hospital for treatment. (BNC)

Be admitted is in most cases followed by *to*, like *be admitted to hospital*. Yet there are times when it is followed by *into* or *in*, of which *into* appears more often, and *in* seldom appears:

- (13) a. 50,000 children are admitted into hospital

each year because they have been drinking harmful products. (BNC)

- b. We then telephoned for an ambulance, got her admitted into hospital. (BNC)
 c. Mrs. Busuttill was admitted into Middlesbrough's Parkside Hospital to have the dead child induced. (BNC)
- (14) But whereas the mums-to-be would normally have found themselves admitted for a spell in hospital for monitoring, the centre can do it in a day. (BNC)

2.3 Operation, Surgery

Operation and *surgery* mean cutting open a patient's body to repair a damaged part. Although *operation* and *surgery* mean almost the same thing, they seem to be used in different ways.

First of all, *surgery* is uncountable, and it cannot be preceded by an indefinite article, even when it is modified by an adjective:

- (15) a. Did I tell you I may have to have surgery? (BNC)
 b. In addition, Mr. Reynolds will eventually undergo major surgery on his bowel and will have a colostomy raised. (BNC)

On the other hand, *operation* is countable and it can be preceded by an indefinite article:

- (16) a. In September 1951, King George underwent an operation for cancer, but he died on the 6th. (BNC)
 b. Later I did a hip replacement operation. (BNC)

Secondly, there are often words that tend to combine more with *surgery* than with *operation* when they form a compound. True, in both of the following, compounds that have *surgery* or *operation* are often used (in the following, each number shows how often a compound occurs in the BNC): *major surgery* (57) and *major operation* (43), *emergency surgery* (34) and *emergency operation* (23). But, in the following pair of compounds, *surgery* is clearly preferred: *plastic surgery* (80) and *plastic operation* (which does not occur at all); *heart surgery* (60) and *heart operation* (16); *cosmetic surgery* (52) and *cosmetic operation* (once); *gastric surgery* (33) and *gastric operation* (1); *elective surgery* (28) and *elective operation* (3); *cardiac surgery* (27) and *cardiac operation* (which does not occur at all).

The third difference between *surgery* and *operation* is that when these two words are immediately followed

by *on* or *for*, *operation* is preferred. There are times when *surgery* is immediately followed by *on* or *for*, but with respect to this, there are far more instances with *operation* than with *surgery*. In these instances, *on* might show an area in which an operation is performed, and *for* a purpose for which an operation is performed:

- (17) a. She needed an operation on her foot, and he was taking care of that. (BNC)
 b. He's stable after emergency surgery on a head wound. (BNC)
- (18) a. In September, King George underwent an operation for cancer, but he died on the 6th. (BNC)
 b. He continued to deteriorate and underwent emergency surgery for a bleeding ulcer. (BNC)

The BNC shows that *operation* is immediately followed by *on* 222 times, and *surgery* 71 times. The BNC also shows that *operation* is immediately followed by *for* 138 times and *surgery* 75 times. Even if we exclude the instances in which *on* and *for* do not directly collocate with *operation* like *operated on Sunday*, these prepositions clearly tend to follow more often after *operation* than after *surgery*.

Operation and *surgery* can be immediately followed by the infinitive *to*.

- (19) a. When she was thirty-six, she had had an operation to repair a uterine vessel in the brain. (BNC)
 b. A Flight Lieutenant underwent surgery to repair a broken blood vessel in the brain. (BNC)

In the BNC, *operation* is immediately followed by the infinitive *to* 318 times, and *surgery* 109 times, which evidently shows that *operation* is preferred when followed by the infinitive *to*.

3. Articles

3.1 An indefinite article

3.1.1 (a) cold

In *have a cold*, usually *a* is not omitted. However, in *catch a cold*, *a* can be omitted. Either *catch a cold* or *catch cold* can be used:

- (20) a. When people cough, you can catch a cold.

(BNC)

- b. I think I caught a cold on Sunday. (BNC)
 c. Unfortunately, catching a cold is easier than getting rid of one. (BNC)
 d. I think I might have caught a cold. (BNC)
- (21) a. I hope you won't catch cold. (BNC)
 b. Well I said don't go catching cold. (BNC)
 c. Aren't you catching cold or something? (BNC)
 d. He had caught cold, or more likely, suffered from an allergy, Trent thought. (BNC)

In the BNC, in the present and *-ing* forms (*catch*, *catches*, *catching*, *a cold*), *catch a cold* occurs 18 times, and *catch cold* 29 times. On the other hand, in the past and past participle forms (*caught*, *have (had) caught*, *a cold*), *caught a cold* occurs 17 times, and *caught cold* only five times. All of this shows that in the present and *-ing* forms, *catch cold* is more often used than *catch a cold*. But, in the past and past participle forms, *caught a cold* is more often used than *caught cold*.

When the verb is confined to *get*, there are no instances of *get cold* and all the 10 instances have *a*, like *get a cold*, *got a cold*, and *getting a cold*.

3.1.2 (a) fever

In *have a fever*, *a* can be omitted: *have a fever* or *have fever* can be used.

- (22) a. Do you feel as though you have a fever? (BNC)
 b. Some days she had a fever and spoke very fast. (BNC)
 c. The difference, however, is subtle, and not as obvious as being in pain or having a fever. (BNC)
- (23) a. Both Sigmoids have fever. (BNC)
 b. "Mother," said Simon, "this man has fever and a poisoned arm. Mend him!" (BNC)

When the verb is confined to *have*, in the BNC *have a fever* and its related forms (*has*, *had*, *having*, *a fever*, etc.) occur 24 times, and *have fever* and its related forms only five times. Thus, with *have a fever*, the forms with *a* are used about five times as frequently as the forms without *a*.

When the verb is confined to *have got*, there is only one example of it in the BNC, and it has *a*: *I've got a fever*.

Regarding *have a temperature*, when we confine the verb to *have*, in the BNC *have a temperature* and its

related forms (*has, had, having, have (had) had, a temperature, etc.*) appear 18 times, while there are no examples of *have temperature*.

- (24) a. There was no improvement; she continued to have a temperature. (BNC)
 b. Harvey said he still had a temperature and must have something to eat before he went to bed. (BNC)

It shows that in *have a temperature*, usually *a* is not omitted. This can also be said with *have got*. When the verb is *have got*, there are nine instances of *have got a temperature*, like *I've got a temperature*, but no instances of *have got temperature*.

3.1.3 (a) pain

In *have a pain*, *a* is optional. Either *have a pain* or *have pain* can be used:

- (25) a. I really do have a pain. (BNC)
 b. She was actually depressed and had a pain in the back of her neck. (BNC)
 c. Strictly speaking, the sensation itself is not located; to talk of having a pain "in one's foot" is to talk elliptically. (BNC)
- (26) a. I have pain down the leg every now and then. (BNC)
 b. The plaintiff had pain in her neck, shoulder and arms. (BNC)
 c. So I would actually do that, but if you're having pain in the day I would treat that as well. (BNC)

When we confine the verb to *have*, in the BNC *have a pain* and its related forms (*has, had, having, have (had) had, a pain, etc.*) occur 21 times, and *have pain* and its related forms 17 times. To be more specific, in the present tense and the *-ing* forms, *have a pain* and its related forms occur 13 times, while *have pain* and its related forms appear 10 times. In the past and past participle forms, *had a pain* and its related forms occur eight times, whereas *had pain* and its related forms seven times. From these, we can see that with *have a pain*, the forms with *a* are used a little more often than the forms without *a*.

When we confine the verb to *have got*, there are four instances with *a*, like *I've got a pain* or *he's got a pain*, and there is one instance of it without *a*. i.e., *I've got pain*. Thus, as in the case of *have a pain*, when the verb is *have got*, the forms with *a* seem to be used more often.

In *feel a pain*, *a* is also optional. We can say *feel a pain* or *feel pain*:

- (27) a. I feel a pain in my foot. (BNC)
 b. ... all of a sudden I felt a pain from here on those ... (BNC)
 c. I thought, feeling a pain in my heart. (BNC)
- (28) a. We have intentions, feel pain, and tell each other things. (BNC)
 b. I saw two holes appear in the windscreen in front of me and I felt pain in my chest. (BNC)
 c. Chopra had felt pain, the pain of mere existence. (BNC)
 d. It had been such a traumatic, agonizing time, even now she couldn't talk about it without feeling pain. (BNC)

Altogether, in the BNC, *feel a pain* and its related forms (*feels, felt, have (had) felt, feeling, a pain, etc.*) occur 10 times, and *feel pain* and its related forms as many as 51 times. To be specific, in the present and *-ing* form, *feel a pain* and its related forms occur nine times, and *feel pain* and its related forms 44 times. In the past and past participle forms, *felt a pain* occurs once, and *felt pain* seven times. Thus, with *feel a pain*, unlike *have a pain*, the forms without *a* are used almost five times as often as the forms with *a*.

3.1.4 (an) earache, (a) stomachache (stomach-ache), (a) toothache

Of the three words *earache*, *stomach-ache* (the only spelling in the BNC) and *toothache*, in the BNC *earache* occurs 30 times, *stomach-ache* seven times, and *toothache* 92 times. In the WBO, *stomachache* (the only spelling in the WBO) occurs six times. This may show that *earache* and *toothache* are used relatively often, but that *stomach-ache* or *stomachache* is not used so often. It may also show that when someone wants to say he or she has a stomachache, mostly he or she will say so by using other words than *stomachache* (or *stomach-ache*).

With *earache*, *have an earache* and *have earache* are possible:

- (29) So with the statement that I have an earache. (BNC)
- (30) a. ... frequently there were notes from his mother to say that he had earache or something ... (BNC)
 b. Used in childcare, its mainly medical role includes ... stopping up the ears when the

child has earache (BNC)

When the verb is *have*, in the BNC there is one instance of *have an earache*, and there are two instances of *have earache*. When the verb is confined to *have got*, there is one instance of *have got earache*, like *I've got earache*. Therefore, taken altogether, in *have an earache*, the forms without *an* seem to be preferred.

With *stomach-ache*, in the BNC there is no instance of *have a stomach-ache* or *have stomach-ache*. When the verb is *get*, there is one instance without *a*: *I often used to get stomach-ache*. In the WBO, there is no instance of *have stomachache*, but there are two instances of *have a stomachache*:

- (31) a. I had a stomachache the other day and felt pretty lousy, and Kim wanted more attention than usual. (WBO)
- b. ... where the line is drawn why you have a stomachache but not a leg ache. (WBO)

When the verb is *have got*, in the WBO there is one instance of *have got a stomachache* like *I've got a stomachache*, but no instance of *I've got stomachache*. Thus, with *have a stomachache* (or *stomach-ache*), the forms with *a* seem to be used more often.

In *have a toothache*, *a* can be omitted. *Have a toothache* or *have toothache* can be used:

- (32) a. I have a toothache. (BNC)
- b. When someone complains that he has a toothache ... what exactly is he saying? (BNC)
- (33) a. I didn't have toothache. (BNC)
- b. Another discovered she had toothache one evening as she had been clenching her teeth all afternoon! (BNC)

When the verb is confined to *have*, there are three examples that have *a*, and 12 examples that do not have *a*. Thus with *have a toothache*, *have toothache* is used four times as often as *have a toothache*.

When we confine the verb to *have got*, the result is almost the same. In the BNC, there are two examples that have *a*, like *I've got a toothache*, and six examples that do not have *a*. As in the case of *have a toothache*, the forms without *a* are used far more often.

3.2 The definite article

3.2.1 (the) flu

English has two forms *flu* and *flue*. In the BNC, *flu* appears 544 times and *flue* 156 times. In the WBO, in the U.S. *flu* appears 45 times and *flue* does not appear at all. In the following discussion, I use the more popular form *flu*:

In *have the flu*, *the* can be omitted. Either *have the flu* or *have flu* can be used:

- (34) a. But he has the flu and that is why he did not travel. (BNC)
- b. I once had the flu. (BNC)
- (35) a. Everybody seems to have flu at the moment. (BNC)
- b. A spokesman said the 56-year-old singer pianist had flu. (BNC)
- c. I've never had flu. (BNC)

When the verb is confined to *have*, in the BNC the form *have the flu* and its related forms (*has, had, having, have had, the flu*, etc.) occur 13 times, and the form *have flu* and its related forms (*has, had, having, have had flu*, etc.) 37 times. Thus the forms without *the* are used three times as often as the forms with *the*.

When the verb is confined to *have got*, there are four instances of *have got the flu*, like *I've got the flu*, and seven instances of *have got flu*, like *I've got flu*. Also in this case, the forms without *the* are preferred.

3.2.2 (the) measles

Measles can be used with or without *the*. *Have the measles* or *have measles* can be used:

- (36) a. If so, Mark E. Smith has the measles in a bad way. (BNC)
- b. She had the measles on Christmas and put the entire household in quarantine. (BNC)
- (37) a. Ian had measles for two weeks. (BNC)
- b. Some were quite healthy, but more than a few had measles. (BNC)

When we confine the verb to *have*, in the BNC the forms with *the* appear five times, and the forms without *the* 12 times. With *have the measles*, the forms without *the* are used more than twice as often as the forms with *the*.

When the verb is *have got*, in the BNC there is one instance without *the*, like *she's got measles*.

As to whether *measles* can be followed by singular verbs or plural verbs, the BNC shows that *measles* is followed by *is* nine times, and by *are* three times. It shows

that *measles* tends to be dealt with as singular rather than as plural.

3.2.3 (the) mumps

In the BNC, there is no instance of *have the mumps*, but there are three instances of *have mumps*.

- (38) a. If the mother had mumps or something
(BNC)
- b. Her baby's father ... wanted her to have the baby because he thought that having mumps had made him sterile. (BNC)
- c. "She was very kind to me when the children had mumps," said Clarissa. (BNC)

These examples show that *mumps* is often used without *the*.

4. Conclusion

In *be diagnosed as* and *be diagnosed with*, when the subject is a person, *be diagnosed as* tends to be followed by a sufferer of a disease and *be diagnosed with* by the name of a disease. *Be diagnosed as* can be followed by an adjective phrase or a gerund, but *be diagnosed with* cannot. While the subject of *be diagnosed with* is a person, the subject of *be diagnosed as* is either a person or a thing.

The object of *diagnose* in *diagnose ... as* is a person or a thing, while the object of *diagnose* in *diagnose ... with* is a person.

In the U.K., of *be admitted to hospital*, *be admitted to a (or the) hospital*, *be admitted to hospital* is most often used. Mostly *hospitalise* (or *hospitalize*) and *admit* are used in the passive.

Although *operation* is preceded by *an*, *surgery* is not preceded by *a* even when it is preceded by an adjective. *Surgery* is more likely to form a compound than *operation*, but *operation* tends to be more often followed by *on*, *for*, or the infinitive *to*.

In the present and *-ing* forms, *catch cold* is more often used than *catch a cold*, but in the past and past participle forms, *caught cold* is more often used than *caught a cold*. *Have a fever* is used almost five times as often as *have fever*. In *have a temperature*, usually *a* is not omitted. *Have a pain* is used a little more often than *have pain*. *Feel pain* is used five times as often as *feel a pain*. *Have earache* seems to be used more often than *have an earache*. *Have toothache* is more often used than *have a toothache*.

Have flu is used almost three times as often as *have the flu*. *Have measles* and *have mumps* are preferred to *have the measles* and *have the mumps*.

Problem-Based Learning in Medical Ethics to Instigate Critical Thinking¹

Ruri Ashida* and J. Patrick Barron**

*English Department, Tokyo Medical University,

**International Medical Communications Center, Tokyo Medical University

In this rapidly changing world, with quickly growing amounts of new information and diverse ways of thinking, it is important for healthcare professionals to have the ability to critically think and understand each patient/each case from various aspects so that they can act in the best possible way. Problem-based learning (PBL) concerning medical ethics is an effective way to instigate critical thinking and raise awareness of the factors that need to be considered and taken care of in different cases. One course given at Tokyo Medical University is organized with the aim to make students think and understand the various important aspects implicit in the healthcare profession while improving their medical English skills.

J Med Eng Educ (2008) 7(1): 30–35

Key Words: critical thinking, medical ethics, awareness, communication, problem-based learning, English for medical purposes class

1. Introduction

Whether in their clinical practices or in their research, the cases and problems that healthcare professionals face today are varied, complicated and often unprecedented. In the decision-making process, healthcare professionals are faced with the need to carefully consider a number of factors which can be obtained through (1) a deep understanding of the patient and his/her family, (2) the latest knowledge of not only the disease but also whatever is related to the situation (e.g. law), (3) awareness of medical ethics, (4) cooperation with other healthcare professionals, and other aspects.

To prepare future healthcare professionals so that they will be able to think carefully and tackle whatever problem they face in the future, problem-based learning (PBL) in medical ethics is an effective method. One Eng-

lish course at Tokyo Medical University has integrated PBL on medical ethics with English for medical purposes. The course is designed so as to raise awareness of medical ethics, develop communication skills, instigate critical thinking towards a solution, and enable students to make progress in English for medical purposes. This paper presents the growing importance of cultivating awareness of medical ethics today as the background to developing the PBL course and then describes the course design and operation.

2. Growing Importance of Medical Ethics

With the rapid advancement in science and technology and with the knowledge of human genetics, now there are many possibilities, options and choices for patients as well as for healthcare professionals. We even have some power to control life and death with life-supporting devices. Healthcare professionals are repeatedly faced with the question, *What is moral conduct?* The increased attention being given to the importance of individualism has accorded greater respect for patients' autonomy, thus the individual patients have the right to make their own choices concerning their lives now. Their choices and ways of thinking are diverse and all the more so because of the overwhelming information they receive

Corresponding author:

Ruri Ashida

English Department, Tokyo Medical University

6-1-1 Shinjuku, Shinjuku-ku, Tokyo 160-8402, Japan

Phone: 03-3351-6141

Fax: 03-3226-7030

E-mail: rrashida@jcom.home.ne.jp

¹This paper is based on our presentation given at the 10th annual JASMEE Academic Conference, July 15, 2007, Tokyo.

through the Internet and the mass media. Healthcare professionals are required to understand what each patient really wants and really needs. At the same time, however, healthcare professionals need to consider each situation from their professional standpoint. Their questions center on the four basic principles of medical ethics. *What does the patient truly want?* (respect for autonomy);¹ *What can be the best for the patient?* (beneficence and nonmaleficence);¹ *What are the boundaries/restrictions as a human being and in relation to society?* (justice).¹

There are many factors that need to be considered in exploring the best possible way. Medical ethics are the basics of proper professional conduct. *Stedman's Medical Dictionary* goes on to define the gamut of the term as it expands to the patients' families: "the principles of proper professional conduct concerning the rights and duties of the physician, patients, and fellow practitioners, as well as the physicians' actions in the care of patients and in relations with their families."²

3. Complexity of Ethical Problems

Ethical problems are extremely complex. They can be very personal and individual, and at the same time, they can be very social and communal. Each patient or healthcare professional has his/her own personal will and own individual way of thinking. The problem that one faces is extremely personal. On the other hand, there are laws, guidelines, and government policies that socially regulate personal decision making. While these factors explicitly regulate decision making, there are also factors that could implicitly regulate the person's mindset, such as culture, religion and consensus. Moreover, all factors involved in one case can often be in conflict with one another, and their interpretation, application, or relative priority differs from person to person.³ This makes ethical problems all the more complicated.

4. How Can We Teach Medical Ethics?

Is it possible to "teach" medical ethics? Science and technology are forever advancing, law and guidelines are frequently reviewed, people's views change, situations differ from case to case, patients vary, and healthcare

professionals differ from person to person. We may say that ethical values vary and change. There is no absolute set of medical ethics that one can "teach."

5. Education Aimed Towards "Awareness" and "Critical Thinking"

Given the multiplicity of factors involved in medical ethics, as described above, the purpose of education should be to prepare the future healthcare professionals so that they would be able to tackle each problem carefully, considering a number of important factors implicit in the profession. First, we need to cultivate awareness of medical ethics—medical ethics of the time, of the people, of the situation and of the society. *What are the moral values? What is "honorable behavior for the physician"?*⁴ *What are the social factors?* Second, it is important to develop communication skills. Communication is most important in understanding the patient, the family, what is involved in the situation and in preventing misunderstanding that could lead to legal problems. Third, we should instigate critical thinking so that the student can analyze, evaluate, and reason through the situation, especially because often there is no single correct answer to the problems. Finally, we should help them develop problem-solving skills so that they can make decisions and act in the best possible way.

To accomplish these purposes, problem-based learning is a very effective method, and we have integrated PBL in medical ethics into our English classes.

6. PBL English Class

6.1 Issues studied

Six issues are taken up: (1) the doctor-patient relationship, (2) truth telling, (3) cultural competence, (4) beginning-of-life issues (preimplantation genetic diagnosis, abortion, etc.), (5) end-of-life issues (living will, palliative care, organ transplantation), and (6) research ethics (conflict of interest, plagiarism and proprietary information, authorship and peer review, use of humans in biomedical research, and use of animals in biomedical research).

Students study each issue in two periods. The first period (Class One) is a teacher-centered class, and a

Individual patients have the right to make their own choices.

Healthcare questions center on the four basic principles of medical ethics: respect for autonomy, beneficence, non-maleficence, and justice.

textbook that we have developed is used. The second period (Class Two), a week later, is a student-centered class, and the students organize the whole class expanding the knowledge that they have gained in Class One. As for the research ethics, however, “a scenario” is prepared in the textbook to help the students who are mostly new to the issues organize the student-centered classes. The classes given at Tokyo Medical University are a part of the required English course for 2nd-year students.

6.2 Class One: Teacher-centered (textbook)

The textbook consists of (1) Reading a case with discussions, (2) English for medicine, (3) Anatomy, and (4) More Reading.

6.2.1 Reading and Discussion

The Reading is a case study but it is not simply an explanation of a case. It is a story, a situation, and it includes various human interactions. For example:

A 54-year-old businessman is in hospital for adenocarcinoma of the pancreas which had already metastasized beyond the pancreas. He wants to go home to spend the rest of his days and asks the doctor. However, the unintentionally careless attitude and words of the doctor make the patient very worried about going home and throw his wife into panic.

The comprehension exercises highlight the issues involved in the case and prepare the students for discussion.

The first discussion topics are directly related to the Reading, such as, *How could the doctor have responded better?* Then, the students go beyond that particular case to think about questions such as these:

What can be the obstacles preventing a patient with a fatal illness from going home?

How can the difficulties be coped with?

What is palliative care?

What kind of end-of-life-care is needed in Japan?

In Research Ethics, one of the cases is as follows:

A new therapeutic technique using an expensive state-of-the-art medical device is written up in a paper about to be submitted by university Investigator A but certain colleagues find out that he owns a large amount of stock in the company and bring the situation to the attention of the institution.

The questions asked include issues such as these:

Is Investigator A justified?

Is there a problem of conflict of interest?

What would you do if you were the head of the department or president of the university?

6.2.2 English for Medicine

English for Medicine includes a variety of exercises and it is designed to help the students develop communication skills.

1. *Medical Interviews* focuses on open-ended questions, and the students learn the importance of listening, understanding, building trust and showing empathy.
2. *Writing/Reading Medical Notes* shows the basic procedure of taking medical notes. What questions to be included in history taking and the common abbreviations used for writing medical notes are studied.
3. *Medical Terms and Lay Terms* teaches the different uses of words. Students need to learn medical terms (e.g. *productive cough, afebrile*) which are words used among doctors when presenting a case, writing a chart, etc.; but at the same time, they need to know lay terms (e.g. *cough up sputum, no fever*) to communicate with the patients.

First, we need to cultivate awareness of medical ethics.

Students practice these various exercises through role plays and conversations.

6.2.3 Anatomy

This section is designed so as to build up medical terminology. Each unit is system-based. The students learn basic terminology with diagrams and word parts (prefixes, combining forms and suffixes).

6.2.4 More Reading

Students read extracts related to the issues from medical journals such as the *New England Journal of Medicine* and *CHEST*.

6.3 Class Two: Student-centered (group presentation)

Class Two is given totally to the students. The class is divided into groups of 4 to 5 students and each group “teaches” one issue that they have learned in Class One.

6.3.1 Group presentations

Each group organizes the whole class (90 min). Students read articles, lecture on the main points, lead the

discussion, etc. For the Research Ethics issues, there is a scenario to be prepared from the textbook, and the students present and lead the discussion. The teacher checks the selected Readings beforehand, gives advice when necessary, and makes copies for the whole class. Copies are given to all students the week before the presentation for prereading.

Some groups are very well organized and they all focus on one aspect of the issue selected. For example, one group talked on Laughter Therapy as a type of alternative medicine. One student began by introducing the history of laughter therapy, and then the next student continued by reporting the actual effect of the therapy, followed by the present situation in the US, the present situation in Japan, and finally, they divided the class into groups for discussion. The topic was *What do you think of introducing Laughter Therapy at Tokyo Medical University Hospital?* They led the discussion, had each group make a presentation, wrote their opinions on the whiteboard, and drew a conclusion. On the other hand, there are also groups in which each student presented individually on different aspects related to the issue.

6.3.2 Other students' comments

Other students, who are not presenting, write comments. The purposes are (1) to check their understanding, and (2) to give feedback to the presenters. In the top half of the comment sheet, students have to write down whatever they understood and found interesting from the presentations. In the bottom half, they make comments and give advice to the presenters. After reading all the comments, the teacher cuts off the top half and gives the bottom half to the presenters for feedback. In this way, the presenters would not know which comment was written by whom. The comments are very productive. Here are a few examples:

It was easy to understand because you used the whiteboard.

Don't read through. Look at us. Be more confident.

Please underline the parts where you are going to read because it is difficult to follow.

6.3.3 Good points of student-centered classes

The good points of student-centered classes are that (1) the students are highly motivated, (2) they learn independently, search for information, think critically,

and organize by themselves, (3) they cooperate in the group to give a full class, (4) they choose their own materials so the materials reflect the students' interest and attitudes toward the issue and present various aspects, (5) the students develop presentation skills, (6) they learn to lead the discussion, and (7) they get honest feedback from their classmates.

6.3.4 Difficulties of student-centered classes

The difficult points are that (1) the materials can be sometimes too difficult and too long although the teacher advises them beforehand, (2) it is difficult to decide to what extent the teacher should intervene in choosing the materials and interrupt in correcting the pronunciation or meaning while they are presenting, and (3) there is less time for the teacher throughout the year because much time is given to the students.

Many students had never considered ethical issues related to plagiarism and intellectual property, conflict of interest, or the use of animals or humans in research.

6.4 The challenges for the teacher

The challenges that a teacher faces are as follows:

1. It is not an ethics class but an English class for medical students, thus the purpose of the class is twofold: to raise awareness of ethical issues and to improve their English for medical purposes.
2. The class should not be a sermon but should prepare the students so that they would be able to tackle whatever problem they might face in the future. The teacher needs to try to draw out many different opinions from the students for discussion and try not to give his/her personal opinions. The teacher should show the guidelines and instigate critical thinking.
3. For selecting and showing the guidelines, the teacher needs to be acquainted with the up-to-date information on medical ethics.
4. Time has to be managed efficiently. Students need much time to go deeply into details of the issue in their discussion. The teacher does not want to cut off the discussion, but the overall time is limited, all the more so because about a quarter of the classes throughout the year are given to the student-initiated classes.

6.5 Student questionnaires

We conducted a questionnaire at the end of the year. Students at Tokyo Medical University have medical ethics classes in their first year, so many answered that

they had previously considered such issues as “living wills,” “organ transplantation,” “palliative care,” “truth telling,” “doctor-patient relationship” (Fig. 1).

On the other hand, many students had never before considered issues related to research ethics, such as “authorship and peer reviews,” “plagiarism and intellectual property,” “conflict of interest,” “use of animals/humans in research” (Fig. 2). Thus, they seemed to find it difficult to discuss these issues in class at first.

Regarding what issues they found interesting, “organ transplantation” ranked first (Fig. 3). The reason for this could partly lie in the fact that the transplantation of a cancerous kidney was big news at the time they were discussing the issue. Following “organ transplantation,” “palliative care” ranked second. One student said that

when his grandmother died he remembered what we had talked about in class. It is encouraging to know that they have related what they were discussing in class with an actual event.

On the question about the method of problem-based learning, 53% of the students said it was very effective and 41% said it was a little effective. This shows that, on the whole, they thought problem-based learning was an effective method (Fig. 4).

Other opinions on the class were as follows:

I was surprised that so many problems are involved in one situation.

The issues were interesting and meaningful for us future healthcare professionals.

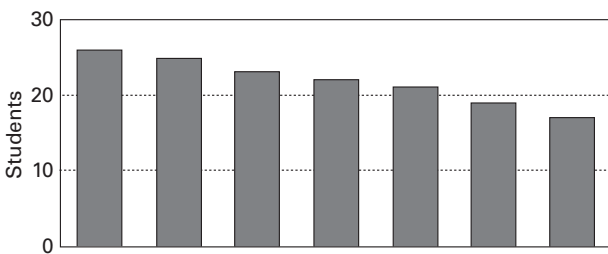


Figure 1. Issues considered before. (32 students, multiple answers)

Living Will (26) , Organ Transplantation (25) ,
 Palliative Care (23) , Truth Telling (22) ,
 Doctor-Patient Relationship (21) ,
 Beginning-of-Life Issues (19) ,
 Cultural Competence (17)

() : number of students

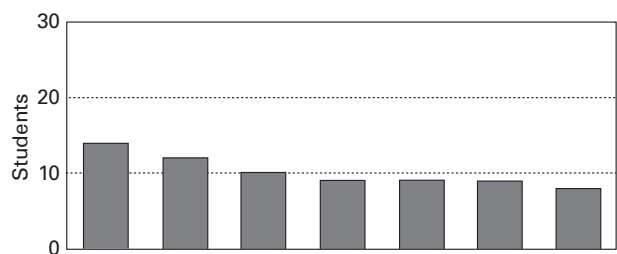


Figure 3. Issues of interest.

Organ Transplantation (14) ,
 Palliative Care (12) ,
 Plagiarism and Intellectual Property (10) ,
 Cultural Competence (9) ,
 Living Will (9) ,
 Conflict of Interest (9) ,
 Authorship and Peer Review (8)

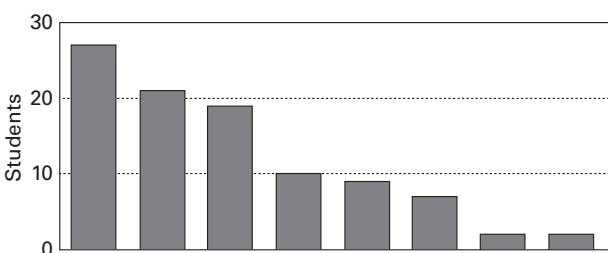


Figure 2. Issues not considered before.

Authorship and Peer Review (27) ,
 Plagiarism and Intellectual Property (21) ,
 Conflict of Interest (19) ,
 Use of Animals in Research (10) ,
 Use of Humans in Research (9) ,
 Cultural Competence (7) ,
 Doctor-Patient Relationship (2) ,
 Beginning-of-Life Issues (2)

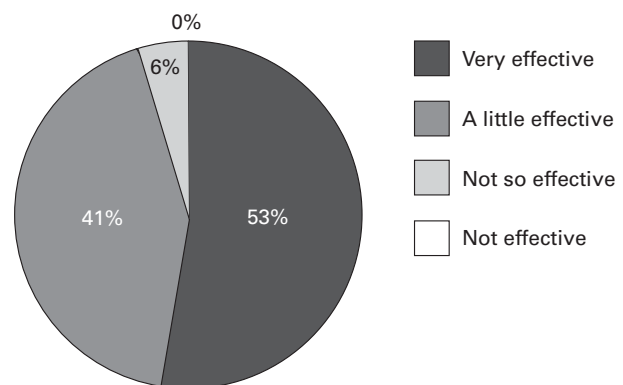


Figure 4. Do you think problem-based learning is effective in learning medical ethics?

It was difficult to discuss the issues in English.

I could consider the issues from a global aspect in English.

Discussions were effective in instigating critical thinking and I was surprised to know that people have various different opinions.

7. Conclusion

Cultivating awareness of medical ethics is all the more important today because science and technology are forever advancing and people with different values are given greater autonomy for their choices of their lives. Healthcare professionals need to consider carefully all important aspects implicit in their profession towards the best possible solution.

Since we cannot teach “medical ethics,” we need to prepare the students so that they will be able to critically think and understand what is involved in each different situation with an awareness of medical ethics. Problem-based learning in medical ethics in English accomplishes this purpose while students make progress in their Eng-

lish for medical purposes at the same time. One student said that he will probably forget all because he will be absorbed in learning scientific knowledge in his classes, but he will remember more and recall more what he had discussed in class when he comes to face a problem in the future. He will critically consider each case carefully with the awareness of medical ethics as a healthcare professional, which fulfills the purpose of this course.

References

1. Beauchamp TL and Childress JF. 2001. *Principles of Biomedical Ethics*. Oxford: Oxford Univ Press. pp. 57–282.
2. *Stedman's Medical Dictionary* (28th edition). 2006. Baltimore MD: Lippincott Williams & Wilkins.
3. Gampel E. Introduction: A framework for moral reasoning. In: BC White and JA Zimbelman (eds). 2005. *Moral Dilemmas in Community Health Care: Cases and Commentaries*. New York: Pearson Education, Inc.
4. American Medical Association (AMA). Principles of Medical Ethics.
<http://www.ama-assn.org/ama/pub/category/2512.html>
(Accessed August, 2007).

A New Willingness-Based English Curriculum Versus the Conventional Proficiency-Based Curriculum

Midori Kimura

Tokyo Women's Medical University
School of Nursing, Tokyo

Background and Objective. A proficiency-based English curriculum is popular at many universities, but motivation is also greatly important to language acquisition. We developed a willingness-based curriculum that takes into account the motivation of the student. This study evaluated the effectiveness of motivation on learning English in the willingness-based curriculum at our university.

Methods. The study was designed to test our dual hypothesis that (1) motivation can achieve more than proficiency and (2) an interesting curriculum can generate intrinsic motivation. Our classroom trial included 87 freshmen (all women). Students were placed in one of four classes according to their willingness and interests in learning English. To assess the students' improvement in English, we gave an English proficiency test at the beginning of the school year and an achievement test at the end. In addition, students were asked to complete questionnaires on motivation at the beginning, middle, and end of the school year.

Results. Of four classes, the Challenge class showed the highest motivation on the questionnaires but ranked second on the initial proficiency test and top on the end-of-term achievement test. The class that ranked the lowest in both motivation and proficiency at the beginning achieved surprising improvement at the end. The results of the study supported our twofold hypothesis.

Conclusion. The willingness-based English curriculum effects learning in highly motivated and in less motivated students and closely reflects not only the learner's motivation but also an emotional element peculiar to Japanese students. Motivation and achievement are directly related.

J Med Eng Educ (2008) 7(1): 36–45

Key Words: achievement, learning attitudes, anxiety, motivation versus proficiency, willingness to learn

1. Introduction

English teachers are always interested in improving the English proficiency of their students and are constantly searching for better ways and methods for achieving good results. However, the teachers at our school of nursing face problems: English is not an important requirement for future jobs or for the National Nursing Examination, and many students are simply not interested in English. In addition, the students are always very busy with their studies in other subjects and nursing

practice, and they cannot spare much time for studying English. Consequently, it is difficult for teachers to get students who were motivated at the time they entered school to stay motivated throughout the year, and it is difficult to get the less motivated students interested in learning English. Under these circumstances, we started looking for a new curriculum to solve the problems, and our search resulted in the development of a willingness-based curriculum made up of four classes, including a Challenge class designed specifically for highly motivated students.

A proficiency-based English curriculum is popular at many universities; however, the curriculums are not without social and psychological pitfalls. Students who seldom fail or never fail may hold negative or stereotypical attitudes toward those who are less successful than they are. Conversely, unsuccessful students may resent high achievers and may group together to ostracize

Corresponding author:

Midori Kimura, Associate Professor
Tokyo Women's Medical University
School of Nursing, Tokyo
E-mail: kimura@nurs.twmu.ac.jp
Phone: +81-3-3353-8111 Ext. 7033
Fax: +81-3-3341-8832

those whose academic success reflects unfavorably on themselves.¹ Another aspect researchers bear in mind in relation to language learning is anxiety. Language learning often presents threatening and anxiety-provoking situations, as noted by Julkunen, especially to students of low proficiency.¹⁶ Learners may suffer from anxiety in relation to a number of aspects of the learning process, for example, the language itself, speaking in front of other learners, the language class, the behavior of their peers, about their standing in relation to competition with fellow learners, taking tests. How to deal with anxiety, feeling pressure or tension in learning English, is an important issue to consider if we are to enhance continuous learning of a language.¹⁷

Considering these problems, to form classes at our university we needed to find criteria not related to proficiency, and this led us to focus our attention on motivation. Motivation is a critical factor in learning, so we tried to find answers from past theories and research. Several influential theories on cognitive motivation have been proposed in the mainstream of psychology. Gardner and Lambert distinguished “integrative” motivation, which refers to the desire to learn a language so as to interact with or identify with students of the second-language community. On the other hand, “instrumental” motivation describes reasons for learning a second language that reflect practical goals such as attaining an academic goal or job advancement.²

Recently, however, much discussion and debate about the nature of motivation for learning a second language has been done, whereby consideration is given to a variety of motivational constructs, in addition to those that are already the focus of research. One formulation that has received the attention of several scholars is the distinction between “intrinsic” and “extrinsic” motivation.³⁻¹² Intrinsic motivation generally refers to motivation for engaging an activity because that activity is enjoyable and satisfying. Extrinsic motivation refers to actions carried out to achieve some instrumental outcome, such as earning a reward or avoiding a punishment. According to Deci and Ryan, intrinsic motivation is founded upon innate needs for competence and self-determination.¹³ The basis of this motivation is the pleasurable sensation experienced during self-initiated and challenging activity.

It is difficult for teachers to get students who were motivated at the time they entered school to stay motivated throughout the year.

How to deal with anxiety, feeling pressure or tension in learning English, is an important issue to consider if we are to enhance continuous learning of a language.

Taking various problems associated with learning English at our school into consideration, we developed an English curriculum intended to instill various types of motivation, such as applying the students’ own integrative, instrumental, and intrinsic motivation to enhance their learning of English. Elements that help us achieve this include an attractive syllabus and interesting and stimulating activities that promote the willingness to learn. Tasks include seven features:

- (1) *Challenge.* Humans like to be challenged.
- (2) *Interesting content.* Connect the learning topic and content with things that students already find interesting from the youth culture.
- (3) *The novelty element.* Activities that are new, different, unfamiliar or totally unexpected will help to eliminate boredom.
- (4) *The intrigue element.* Stimulate curiosity by creating a conceptual conflict that needs to be resolved.
- (5) *The exotic element.* Learn about places and people that are unique.
- (6) *The fantasy element.* Students use their imagination to create make-believe stories or identify with fictional characters.
- (7) *Tangible outcome.* Tasks that require students to create some kind of a finished product as the outcome.¹⁴

The English classes for freshmen are broadly divided into a reading class and a communication oriented class. The reading class is compulsory, and the students can choose one additional class. The communication oriented class is further divided into one Challenge class, one Speaking class, and two Listening classes. The most unorthodox class is the Challenge class, in which students are expected to challenge themselves by undertaking various types of oral communication such as giving speeches, doing role plays, holding discussions, and producing a work-project.

At the orientation seminar at the beginning of the school year, teachers explain the goals and the contents of each class, and the students make their decisions according to their willingness and interests in learning. Students are welcome to enroll in the classes of their choice. However, the class size is limited to around 24 students because of the limited classroom space and number of English teachers. In addition, the responses to

the “Questionnaire on Motivation and Attitudes” (see Appendix) are taken into consideration to finalize the class.

Challenge class students are expected to be self-reliant and highly motivated so as to achieve the challenging goals by doing extra homework or working on a project in addition to doing the drills in the textbook. English is the only language spoken in the Challenge class. Table 1 describes some activities carried out in the Challenge class and Speaking class, where many pair-work and group-work activities are tried in order to encourage a cooperative atmosphere in class.

Although students belong to different classes, the same textbook is used for all reading classes and a common textbook is used in the Challenge class, Speaking class, and the two Listening classes. The Speaking class spends about 70% of the time in speaking practice and 30% in listening practice, with the reverse being the case with the Listening classes. Teachers try to give the same level of term examination in all classes and compare the

performances of students in one class with those of all the other classes. This way, students can feel secure in knowing that they are being evaluated fairly and are, therefore, encouraged to challenge high goals.

Two hypotheses were put forward to test whether the willingness-based English curriculum is effective in English acquisition: (1) Motivation can achieve more than proficiency. (2) An interesting curriculum can generate intrinsic motivation.

English is the only language spoken in the Challenge class.

2. Methods

2.1 Students

The study population included 87 freshmen (all female) in four different classes: Challenge class (n = 20), Speaking class (n = 20), Listening class 1 (n = 23), Listening class 2 (n = 24).

2.2 Procedure

At the beginning of the school year (2005), we gave a 60-minute English proficiency test (45 min written, 15

Table 1. Some examples of learning activities.

Class Activity	Challenge Class	Speaking Class
Speech	Why I want to be a nurse. My summer vacation	Same as Challenge class
Presentation	Digital storytelling (group-work) Students drew pictures for each paragraph of “The Mouse and the Lion,” made all pictures into digital form, added voice and music, and presented the story as a movie.	Ordinary storytelling (group-work) Presented the story and pictures in ordinary story-telling style.
Role play	Conversation between a fast-food shop worker and a customer. Students downloaded menus of fast food shops, such as McDonald’s Kentucky Fried Chicken, Moss Burger, translated them into English, and performed role plays using these menus.	Same as Challenge class
Discussion	The relationship between illness and therapy. Students watched a video clip of music therapy, and discussed the clip in groups.	No discussion
Work-project	“People and things that supported me this year.” (First-year students study at the campus in Kakegawa, which is located in a rural area. They live in an apartment house and are separated from their parents for the first time, so they get homesick. This project reminds them how many people have cared about them.) Students in groups walked around Kakegawa and took pictures of people and things they thought helped them grow up, and presented them in English in class using their computers and PowerPoint slides.	No project

min listening) to identify each student's level of English proficiency. The written section consisted of reading comprehension, idiomatic expressions, vocabulary, and short conversation. Students were asked to fill out three different questionnaires (Likert scale 1 to 4) about their future interest and English learning at the same time they took the proficiency test. At the end of the term (2006), a common English test was given in the same style as the earlier English proficiency test in order to evaluate students fairly among the four classes. The relationship between test scores and motivation was then compared among the four classes in order to test the first hypothesis, namely, that motivation can achieve more than proficiency.

Based on the results of the proficiency test and questionnaire regarding motivation, focus was put on the Challenge class and the Speaking class to test the second hypothesis, that an interesting curriculum can generate intrinsic motivation. The Challenge class was assumed to be the most motivated although it did not have the highest test scores at the beginning, whereas the Speaking class had the lowest test scores and the least motivation. To see the differences in their learning attitudes, we collected feedbacks on the same presentation task in the middle and at the end of the term by a questionnaire scored on the 1-to-4 Likert scale.

3. Findings

The findings were divided into two large parts. The first part addresses how students differed by motivation, with the results being based on an overview of the four classes in terms of interest in English learning, proficiency, and achievement. The second part addresses how the Challenge class compared with the Speaking class.

3.1 Part 1: Comparison of the four classes

Most students of the Challenge class were interested in studying or working overseas, while students in the other three classes did not show much interest in engagement abroad (Fig. 1). The results showed that in the Challenge class the students' incentive to study English was very high.

Table 2 compares each of the three classes with the Challenge class in terms of how much students liked English at the beginning of the school year on a 1 (least) to 4 (most) scale. Students of the Challenge class had the highest score and they liked English very much. A significant difference between the Challenge class and other three classes in how much the students liked English was also seen. This shows that Challenge class students were motivated to study English.

Table 2. How much the students liked English.*

(1)	Class	N	M	SD
	Challenge	20	4.00	.00
	Listening 1	23	3.70	.47
t = 3.81 p = .001				
(2)	Class	N	M	SD
	Challenge	20	4.00	.00
	Listening 2	24	3.90	.30
t = 2.51 p = .017				
(3)	Class	N	M	SD
	Challenge	20	4.00	.00
	Speaking	20	3.60	.50
t = 3.69 p = .001				

*t-test paired with Challenge class

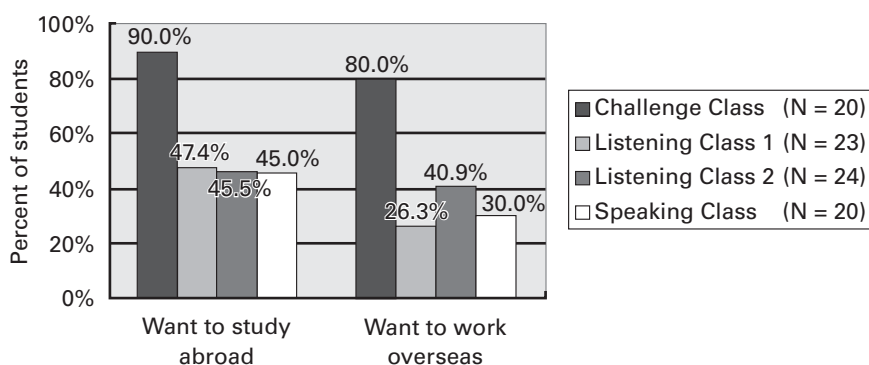


Figure 1. Student interests about their future.

Figure 2 shows on a scale of 1 (least) to 4 (most) how much students in each class wanted to improve their English skills. Writing skill was not asked because it was not a skill emphasized in our school. The Challenge class had the highest motivation of the four classes, and the students of this class wanted to improve the three skills as much as possible, whereas the other three groups wanted to improve only speaking and listening skills, but not so much reading skills.

Figure 3 indicates the scores of the pre-term proficiency test and the end-term achievement test. These graphs show two interesting points. The first point is that the Listening 2 class got the highest score and the Challenge class got the second-highest score on the pre-term proficiency test; however, the Challenge class overtook the Listening 2 class on the achievement test at the end of the term. The second point is that the Speaking class got the lowest score on the proficiency test in the beginning; however, the students of this class improved their test scores considerably on the achievement test.

Table 3 focuses on the test score improvement (differences between pre-term proficiency test scores and end-term achievement test scores) by comparing the mean of the Speaking class with the three other classes by t-test

(independent paired comparison). All test results in Table 3 show that the improvement of the Speaking class was greater than for the other classes, and the differences were significant.

Table 3. Test score improvement compared between the Speaking class and the other three classes.

(1)	Class	N	M*	SD
	Speaking	20	24.45	7.72
	Challenge	19	9.46	7.02
$t = -5.63 \quad p < 0.0001$				
(2)	Class	N	M*	SD
	Speaking	20	24.45	7.72
	Listening 1	20	16.53	8.93
$t = -2.93 \quad p = 0.009$				
(3)	Class	N	M*	SD
	Speaking	20	24.45	7.72
	Listening-2	23	7.82	8.08
$t = -6.36 \quad p < 0.001$				

*M: mean scores of the students who took both the pre-term and end-term tests (n = 79), not counting students absent on one of those test days.

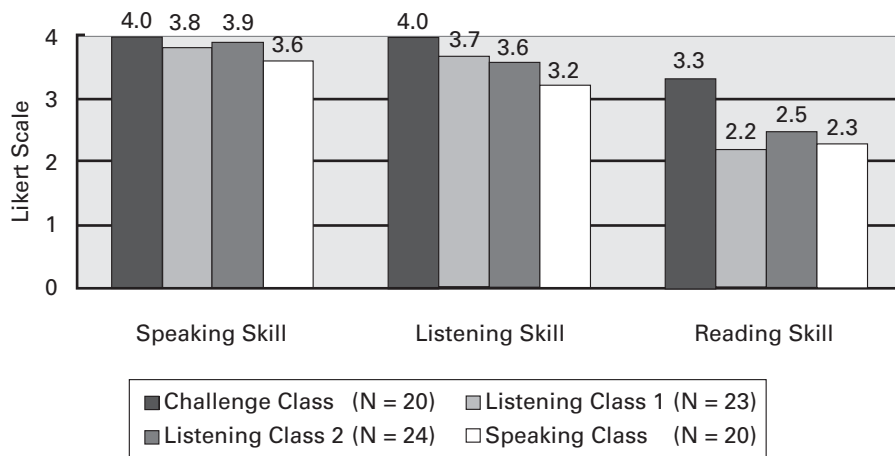


Figure 2. How much they wanted to improve in three skills.

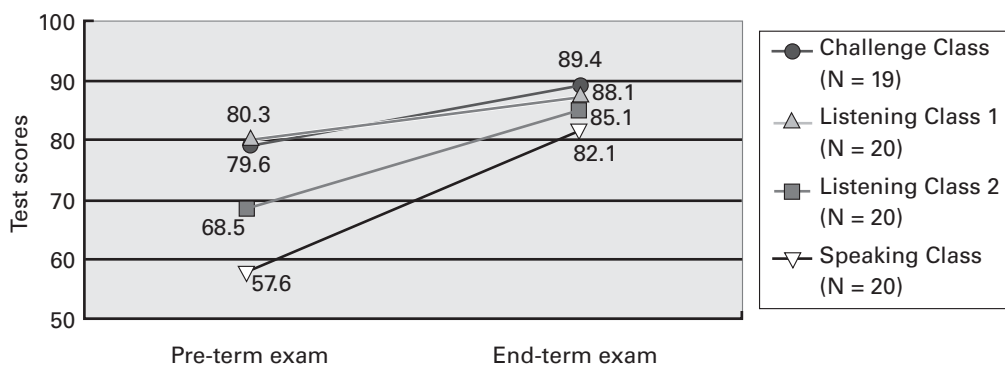


Figure 3. Pre-term and end-term test scores for the four classes.

3.2 Part 2: Comparison between the Challenge class and the Speaking class

The second part of our findings focuses on the Challenge class (the most motivated group at the beginning of the year) and the Speaking class (the least motivated group). We wanted to see the effectiveness of the willingness-based English class by looking at learning attitudes and cognitive style (i.e., how differently the students approached the same task), and how they reacted psychologically to the willingness-based curriculum.

3.2.1 How they approached the task

We compared the Challenge class and Speaking class in terms of how they approached the task and how they gave the presentations about their summer vacations in class by PowerPoint slides. A big difference is seen in preparation hours between the two classes: 75% of the students in the Speaking class spent 1 to 1.5 hours, but more than 85% of the students in the Challenge class spent at least 1 to 1.5 hours and 50% of them spent more

than 2 hours (Fig. 4). One student of the Challenge class was absent and did not do the task; therefore, the number of samples was 19, not 20.

Most of the Speaking class students practiced just reading their speech silently, whereas 80% of the Challenge class students practiced reading aloud as well as silently many times (Fig. 5). The Challenge class was more presentation-conscious, such as memorizing speech content, practicing speech in front of friends and family, and speaking to themselves. As a result, the effectiveness of their practice was reflected in the teacher evaluation of the presentations (1 very poor to 5 very good), as shown in Figure 6. The most conspicuous difference in the presentation skills was eye contact, which is an important factor in effective presentation. Most students of the Speaking class were looking down at the time of presentation and reading their speech. They spent a lot of time for preparation, such as organizing speech content, writing English sentences, and making PowerPoint slides, but they did not spare enough time

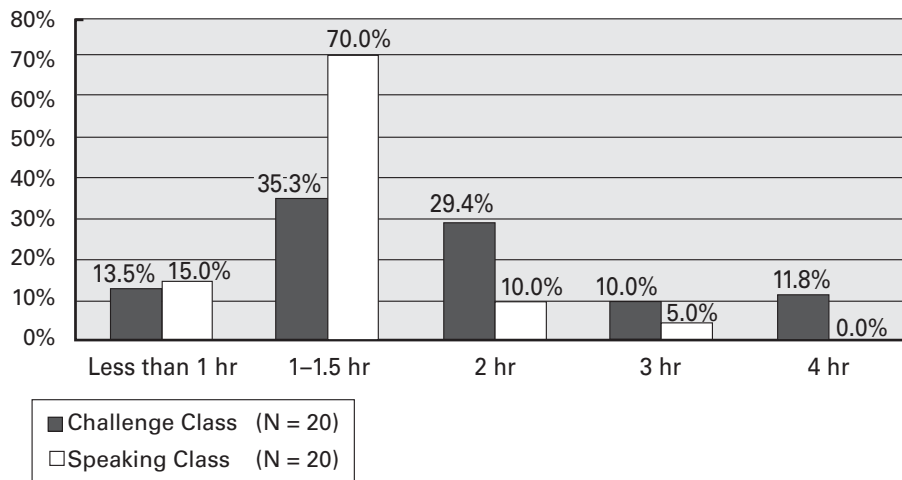


Figure 4. How many hours students spent preparing for the presentation.

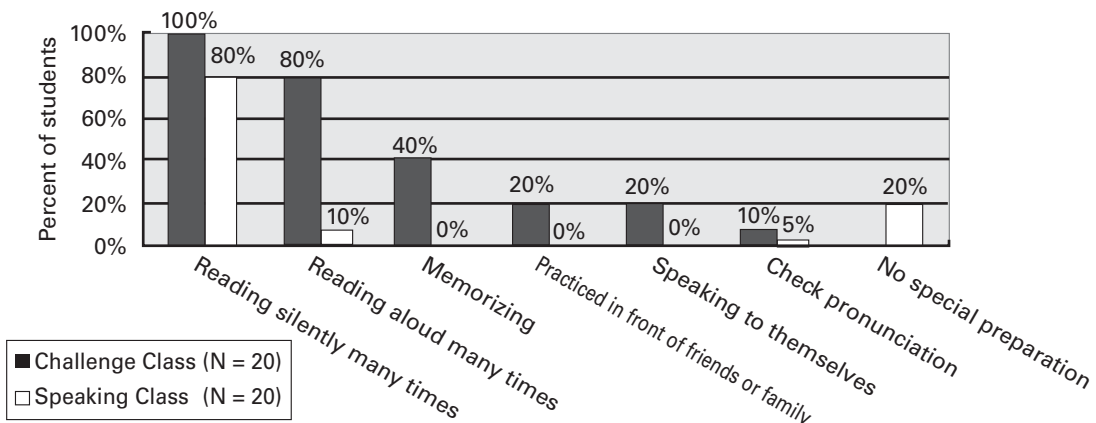


Figure 5. How students practiced for the presentation.

for presentation practice. Because of this, the Challenge class students felt satisfied and confident after the presentation, but the Speaking class did not.

3.2.2 How the students evaluated the curriculum

At the end of the term, the students of the Challenge class and Speaking class were asked which tasks they enjoyed the most. They marked each task with a “yes” or “no”; Figure 7 shows the percentages of those answering “yes.” The Challenge class did not practice pronunciation in class, and the Speaking class did not try discussion; therefore, those results are not shown in the graph. Singing English songs and conversation/role play were very popular in both classes, and many students in the Challenge class agreed that making presentations was really challenging and interesting.

Figure 8 shows how much the students thought they had improved in their English skills after one year. About 75% of the Challenge class felt that their speaking skills had improved, and about half the Speaking class thought their listening skill and speaking skill had improved. Interestingly, about 12% of the Speaking class thought their writing skill had improved, although we did not put much emphasis on writing skills in the class.

Last of all, the students answered the questions about what they thought about studying English and about their class. Their learning attitudes are shown on a 1-to-4 Likert

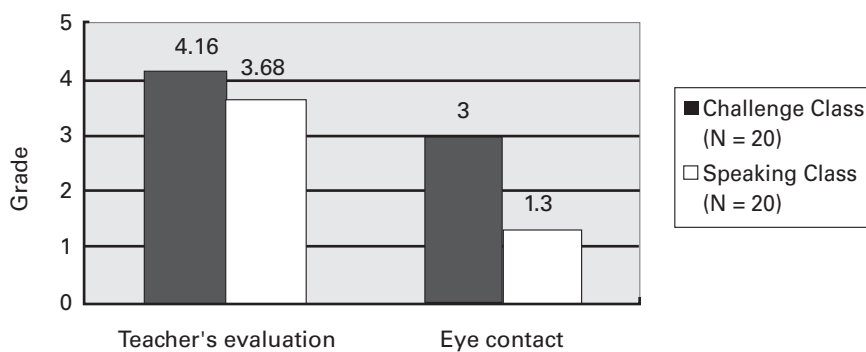


Figure 6. How well the students did on the presentation.

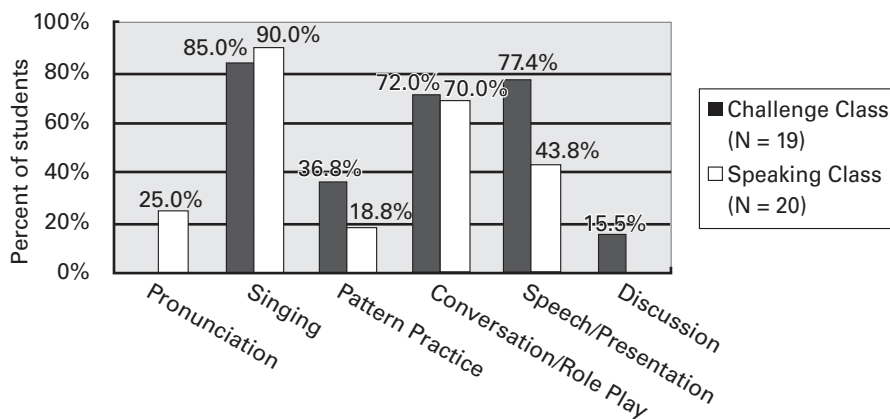


Figure 7. How much the students liked the tasks.

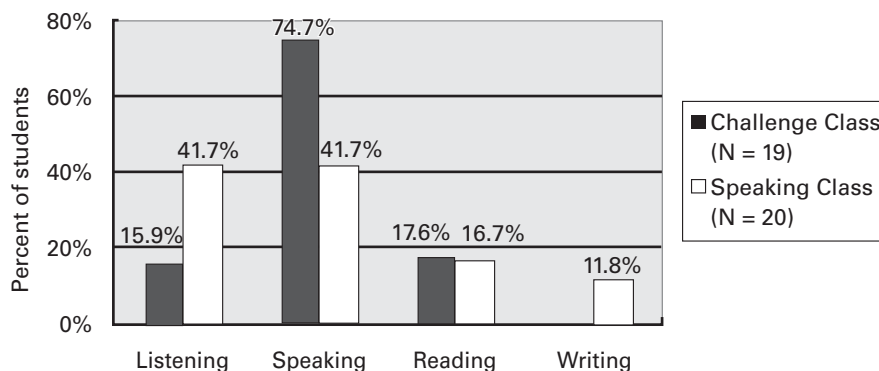


Figure 8. How the students evaluated their improvement in the four skills.

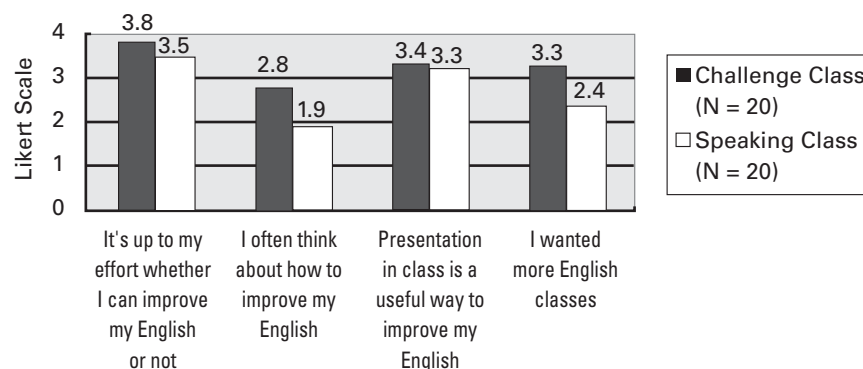


Figure 9. How they evaluated their English learning attitudes.

Table 4. What the students thought about their classes.

Challenge Class	Speaking Class
<ul style="list-style-type: none"> • It was good that our willingness and motivation were respected in this class. • In this class everyone was eager to learn, and I was stimulated. • I liked the idea that our challenging spirit was respected. • I liked this class because the teacher spoke in English and we did many communicative activities in English. • I enjoyed this class and I thought we could strive for even greater challenge. 	<ul style="list-style-type: none"> • I think it was good that students with the same interest were in the same class and we could focus on our favorite activities. • Since there were no excellent English speakers in this class, I did not feel embarrassed about making mistakes. • Since I felt that I was in the right class, I felt secure and did not hesitate to ask questions, and I enjoyed myself. • It was hard to judge my English level objectively in this type of class structure.

scale (1 strongly disagree to 4 strongly agree) in Figure 9, and their comments on the willingness-based curriculum are summarized in Table 4. Students in both classes showed a highly autonomous attitude by agreeing that it was up to the students as to whether they could improve their English or not, and that giving a presentation in class was a useful way to improve their English. However, their responses to other questions were different. While the Challenge class often thought about how to improve their English and hoped for more English classes, the Speaking class confessed to having rather negative attitudes to the same questions. However, both classes seemed to be satisfied with their classes and gave positive comments. They commented that their willingness and their interests had been taken into consideration and respected in this curriculum. An interesting remark by the Speaking class students was that they did not feel embarrassed about making mistakes and could ask questions without hesitation because they felt secure being in the right class.

4. Discussion

The results of this study support our two hypotheses and indicate that a willingness-based English curriculum is effective for both highly-motivated students and low-motivated students. Test results of the students of the Challenge class and the high motivation backed by their favorable learning attitudes suggest that motivation can achieve more than proficiency, supporting hypothesis 1 (Figs. 1–3, 7, 9; Table 1). Second, the remarkable improvement in test scores of the Speaking class and positive comments made by those students about their learning indicate that an interesting curriculum generates intrinsic motivation, thus supporting hypothesis 2 (Figs. 3, 7–9).

As we could see from the Challenge class and Speak-

ing class, motivation and achievement are directly related. When learners have intrinsic motivation, the goal of language learning can provide the desire to achieve goals and the student's energy expands, and these aspects are associated with language learning and success. The students of the Challenge class, which ranked second in the pre-term examination among the four classes, achieved the best score at the end of the term. They showed a strong desire to learn a language and were the most earnest in wanting to improve their English skills, spending many hours for task preparations. We observed that they had maintained their motivation throughout the year. Naturally, these factors resulted in their success in learning English. As for the students of the Speaking class, their test scores and instrumental motivation were the lowest at the beginning of the term; however, the students of this class achieved the biggest improvement in test scores at the end of the term. This happened because the students enjoyed the tasks, which they believed were useful ways to improve their English. These results support Gardner and Lambert's theory regarding attitudes and motivation.²

Motivation is a multifaceted construct, because humans are social beings and human action is always embedded in a number of physical and psychological contexts which considerably affect a person's cognition, behavior, and achievement.¹⁸ However, the evaluations that highly-motivated students gave were very distinctive and different from the evaluations given by the low-motivated students. The Challenge class students highly valued the fact that their willingness to learn was respected in their class, which gave them strong motivation to study, and they were stimulated by the positive attitudes of their classmates. They were confident risk-takers who did not mind making mistakes very much. On the other hand, the students of the Speaking class, who had low scores on the pre-term proficiency test, lacked confi-

dence in English and had low motivation. They felt comfortable in class among students who were the same as themselves. In the Japanese culture, people feel comfortable when they find everyone to be the same. Many students soon realized that their classmates had similar proficiency in English and the same interest in learning to speak English, and they started engaging in activities rather positively without feeling much anxiety. Everyone had a chance to be better than others, and they became motivated.

However, there were some shortcomings in this curriculum. Class size of the Challenge class was limited to around 24, so we could not accept all applicants who wished to join the Challenge class. Another problem was that students who were not in the Challenge class when they were freshmen seemed to hesitate to apply to the Challenge class in their sophomore year because they felt that they were already behind.

The outstanding points of this curriculum, however, exceed the drawbacks. This curriculum motivates students who are confident as well as those who lack confidence by considering both willingness and anxiety in learning and the unique characteristics of Japanese students. A proficiency-based curriculum depends on competition as the major motivator for human progress, which is valued in the North American society. The education system there is based on the premise that competition brings out the best in people, and the general consensus is that competition promotes excellence in business, politics, and education.¹ However, this causes much stress among some students. Markus and Nurius offer this explanation: "Possible selves represent individuals' ideas of what they might become, what they would like to become, and what they are afraid of becoming, and thus provide a conceptual link between cognition and motivation."¹⁸

Many Japanese students hesitate to do overt self-comparison in class, out-do other learners, or gain the teacher's attention by demonstrating their knowledge in class. Besides, thinking of their future careers in nursing, in which cooperation among staff is a must, we cannot recommend creating an excessively competitive atmosphere among students. Willingness-based curriculum takes emotive aspects of Japanese students into consideration, yet it provides highly motivated students a chance to push themselves to the limit.

In the Japanese culture, people feel comfortable when they find everyone to be the same.

Conclusion

In conclusion, when we respect the willingness of the students, we are able to get students who are motivated at the time they entered school to stay motivated throughout the year, and get the less motivated students interested in learning English. Motivation influences the learner more than proficiency on achievement in English learning and is one of the main determinants of foreign language learning achievement. However, motivation based on competition or proficiency does not create a healthy atmosphere among students. Competition can have some socially and psychologically damaging effects, particularly on Japanese girls, as they tend to reject academic success in favor of peer acceptance. Therefore, it is important for teachers to give consideration to this emotive element, which is characteristic of Japanese students, especially when forming classes and grabbing the attention of students with interesting tasks and stimulating activities. The willingness-based curriculum respects the willingness of every student, ranging from those who are highly motivated to those who are less motivated, and from those who have confidence to those who lack confidence and can foster motivation.

Acknowledgments

I would like to express my gratitude to the referees and the editor Nell Kennedy for their assistance and helpful suggestions.

References

1. Coelho E. Cooperative learning: Foundation for a curriculum. In: C. Kessler (ed). 1992. *Cooperative Language Learning: A Teacher's Resource Book*. Englewood Cliffs, NJ: Prentice Hall Regents. p. 33.
2. Gardner RC and Lambert WE. 1972. *Attitudes and Motivation in Second Language Learning*. Rowley MA: Newbury House.
3. Dornyei Z. 1990. Conceptualizing motivation in foreign-language learning. *Language Learning* 40: 45-78.
4. Oxford R and Shearin J. 1994. Language learning motivation: Expanding the theoretical framework. *Modern Language Review* 78: 12-28.
5. Clement R, Dornyei Z, and Noels KA. 1994. Motivation, self-confidence and group cohesion in the foreign language classroom. *Language Learning* 44: 417-448.
6. Crooks G and Schmidt RW. 1991. Motivation: Reopening the research agenda. *Language Learning* 41: 469-512.
7. Tremblay PF and Gardner RC. 1995. Expanding the motivation construct in language learning. *Modern Language Journal* 79: 505-518.

8. Wen X. 1997. Motivation and language learning with students of Chinese. *Foreign Language Annals* 30: 235–251.
9. Brown HD. 1994. *Teaching by Principles*. Englewood Cliffs, NJ: Prentice Hall.
10. Dickinson L. 1995. Autonomy and motivation: A literature review. *System* 23: 165–174.
11. Schmidt R, Boraie D, and Kassabgy O. Foreign language motivation: internal structure and external connections. In: RL Oxford (ed.). 1996. *Language Learning Motivation: Pathways to the New Century*. Honolulu HI: Univ. of Hawaii Press. pp. 14–87.
12. Williams M and Burden B. 1997. *Psychology for Language Teachers: A Social Constructivist Approach*. Cambridge: Cambridge Univ Press.
13. Deci EL and Ryan RM. 1985. *Intrinsic Motivation and Self-determination in Human Behaviour*. New York: Plenum.
14. Dornyei Z. 2001. *Motivational Strategies in the Language Classroom*. Cambridge: Cambridge Univ Press.
15. Gardner RC. 1985. *Social Psychology and Second Language Learning*. London: Arnold.
16. Julkunen K. Situation-and-task-specific motivation in foreign language learning. In: Z Dornyei, R Schmidt (eds). 2001. *Motivation and Second Language Learning*. Honolulu HI: Univ of Hawaii Press. pp. 29–42.
17. Skehan P. 1989. *Individual Differences in Second Language Learning*. London: Edward Arnold.
18. Markus H and Nurius P. 1986. Possible selves. *American Psychologist* 41: 954–969.

APPENDIX

Questionnaire on Motivation and Attitudes

1. Please answer “Yes” or “No” about your future.

I want to study abroad	yes	no
I wan to work overseas	yes	no

2. Please think back to your high school days (or previous year) and answer the following questions on a scale of 1 (least agree) to 4 (most agree).

I like English.	1	2	3	4
I like speaking in English.	1	2	3	4
I like reading English books.	1	2	3	4
I like listening to English.	1	2	3	4
I like writing in English.	1	2	3	4
I always prepared for English class.	1	2	3	4
I never failed to do my homework.	1	2	3	4
I studied English other than coursework.	1	2	3	4

What did you study? (_____)

If you have taken any of the English tests indicated below, please write down your score.

English Step Test (_____) TOEIC (_____) TOEFL (_____)

3. How much do you want to improve your English? Please circle all that are appropriate.

- (1) Be able to carry on easy English for travel.
- (2) Be able to carry on easy daily conversation.
- (3) Be able to make speeches without much trouble.
- (4) Be able to discuss some issues.
- (5) Be able to read easy stories.
- (6) Be able to read essays at the high school English textbook level without using a dictionary.
- (7) Be able to read English newspapers.
- (8) Be able to read English journals on nursing.
- (9) Be able to understand easy daily conversation.
- (10) Be able to understand romantic movies without subtitles.
- (11) Be able to understand English news.
- (12) Be able to understand lectures on nursing.

[Course work, motivation]

「対訳君」医学版の医学英語教育への応用 The Application of “Taiyaku-kun” in Medical English Education

村田桂子*, 平井由里子**, 福島雅典*

Keiko Murata,* Yuriko Hirai,** Masanori Fukushima*

* 京都大学医学部附属病院 探索医療センター 検証部

** 株式会社 MCL

*Dept. Clinical Trial Design & Management, Translational Research Center,

Kyoto University Hospital, Kyoto

**MCL Corporation, Shiga

Although it is essential for medical professionals to acquire an adequate proficiency in English in order to retrieve the information they need from the English-language literature and present their own research to the world in English, they cannot afford the time needed to improve their English ability in medical school. This is mainly because acquisition of medical knowledge normally takes priority over developing English ability in medical schools, and many English teachers in these institutions have reported difficulty in raising their students' English ability to a satisfactory level given the limited number of English lessons. In order to improve this situation, we propose introducing the “Taiyaku-kun” database software together with some interpreter-training methods, e.g., shadowing, dictation, and slash-reading, into medical students' English lessons. The advantages of this combined method are that students can not only effectively develop comprehensive ability in English but can also come to understand the concept of a database system and acquire information retrieval skills. Furthermore, teachers can reduce the time needed to prepare for their English lessons, and both the teachers and students can easily take full advantage of the wide range of high-quality English-language medical content and resources of “Taiyaku-kun,” thus making their English lessons more substantial and effective.

J Med Eng Educ (2008) 7(1): 46–51

Key Words: database software, interpreter training, information retrieval, MEDLINE, slash reading

序

最近の医学の進歩は加速しており、MEDLINEをはじめ医学論文検索サイトには毎日多くの論文が新たに追加され、情報が蓄積されている。それらの情報はほとんどが英語である。医学部卒業後、医師たちは専門分野を決定し診療、研究を開始するが、その際に世界中の論文から必要な情報を得ることおよび自らの研究成果を世界に向けて英語で発信していくことが否応なく求められる。しかしながら、多くの調査^{1,2}が示すように、彼らが学生時代に受ける英語および医学英語の授業のコマ数は限られている。彼らの将来

の活躍に障害とならない十分な英語力を、この限られた英語の授業数で、全員に習得させることはほぼ不可能である。しかしながら、毎日少しの努力を自主的に行える学生なら、低学年の授業で効率的な学習方法を教えることで、学会発表後の質疑応答も英語でこなせるだけの能力を身につけることも可能と考える。今回我々は、語学のプロである通訳の養成訓練法と、翻訳支援ソフト「対訳君」を用いた効果的な医学英語の講義例を紹介する。

背景

著者の一人である福島はこれまで、メルクマニユアルや米国国立癌研究所の癌情報サイト PDQ など多くの翻訳を手がけてきた。そのような大型の翻訳を行う際には、50名を超える医学翻訳者たちに下訳を依頼するが、毎回、以下のような問題に直面していた。

1. 優秀な医学翻訳者の数は限られており、医学知識が不足

Corresponding author:

Keiko Murata

Kyoto University Hospital Translation Research Center

Dept. Clinical Trial Design & Management

54 Shogoin Kawara-cho, Sakyo-ku, Kyoto, 606-8507, Japan

Phone: +81-75-751-3397 Fax: +81-75-751-3399

E-mail: cancerne@kuhp.kyoto-u.ac.jp



図1 「対訳君」の基本画面構成

- しているため、内容が理解できず上手く訳せない翻訳者がほとんどである。
2. 医学は日進月歩であり、情報を翻訳しているうちにその情報が古くなるので、翻訳はどうしても大量の翻訳者による同時進行で迅速に行う必要がある。
 3. 同じ英語に対して多くの翻訳者が様々な訳をつけるので統制がとれない。

そこで我々は、医学知識を補え、翻訳の時間短縮が図れ、さらには用語統一ができるソフトウェアとして「対訳君」医学版 (http://www.mcl-corp.jp/software/m_igaku.html) を開発した。発売後3年が経過したが、翻訳者だけではなく論文を執筆する研究者からの購入も多い。「対訳君」は、2007年末現在購入者数約2500名とソフトウェアとしては一定の評価を得た製品である。

「対訳君」の画面構成

「対訳君」は、3つの枠から構成される。これらの枠を連動させることにより、効率よく単語やフレーズの意味を調べることおよび文章の構成を学ぶことができる。

(1) メイン枠

メイン枠は文章を編集するエリアである。真ん中にバーを表示させて英語と日本語にわけるとも、バーを消してワード文書のような使い方をすることも、どちらでも選択できる。

(2) 辞書枠

辞書枠は、複数の辞書を一度に申しし検索するエリアで、左側に検索語を含む辞書のインデックスが表示され、そのいずれかをクリックすることで、右側にその辞書の内容を表示させる。この辞書枠は非常に多くの機能を持っており、前方一致検索や熟語検索、語尾補正検索など、様々な検索

• Special English

<http://www.voanews.com/specialenglish/index.cfm>

- 米国への移民に対する英語教育サイト
- やさしい内容のテキスト
- ゆっくりとしたスピードのサウンド
- 教育目的であれば著作権フリー

図2 VOA (Voice of America)

方法を選ぶことができる。図や音声にも対応している。「対訳君」医学版では、「ライフサイエンス辞書」「英辞郎」「医療統計用語辞典」などの辞書がすでに内蔵されているが、それ以外にも、「ステッドマン医学大辞典第5版」など100タイトルを超える市販辞書も登録して、同時に使用できる。また、辞書枠は最大10個まで開き、1つの辞書枠ごとに、英英辞典、医学辞典、国語辞典、英和辞典などの各集合体で辞書をグループ化することもできる。

(3) 対訳枠

対訳枠は、用例を検索するエリアである。医学版では「医学英語慣用表現集」「メルクマニュアル17版」「PDQ最新がん情報」などの医学情報および「英文ビジネスレター集」「MCLオリジナルレター集」などのレター集が内蔵されている。これらはいずれも単なる用例集ではなく、一連の内容をもった情報であるが、1文1文を日本語と英語のペアにして内蔵してあるので、対訳単位で検索することができる。検索してみつけた対訳の前後の文脈を参照したいときには、連続表示というタグをクリックすると、別ウィンドウが開き、その前後を通読し内容を理解することもできる。

この対訳検索の発想は、もともと英文作成のニーズから生まれた。辞書では単語の意味は引けても、文章の組み立てをひくことはできない。例えば、「～を使えば、...できる」などの文書を英語で書こうと思い、辞書でuseを引いてもあまり参考になる例文をみつけることはできない。そんな時対訳検索であれば、最初に「使えば」、次にスペース、最後に「できる」と入力し、And検索を行うと、「使えば」と「できる」が両方含まれた対訳をいくつか検索してくる。そこに記載された英文を見ると、allowを使って表現する構文や、Withを使用する方法、またIfを使うものなど、同じ内容でも様々な表現が使用できることがわかる。「対訳君」は機械翻訳を行わない。検索して得られた情報の中から何をどう利用するかは使う人に任せられている。つ

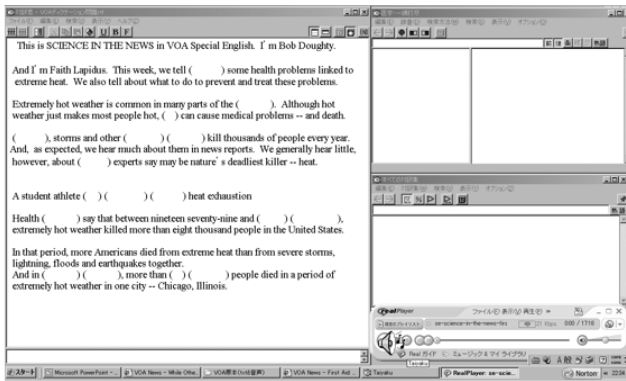


図3 毎回行頭冒頭のディクテーション

まり、人間が考えるべきところは人間に考えさせるツールである。この辺りが、このツールが教育に応用できると考えるポイントである。また同時に、是非学生たちに、「対訳君」を使用することで学んでほしいのは、データベースの概念である。「対訳君」の対訳枠は簡易データベースの機能を備えており、英語と日本語の対訳にこだわることなく、データを登録しておくことができる。登録方法には、エクセルなどを用いて一括大量登録する方法と、メイン枠から1つ1つ登録する方法がある。どちらも非常に簡単で、登録したらすぐにその情報を検索して再利用できる。これらの操作を通して、データベースの概念が理解でき、今後世界中の論文が集まる検索サイトでも、どのようなキーワードや、どのような検索方法を用いれば、求める情報が効率よく得られるかという、いわば良質の情報に対する嗅覚ともいべき感覚が養われる。

目標

医学部卒業時点で、論文執筆、学会発表、質疑応答をこなせる英語力を身に付ける。

この目標は、非常に高い目標であり、現在のような低学年の週1,2回程度の英語の講義時間では通常達成できない。従って、低学年の講義において徹底的に効率のよい学習方法を学生たちに教えこみ、あとは週2,3回のたった5分から10分の努力を行うことでこの目標を達成させることを提案する。

方法

語学のプロ、通訳の養成メソッドを講義に取り入れる。毎回、授業の冒頭にシャドーイングとディクテーションを行う(解説を含め所要時間20分)。その後の講義は自由で、スラッシュリーディング、論文の読解や作成、接頭語や接尾語などの用語学習、英語で行うディスカッションなど自由に展開させる。授業ではPCをプロジェクターにつなぎ「対訳君」医学版と音声再生ソフトを立ち上げておく。



メイン枠下段に予め用意してあった解答

図4 ディクテーションを取り入れた授業例

(1) 教材

教材として推奨するは Voice of America (VOA) のサイトの Special English のニュースである。ここには、音声とテキストがセットになったニュースが常時カテゴリー別に掲載されている。医学生には、特に Health&Medicine や Science&Technology のニュースがお勧めである。この Special English はもともと米国の移民のためのサイトであり、英語が母国語でない人を対象としているので、ニュースは非常にゆっくりとしたスピードで読まれている。また、教育目的の使用であれば著作権の許可を受ける必要はない。パソコンに VOA から入手したテキスト記事とニュース教材をダウンロードしてローカルフォルダーに保存しておく。

(2) 通訳養成メソッド：ディクテーション

ディクテーションとは、音声を聞きながらおこなう穴埋め問題のことである。あらかじめ、VOA のテキストを「対訳君」のメイン枠に貼り付けておき、所々を虫食いにしておく。冠詞を聞き取らせるのもよいし、フレーズごとごとり括弧でくくってもよい。学生たちのレベルに応じて穴あきの量を調整する必要がある。学生たちには、画面と同じ穴あきのテキストを印刷して配っておく。音声再生ソフトより音声を流し、書き取りをさせる。通常は2回音声を流し、その後自己採点もしくは隣同士で採点を行う。

「対訳君」のメイン枠は上下2つに分かれているので、上段に穴あきのテキスト、下段に解答となる元のテキストを表示させておくことで、2段式黒板のように下段を引き上げると、解答が表示される。

採点のあとは解説を行う。「対訳君」では用語をクリックすると辞書と用例集を同時に検索する仕組みとなっているので、プロジェクター内で難しい用語をクリックしながら、用語の意味や、他の文章内での使われ方を解説するとよい。「対訳君」の辞書枠では、100 タイトルを超える市販の辞書を接続することができるが、それらの中には、百科事典、英英辞典、国語辞典、漢字字典など様々なものが含まれる。辞書の検索結果にわからない用語があった場合、その用語

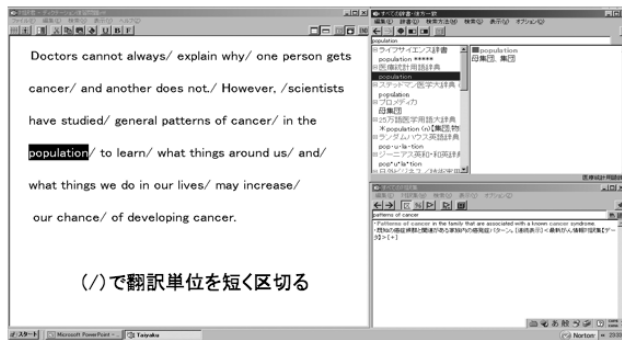


図5 スラッシュリーディング講義例

をダブルクリックすると、今度はその用語で検索が走るので、辞書から辞書へのジャンプがスムーズに行える。従って、英語に限らず様々な調べ物が授業中に行えるので、授業内容の幅が広がるだけでなく、教師の授業前の予習にかかる準備時間が短縮される。

(3) 通訳養成メソッド：シャドーイング

シャドーイングとは、耳から聞こえる音声に陰のようにして復唱する訓練である。他の人の声が邪魔にならないよう、この訓練では通常、学生各自にイヤホンかヘッドホンを配布して行う。一度行ってみるとわかることであるが、意味を理解できていない文章を復唱することは非常に難しい。例えば、習ったこともないような言語をその通り復唱するのは、ほとんど不可能で、その難しさは乱数を暗記するようなものである。一方、意味を理解した文章の場合、表現方法が多少正確でなくとも復唱は比較的容易い。つまり、耳から聞いた音声を正しく復唱しようとするのである。従って、この訓練は一見ヒアリングとスピーキングの訓練のようで、実は、語学習得に必要な3つの能力、すなわち、聞く、理解する、話す能力すべてが鍛えられる。このようにシャドーイングは理想的な訓練であると同時に、過度の集中力を必要とし非常に疲れるので、毎日3分も行えば十分である。仮にこの訓練を歯磨きと同じように、毎日続けることができれば、今回の目標は間違いなく達成できるであろう。多くの研究がこのシャドーイングの効果を報告している。^{3,4}

なお、授業においては、この訓練の後の解説もディクテーションの時と同様で、「対訳君」を用いて用語の意味を確認しながら行うとよい。

(4) 通訳養成メソッド：スラッシュリーディング

スラッシュリーディングとは、文章の意味の切れ目にあらかじめスラッシュをつけておき、そのスラッシュごとのかたまりで、前から順に訳していく訓練である。医師たちは卒業後に多くの英語の論文を読む必要があるが、このスラッシュリーディングの手法をマスターしておくことで、構文が全く異なる英語を日本語に置き換えて理解する際に、

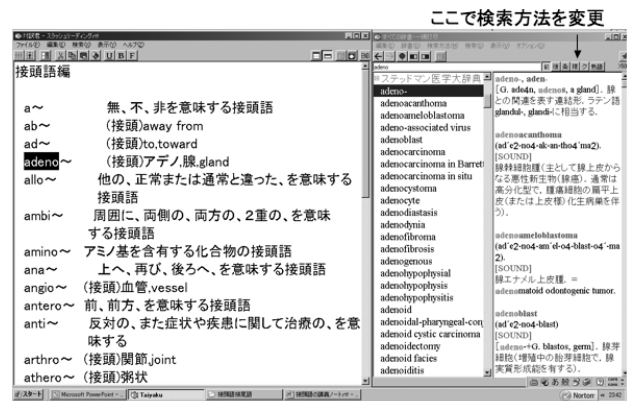


図6 接頭語・接尾語に関する講義例

最後まで読んでから最初に戻って訳し始める必要がなくなり、読解の効率が格段に上がる。つまり、同じ時間で以前より多くの情報を仕入れることができる。

なお、授業においては、この訓練の後の解説もディクテーションの時と同様で、「対訳君」を用いて用語の意味を確認しながら行うとよい。

以上が、通訳養成メソッドを利用した訓練の主だったものである。これらの訓練のうちシャドーイングは講義のたびに毎回行う必要があるが、ディクテーションとスラッシュリーディングは毎回でなくてもよい。重要なことは、これらの訓練を各自で続けることが目標達成に不可欠であるということ、教師が学生に力説することである。

(5) その他の講義例：論文の構成

低学年のうちに論文の構成を教え、専門分野の学習内容について Medline などの論文検索サイトを利用して情報を取得できるようにすることが重要である。授業では例えば IMRAD (Introduction, Materials and Methods, Results, and Discussion) の項目ごとに、記載すべき内容を教え、そのそれぞれにおいて使用される独特の表現を紹介する。例えば Results の項目内でよく見られる significantly different とは統計的にどういう意味を持つのか、また各項目内の頻出用語の特徴などを教える。「対訳君」医学版では、論文の項目ごとに頻出表現をまとめている医学英語慣用語集やメルクマニュアル 17 版 (両著とも書籍として市販されている)、そして論文表現の宝庫である最新がん情報が内蔵されている。例えば、上の例であれば、significantly different をキーワードとして対訳辞で検索を行うとこの表現を含む多くの例文がヒットしてくるので、どのような文脈で使用されているかを示しながら解説すると、大抵の学生はたとえ統計学の深い意味はわからなくとも、有意差という言葉の意味は理解できるはずである。

(6) その他の講義例：接頭語/接尾語

主だった接頭語・接尾語を理解しておけば、ほとんどの医学用語は意味を類推することができると言われるほど、

★ A study randomized patients to receive A and B

★ patients were randomly assigned to receive A and B

★ patients were randomized to receive either A or B

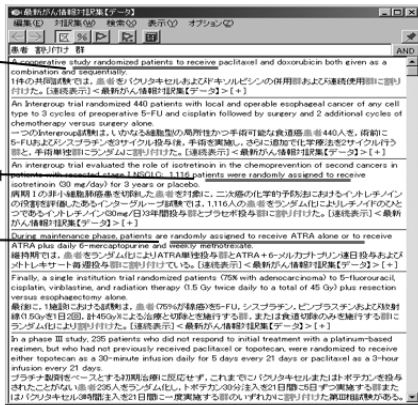


図7 対訳の有効利用(文の構造を引く)

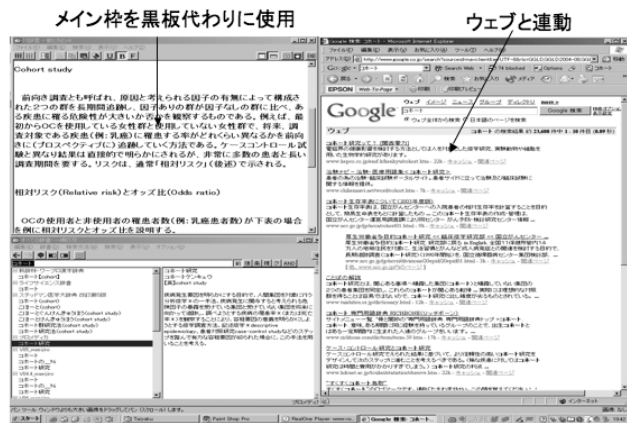


図8 インターネットを利用した講義例

医学英語学習において接頭語・接尾語は重要である。ステッドマンなどの医学辞書が繋がれていることが前提であるが、接頭語は「対訳君」の辞書枠で前方一致検索を行うとよい。例えば、adeno と入力し前方一致検索を走らせると adeno から始まる多くの用語がヒットする。そのそれぞれをクリックしながら意味を示すことで、特に説明しなくてもこの接頭語の意味を理解させることができる。接尾語は逆に後方一致検索を行って表示させる。

(7) その他の講義例：英文作成

辞書を調べると、すべての単語を英語に置き換えることができる。では、それだけで英文を作成することができるか。答えはNoである。どのような構成で文章を組み立てるかが決まらなると英文は書けない。対訳検索とは、文章の構造を引く辞書と考えるとよい。例えば「患者をレジメンA群とB群にランダムに割り付けた」という文章を書きたいとする。この中から適当にキーワード(患者、ランダム、割り付け、群など)をいくつか抜き出し、対訳枠で and 検索を行うと多くの文章がヒットする。それらを見ると同じ内容を様々な文章構成で表現できることがわかる。上記の例では、“patients were randomized to receive either A or B”や“patients were randomly assigned to receive A and B”などのように、patients を主語に受動態で表現する方法もあれば、

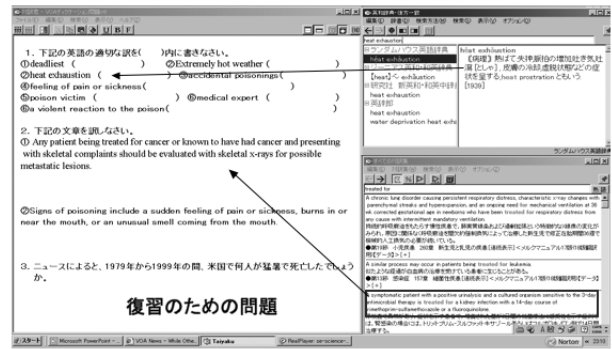


図9 テスト問題を簡単に作成



図10 学内ネットワークでも活用

また“A study randomized patients to receive A and B”研究を主語に能動態で表現する方法もある。また、動詞も assign を使用することも randomize を使用することもできる。さらに either A or B でも単に A and B でも表現できることが分かる。英語では同じ表現を繰り返すより、様々な表現を使用する方が高尚とされている。例えば、日本人の発想では上記の例において、Study を主語に文章を組み立てることはなかなか思いつかないが、対訳検索を行うことにより、作成した文章にバラエティーをもたせることができる。また、この英文作成の過程において様々な英文の構成に触れることで文章構築能力が高まる。英借文と批判されるかもしれないが、書く能力は、とにかく多くの文章を書いてみることで、すなわち、量で形成されるのである。⁵

(8) その他の講義例：インターネット検索

「対訳君」では、メイン枠の用語をクリックすると、辞書と用例集を検索するが、同時にインターネットのグーグルも検索するよう設定できる。また、クリップボードを経由して辞書検索を行う設定にしておくと、プロジェクターでインターネットの生の情報をみせながら、分からない用語については Ctrl+C のショートカットキーで辞書を走らせることができるので、英語の情報でも難なく講義を進めることができる。Medline で検索した論文を表示させながら、そ

の場で難解な用語の意味を調べながら解説が行えるなど、授業の幅は間違いなく広がる。

(9) 教材作成

「対訳君」医学版には「メルクマニュアル 17 版」「最新がん情報」など豊富な医学情報が含まれている。それらの一部をコピー＆ペーストして編集するとテスト問題などの教材を簡単に作成することができる。また、作成した教材をデータ登録しておく、例えば予め設定した記号や「答えなさい」などのテストに含まれそうなキーワードで検索することで、過去のテスト問題を対訳枠で検索し次年度も使いまわすことができる。

(10) 学内ネットワークの活用

対訳枠は簡易データベース機能をもっており、エクセルで作成した単語帳から、ウェブで調べた情報、講義ノートまで様々なデータを登録しておくことができる。例えば、講義のノートをメイン枠で作成し、講義終了後に学内ネットワーク内に保存しておく、「対訳君」がインストールされた PC 同士で共有できるので、講義ノートがそのまま検索可能な参考書として共有できる。

結論

今回提案した授業を実践することで、学生側および教師側の双方に上記のメリットが期待できる。

1. 総合的な能力が身に付く(学生側のメリット)

リスニング・スピーキング・リーディング、ライティング能力を総合的に伸ばすことができる。

2. 授業中の解説の幅が広がる(双方のメリット)

インターネットの情報や、辞書や百科辞典の間をジャンプしながら話を展開できる。

3. 教材準備が非常に楽になる(教える側のメリット)

調べ物が効率よく行える上に、例文がすぐに見つかり、テスト問題も簡単に作成できる。

低学年のうちに効果的な学習法および豊富なデータの中から必要な情報を抽出する方法を身につけさせることは重要である。効果的な学習方法を身につけても、継続して実施しなければ意味がないが、一部の学生でも実践してくれれば幸いである。また、「対訳君」を使用することでデータベースの概念が理解でき、多くの情報の中から求める情報を効率よく抽出する技術が自然と身に付くのではと期待する。これらの情報検索技術は現在のような情報社会において、一生涯役立ってくれるだろう。

参考文献

1. Kanazawa N, Barron JP, Breugelmanns R, and Yamamoto K. 2006. Student attitudes toward medical English as shown by questionnaire. *J Med Eng Educ* 5(2):99-106.
2. Yamamoto N, Noutomi M, Yamaguchi M, and Fujioka K. 2006. Present situation of medical English education from students' point of view. *J Med Eng Educ* 5(2):107-109.
3. 奥山澄夫. 2004. 実践的コミュニケーション能力を高めるために. 神奈川県立総合教育センター長期研修員研究報告 2 : 61-64.
4. 柳原由美子(1994), 「英語聴解力の指導法にする実験的研究: シャドウイングとディティーションの効果について」. *Language Laboratory* 32:73-89.
5. 寺島隆吉. 1996. 量の教育哲学. 現代英語教育年 8 月号.



医学英語検定試験 3・4級教本

日本医学英語教育学会（編）

A5判，172頁，定価2,940円(5%税込)，2007年12月刊行，メジカルビュー社

日本医学英語教育学会が主催する日本で初めての医学・医療に特化した英語検定である「医学英語検定試験（医英検）」の受験者向け教本。2008年4月に第1回試験の実施が予定されている3級・4級試験で出題される「語彙問題」，「読解問題（長文読解，会話読解）」，「プラクティカル問題（写真や図表の読み取り）」，「リスニング問題」の出題傾向や対策についての解説に加え，実際の出題形式に則った練習問題とその解答・解説が豊富に掲載されている。巻末には専門分野別のワードリスト（単語集）も掲載されており，受験準備に最適。



今日から役立つ! 医師のための英会話フレーズ 500 外来診療編 [CD付]

日本医学英語教育学会（編），植村研一・大井静雄・Paul Hollister（編・著）

A5判，144頁，定価3,990円(5%税込)，2007年8月刊行，メジカルビュー社

本書は外来診療の現場で頻用される英会話のフレーズを，問診，臨床検査，生活指導などのシチュエーションごとに分類して紹介し，（解説は最低限にとどめて）音声CDで耳から覚えてもらうことを目的としている。

例えば痛みを感じる箇所を訊ねる場合でも，“Show me where it hurts.” “Where do you feel the pain?” など様々な言い回しがある。1つのことを訊ねるときの言い方を何種類か覚えておき，会話用のボキャブラリー（＝常套句）のバリエーションを増やせば，英会話能力は飛躍的にレベルアップする。

日本人が得意とする文法知識や語彙力を，“外来診療での実践的な英会話力”に進化させる1冊。



今日から役立つ! 医師のための英会話フレーズ 500 学会発表編 [CD付]

日本医学英語教育学会（編），大井静雄・植村研一・Paul Hollister（編・著）

A5判，144頁，定価3,990円(5%税込)，2007年8月刊行，メジカルビュー社

本書は国際学会で頻用される英会話のフレーズを，参加登録，演題発表，質疑応答などのシチュエーションごとに分類して紹介し，（解説は最低限にとどめて）音声CDで耳から覚えてもらうことを目的としている。

学会会場で最初に向かう受付デスクにおいても，“Can I register here?” だけでは不十分なのは明白である。事前登録をしているときの表現，演者登録をする言い方，懇親会の申し込みの言い回しなど，会話用のボキャブラリー（＝常套句）のバリエーションを増やし，英会話力をレベルアップさせる必要がある。

日本人が得意とする文法知識や語彙力を，“国際学会での実践的な英会話力”に進化させる1冊。

【特別講演】

The Current Situation of English for Medical Purposes in China

演者

Bai Yongquan

Dean, School of Foreign Languages, Xi'an Jiaotong University, Xi'an, China

J. Patrick Barron (Chair): Prof. Bai Yongquan spends about one-third of his time in Xi'an, one-third traveling in other parts of China, and one-third outside of China. It's very hard to get hold of him, so it's really a great pleasure to have him here today. He promised Professor Otaki two years ago, when he held a very big meeting in Xi'an on English for medical purposes, that he would come here for this meeting. And he's keeping his promise. He's a senior adviser at the Institute of USA-China Cultural and Educational Exchange, he's chairman of the National Association of Foreign Languages for Medical Science, and he has published over 50 theses and 40 books, including a comprehensive English-Chinese medical dictionary, a contemporary English-Chinese medical dictionary, a contemporary Chinese-English medical dictionary, and also he has translated, among other important books, Dorland's Illustrated Medical Dictionary, and Cecil's Textbook of Medicine. His present research areas are linguistic physiology and the memorization of English words. –Professor Bai, please.

Thank you, Prof. Barron. Actually, my topic was assigned to me by Prof. Otaki when she came to the conference at our university in Xi'an. So, I will show you a general picture of medical English in China.

1. English language education in China

Slide 1 gives you the general picture of English language education in China. We start from primary school, but English is an elective at this level. In big cities like Xi'an, Shanghai, and Beijing, it's required, but in the villages and mountains it's an elective. In big city schools, the total is 2 to 4 hours a week for 3 years (4th, 5th, 6th years). English becomes serious, indeed compulsory, in middle school. We have junior and senior middle school 3 years each, so the total is 6 years here, where English is compulsory, 4 hours a week.

At the university undergraduate level, it's compulsory, and it's taught for 4 to 5 years, 4 hours a week. In most schools it becomes 3 years (1st, 2nd, 3rd year). Then you come to graduate programs. For master's degree students, usually 2 to 3 years of English are compulsory, 4 hours a week, 1 semester or 1 year. Then for doctoral students, it's an elective, 2 to 4 hours a week, for 1 semester or 1 year. This is usually done in remote areas, not in really well known universities. In well known universities, no English is offered at the doctoral level. So, the English education required total is 10 years.



演者紹介： Bai Yongquan (白永权) 氏

The Dean of the School of International Studies at Xi'an Jiaotong University, Director of English Training Center at Xi'an Jiaotong University attached to the Ministry of Health, Chairman of Academic Degree Appraising Committee in the School of International Studies, Chairman of Medical English Committee under Chinese Medical Association, etc.

Prof. Bai graduated from the English Department at Xi'an University of International Studies, majoring in British and American Literature.

As an established scholar, Prof. Bai is Visiting Professor of the School of English at University of Utah in United States, Chief Editor of Medical English Coursebook Series programmed by the Ministry of Health, Chairman of the Editing and Revising Committee of Medical English Coursebook Series programmed by the Ministry of Health, Group Leader of National Entrance Examination Assignment of English for Medical Doctor Candidates, Member of the National Guiding Committee for Foreign Language Teaching in Higher Educational Institutions.

Level	Years of schooling	Status of English course	Hours weekly	Duration
Primary school	6	Elective	2 to 4	4 th to 6 th year
Junior middle school	3	Compulsory	4	3 years
Senior middle school	3	Compulsory	4	3 years
University	4 to 5	Compulsory	4	1 st to 3 rd year
Master's degree	2 to 3	Compulsory	4	1 semester or 1 year
Doctoral degree	3 to 5	Elective	2 to 4	1 semester or 1 year

Slide 1. English Language Education in China in General.

English tests

Slide 2 shows the compulsory English tests. A person is required to take all these tests before becoming a professor. He will not take any language test after he is formally promoted to professor status because, at that point, he's an administrator of language tests. The English tests start from the junior middle school admission test, then the senior middle school admission test 3 years later. And in the university admission test, English is required. There's a national test for admission to universities all over China that we call the "black jewel" examination. Then at the end of their university studies, students have to take a college graduation examination. It's required. If you pass this test, then you get your degree and you can graduate. If you fail to pass the test, you will graduate, but without the diploma. You can come back in 3 or 4 years to sit for the test again, and after you pass the examination, you get your diploma. This is a very tough requirement.

The admission test for the master's degree program requires English. And also for the doctoral program. Those students will follow normal courses, then they have to pass an English test for promotion, and after graduation, if they want to start work in a university as a teacher's assistant (TA). And if you want to get promoted to lecturer after that, then you have to sit for another test. And to become an associate professor requires a further test, and so on until one becomes a professor. So in all, a person in an academic area has to sit for 9 English tests. No choice.

Till 1993, we had the Cambridge English test for

Name of Test	Status
1 Junior middle school admission test	Elective
2 Senior middle school admission test	Required
3 University admission test	Required
4 College English band-4 and band-6 test	Required
5 Master's program admission test	Required
6 Doctoral program admission test	Required
7 English test for promotion to lecturer	Required
8 English test for promotion to assoc professor	Required
9 English test for promotion to professor	Required

Slide 2. English Tests a Person Has to Take Before Becoming a Professor.

preschool children. And now we see a very strange phenomenon in China: parents wish to offer English language education to their kids starting from 3 or 4 years of age, before they go to school at 6. So when a kid is 3 or 4 or 5 years old, the parents send them to take this Cambridge English test. It's from level 1 to level 8, an elective. And then, once you start learning English in school, you have an achievement test at the end of each semester. So we don't know how many achievement tests we have had at school.

After you graduate from university, you have job interviews where it's like getting a business English certificate (BEC) or professional English testing system (PETS); those are popular in China. You have to sit for these exams. Otherwise, you won't be hired. And if you're a researcher and want to continue your research, you have to get a scholarship, and for that you have to pass a scholarship test for study abroad. Here you have TOEFL, GRE, IELTS, and GMAT.

"Chinese English"

Now with that big picture in view, I'd like to say that English in China is not English itself anymore. English language education is a kind of religion of education in China today. There have been heated debates about this on TV. English is a religion now in China. Religions are not allowed in China, but they're allowed in English countries and a part of Western culture and those things. And some people say also that English has become common in China because we have 300 million people who speak English or who are learning English in China! We

Academic Organizations of Foreign Languages for Medical Purposes

- Chinese Society for Foreign Languages for Medical Purposes (Xi'an)
- Association of English for Medical Purposes (Xi'an)
- Association of Japanese for Medical Purposes (Northeast Xi'an)
- Association of French for Medical Purposes (Shanghai)
- Association of Russian for Medical Purposes (Harbin)
- Association of German for Medical Purposes (Wuhan)

Slide 3. Academic Organization of Foreign Languages for Medical Purposes.

say that in the world we have British English, American English, and African English, and the next one now is Chinese English with a Chinese accent, Chinese culture and Chinese phrases. When people in other countries meet each other and the weather is good, they say, "Good morning. It's going to be a lovely day today." In China, they say, "Good morning. Have you had your breakfast?"

2. China's medical English program

Now we get to our main topic. The first medical English program in China started in 1903 at Beijing Medical University, according to the records. The Western missionaries came together there and they ran the first Western medicine program in China. They used English textbooks, and medicine was taught in English. Everything was in English, and the teacher was English. This continued into the fifties, and the students' English was generally very good; they were taught general and medical terms. Realizing it's very important to help the students enlarge their vocabulary, a kind of doctor or a person who had a medical background and knowledge and also expertise in teaching English started a program just to help them enlarge their vocabulary; this was the EMP course. The first syllabus for medical English and the first set of textbooks were published in 1961. That became official, published by the Ministry of Public Health, and it was closely related to government policy.

Five languages for medical purposes

The first set of textbooks of Japanese for medical purposes was published in 1978. First, English, then came Japanese, then Russian, French, and German. So those are the five languages taught in Chinese medical schools. Actually, we use English for medical purposes as pivot language for training in all the other languages. The first English-Chinese medical dictionary was published in 1957. Then two English-Japanese medical dictionaries (one by Yasumasa Aoyagi in 1958 and one by Teizo Ogawa) and *The Usage of Medical English* (by Mitsunao Kobayashi in 1972). These were best sellers at that time.

3. Foreign language academic organizations

We have a national organization called the Chinese Society for Foreign Languages for Medical Purposes (slide 3). The headquarters of this society, which I'm the president of, is in Xi'an. Underneath this society, we have 5 associations: the Association of English for Medical Purposes, the Association of Japanese for Medical Purposes (Japanese for medical purposes in Northeast China and also in Xi'an, which is where the 1st military hospital was built); the Association of French for Medical Purposes at Shanghai (the 2nd medical university), Russian for Medical Purposes in Harbin (Harbin Medical University); Association of German for Medical Purposes in Wuhan (that is, Tongjin).

Each association has its own activities and holds its own meetings every 2 years, plus they hold joint meetings with the umbrella association. We hold national conferences every 2 years and regional initiatives; that means if we have a national conference this year, next year it will be a regional conference, and the year after next, national again. Then we have advisory services for furthering educational policymaking in China. We have close contacts with the Ministry of Education and the Ministry of Public Health about revision of the syllabus, evaluation of teaching at the different medical schools, and schools' policymaking (which gives them certain advantages at the ministry). It is also the job of the Ministry of Education and the Ministry of Public Health to authorize the society to work out a syllabus and evaluation policies.

The associations also organize textbook writing and translation. We publish a lot of books and translations, and because we have a huge medical school population (in all of China, over 3,400 teachers in medical schools and universities) and organize the teachers' training, we

offer different programs, from 3 months up to 3 years. Three-year programs, that means graduate programs. And 3-month programs are just for short-term training, either teaching methodology of medicine or of language. We publish a newsletter that is sent to each member of the society. And we organize special activities like academic competitions, translation competitions among students and translation competitions among teachers, and writing competitions, and debating and different sorts of activities at the national level.

We have one more EMP organization, called the Association of English for Traditional Chinese Medicine. Its members mainly attend traditional Chinese medical schools all over China. I think now we have about 30 schools of traditional Chinese medicine.

4. English for medical purposes

We have many different programs of English for medical purposes. First, EMP as a compulsory course for all medical students, including undergraduate, graduate, and doctoral students. For medical undergraduates the total teaching hours range from 288 to 360 hours, 4 hours each week, 5 to 6 semesters, which means from two and a half years to three years. In the first 2 years, students have 4 semesters of general English. We call it by a new term, "college core English." This is a new term from the Ministry of Education; 8 years ago, they called it "common core English," which means English as the core language, whatever discipline the student will go into and study. College core English has 288 teaching hours. All universities for the first 2 years of English have 1 syllabus and use standard textbooks from the Ministry of Education. Because China is so huge, with 1 standard it's impossible to represent the practical situation of medical universities in both the big cities and the remote areas. You pass a national college English test: Band-4 for average students, and Band-6 for good students. Whether they're average or good is decided by the students themselves. Students can choose whether to take 5 semesters or 6 semesters, and if they want to take the Band-4 exam, that's all that's required. When students finish their English education, after 4 years in university, they have to get a certificate to show that they passed.

In medical school, students study English during the first 2 years. Then they begin their major studies in the third year. From the medical school level, we have just 72 hours for medical English only. So we can only teach

EMP as a University Major

- EMP became a university major in Xi'an Medical University in 1989
- The aim is to train the students to be English teachers in medical schools and Translators and interpreters for hospitals, government agencies, health-related professions, business companies and medical publishers

Slide 4. EMP as a University Major.

the students to read and expand their medical vocabulary, just listening and speaking, but no time for writing. We have debated this for many years: we spend too many hours on general English; so we've been trying to push the Ministry of Education to take a little bit from elsewhere and put it here. The professors are of this opinion: After 3 years of learning English, their general skills are very good in reading, listening, and speaking; they can talk about daily things. But they are still poor at reading medical literature and doing translation, and at writing medical papers or clinical daily medical writing, and those 2 functions are very big. So the professors think, if we could increase the total hours to 144, then they would have more time to teach the medical students to read medical papers and to translate and write.

The situation 10 years ago, before we had the college English tests and before this new system was introduced, all the 288 or 360 teaching hours were for medical English. At the time of admission, the students' English level was generally very poor; then after graduation, after 3 years of English, they could read, and they could translate very well. But now, their general English level is very strong, but their medical English has become weaker. That's the situation now for medical undergraduate students.

For medical graduate students, students working toward a master's degree, total teaching hours range from 72 to 144 hours. We teach them 1 to 2 semesters, 4 hours each week. The purpose is to teach them to read medical journals and books, write research papers, present their research papers at conferences, and communicate with experts in their field. So for graduate students, the course is all right. But for doctoral students, English is an elective.

The Latest Trend in Medical English Education

- English is taught in one of three modules:
Chinese lecture with English textbooks
English lecture with Chinese textbooks
English lecture and English textbooks
- 20% of medical courses are taught in English

Slide 5. The Latest Trend in Medical English Education.

EMP as a university major

The second program is English for medical purposes as a university major (slide 4). This is something unique to China, not found even in Europe, so far as I know. In China, we have 148 medical universities and medical schools. We need, minimum, about 5,000 language teachers in these 148 schools. Most schools have difficulties getting enough qualified teachers who have a medical background and are good at English. So starting in 1989, EMP became a university major at Xi'an University (Xi'an University does not exist anymore; it has become part of Jiaotong University).

The aim of this program is to train students to be English teachers in medical schools, all medical English teachers, and to become translators and interpreters in hospitals. The big city hospitals all have a section to help foreign people with translation and interpretation, because, as you know, hospitals have exchanges with other hospitals in the world, so when visitors come, you need interpreters. Translators and interpreters are also needed by government agencies; the Ministry of Health has a big section called the Department of International Cooperation; they have about 30 people who studied at foreign universities and who speak very good foreign languages and know medicine. Government agencies need people like that. The provincial health bureaus also have an international office. They need people, interpreters mainly. And in health-related professions, for example, international organizations like the Red Cross and the World Health Organization who set up agencies in China for surveillance about SARS and bird flu, need people who know English and know medicine in general. And business companies, particularly drug companies, they sell Japanese drugs to Chinese hospitals and need somebody who knows Japanese and knows about medicine. The same for medical publishers: China has lots of books

and journals in English, and also the journals that publish in Chinese require the abstracts to be in English. So they need people who do the editing and the translations. These are the main purposes of the program in EMP as a university major.

EMP as a university major is a 5-year program. This means that students study for 5 years during university (three and a half years they study English and for one year and a half they study general medicine). General English skills training takes place during the first 2 years, and each week they have 18 hours of medical English. After that, for students whose major is English, they have to take a national language proficiency test at the end of the second year. By the time students finish their first year, they speak English pretty well actually, because of 18 hours of intensive training weekly for 2 years.

Even after the tests, they have to continue learning advanced English from the third year. Medical English (reading medical literature) and medicine also continue from the third year to the fifth year. From the medicine curriculum they take almost all the same medical subjects as do medical students. Not all, but almost all. The difference is only 15 hours, and what they study is very general. In Anatomy they just study general structure and don't have to remember the names of blood vessels or of each part of the body. They also take Physiology and all the preclinical and clinical courses of the medical curriculum, but only 30 hours. Normally, in Anatomy for medical students, medical students will spend 200 hours, but most of the EMP students will just have 50 or 40, very general. They don't have to go to the laboratory to do research, and they don't go to hospital to have clinical practice.

Either the textbook or the lecture is in English (slide 5). One has to be in English and the other has to be in Chinese. If everything is in English, students don't learn the Chinese equivalents. They know what something is called in English, but if you ask, "What's the Chinese equivalent for that," they say, "I don't know." That's really a problem if they're going to be interpreters or translators. So here we do either the lecture or the textbook in Chinese and the other in English. Then after they get a Bachelor of Arts, they will really be welcome everywhere.

By the time these EMP majors come to their third year, they already have sufficient work on the side and there's much more demand than supply. There are now 5 medical universities in China offering this program; each

year about 120 students graduate from this program.

EMP for master's degree

EMP for a master's degree is also unique to China. It's like another layer above the undergraduate program, so it's a 3-year program. It also started at Xi'an University, in 1991. It's designed to train senior and highly qualified medical English teachers, translators, interpreters. Through this program we offer advanced courses. The students are selected from among medical English majors or from medical students. Some have just graduated from medical school. After 3 years of the EMP master's study and graduation, many will be working for the key medical universities in China. Many do medical research instead of studying anymore. Their research topics are usually related to medical English teaching methodology, medical English textbook writing, theoretical and practical aspects of textbook writing, medical paper writing and rhetoric, bilingual medical dictionary writing, medical translation and interpretation skills, and medical terminology. One of my students did a thorough study on this area, medical terminology, and she found that if you teach the students 60 combining forms, their vocabulary will suffice, because with these endings, different endings can be different terms. And also we do a needs analysis on English for medical purposes. So the students have really a good chance for jobs.

Medical language training centers

We have 8 medical foreign language training centers, supervised by the Ministry of Public Health and the World Health Organization: 3 English, 2 Japanese, 1 French, 1 Russian, and 1 German. The Ministry selects doctors and nurses and sends them here for job training. The training usually lasts for three months to a year; that depends on the English level when they come, and on their need for English in the future. The first aim is to offer an intensive course to doctors and nurses so that they can win an international scholarship, such as the Monbusho scholarship from Japan. The second aim is to help doctors pass the test for promotion, because doctors need to be promoted after graduation every 5 years, so the language test can determine whether you are promoted. And to communicate with foreign colleagues is the third aim. At present, only 6 of the centers are functioning.

Another program is that each provincial health bureau has a foreign language training center to train doctors and nurses who go on to work in Chinese med-

ical teams everywhere. Now we have many: each province has at least one medical team in every country. Some have 13. The trainee learns English and also one other language. It's an intensive course, for 6 months.

The teachers of medical English

Each medical university or medical school has a Foreign Language Department with 10 to 50 teachers of those languages. Most teach English. All the teachers have some medical background, and teacher promotion is based on teaching, publishing, and research. The teaching requirement is 8 to 12 hours a week, each class has about 40 students, and the teacher teaches 2 or 3 classes. You have to publish 2 papers in well known journals or publish 1 book during the 5 years, and you have to gather research grants and research awards.

We have just 4 ranks: teacher's assistant (TA), lecturer, associate professor, and professor. From TA to lecturer, you do more teaching, no research, so you have to be qualified by your teaching. If after 5 years you want to get promoted to lecturer, a professor comes and sits in your classes and observes, to see your teaching methodology and the organization of classes and your instruction of students. After another 5 years, to be promoted to assistant professor, that means more research and you teach 8 hours and you have to write; and then another 5 years to professor. After you go to professor, you do more research, then you supervise young teachers and maybe you teach 1 class. Retirement age is 60 years.

The teaching methodology before 1985 was pretty much translation in Chinese. English was taught in Chinese: teachers and students would analyze the grammar and structure and translate each word into Chinese, and finally the meaning of the whole sentence in Chinese. This method is good for reading and translation. Along the way, the teacher has to explain things such as punctuation: Why is a question mark used here? Why is there this punctuation? Why is there a comma here? So the teaching was very slow in those days; the class would spend an hour on just half a page. It was accurate, but this method is bad for listening and speech. Now we use a communicative approach, good for listening and speaking, but poor for reading and translation. So we often use an integrated, bilingual method: whenever we teach reading and translation, we might use grammar translation; when we teach listening and speaking, we use the communicative approach.

Medical English textbooks

At the national level we have 3 sets of textbooks: advanced, intermediate, elementary. Really we face very strong challenges in the medical English field, because these medical universities were merged into comprehensive universities 5 years ago, and the Medical English Department in the medical schools has now become a part of the Foreign Language Schools. It has become increasingly what you'd call literature. So medical English is a victim of college English, because college English is intensive and takes up a lot of teachers. Future English for medical purposes in 5 years is likely to come back to medical English. When students finish college English Band-6, their English is advanced, and we have a new curriculum, a new syllabus for high schools, which is equivalent to college English Band-4, so that means that when students come to university, their English now is pretty good and they have no need to learn general English. Future EMP will re-emphasize a bridge course, 140 hours of teaching, with emphasis on terminology, medical paper writing, daily English medical writing, and presenting papers at conferences.

Thank you.

Discussion time

Barron: Thank you very much, Professor Bai. I would like to ask, roughly how many teachers of EMP are there in China?

Bai: Five years ago, we had fewer than four thousand, but now the leading medical universities have become part of comprehensive universities, and the department of medical English has become a part of the linguistic section. So most of the teachers who used to teach medical English now teach general English. So it's hard to say how many we have.

Barron: I see. Any other questions?

Christopher Holmes (University of Tokyo): What's the male-female ratio in your medical schools and then in the English for medical purposes programs?

Bai: In medical schools, half the students are male and half are female, half and half. But in our English for medical purposes program, I think now 70 percent are female. And as for the teachers in this section, most of them are female.

Barron: Thank you very much, Professor Bai.

Recorded at Kanazawa on July 15, 2006.

Transcribed by Christopher Holmes,
put into digest by the editors of *J Med Eng Educ*

日本医学英語教育学会 第9回総会

【Symposium】

米国留学準備教育

座長

元雄良治

金沢医科大学

1. 海外臨床実習とその準備教育

松井秀親 (東邦大学医学部医学科英語学研究室)

2. 米国のレジデント研修に日本人医師が参加する方法

大石 実 (日本大学医学部)

1. Overseas Clinical Clerkship and English Education

Hidechika Matsui (Toho University School of Medicine, Department of English)

英語教育の視点から、東邦大学における海外臨床実習とその準備教育についてお話をさせていただきます。東邦大学では6年時に選択制臨床実習という教育が行われておりますが、その中で国内の病院を選ぶ実習をするのか、それとも海外の大学なり、海外の病院を選ぶ選択制臨床実習を行うのかということで分かります。その中で、私は海外で選択制臨床実習を行うという学生に、それに向けて準備をさせていくという責任を負ってきました。

海外臨床実習を行った学生は、私が赴任した2002～2006年にかけて、実数では10人、8人、6人、5人、8人と推移しています。また、海外臨床実習は通常4～8週間行われますが、8週間行う学生はすべて同一の国、病院にいななければならないということはありません。そういうわけで、1回の海外臨床実習について2ヵ国を訪ねる場合もあります。そういう意味で、延べ人数では11人、9人、6人、5人、今年10人ですけれども、そういう形で推移しています。

この中で、東邦大学の海外臨床実習の特徴というのは、観点によりますけれども、2つあると思います。1つは、イギリスにおいては実習学生が途切れることがなかったということがあります。2002～2006年まで、3人、3人、4人、2人、4人という形で、毎年2人以上の学生を派遣しています。それは、東邦大学とシェフィールド大学、それからリバプール大学の医学部と、Memorandum of Understanding (MOU) という形で、主に学生の交換ですけれども、相互友好協定を結んでいます。そのことが大きいかと思われます。

東邦大学の海外臨床実習でのもう1つの特徴は、東南アジアに学生が多く行っていて、毎年何名か必ず行くという

ことです。例えば2002年度では、東南アジアのソクラ王子大学とチェンマイ大学に合計3名、海外臨床実習を行っています。また、2003年度でも同じように3名、ソクラ王子大学、チェンマイ大学。2004年度はまた東南アジアで、ソクラ王子大学へ2名。2005年度も1名行っています。今年、2006年度は残念ながら、東南アジアには、主にタイですけれども、1名も海外臨床実習を行っていません。

こうしたなかで言えることは、東邦大学の医学部の1学年の人数は大体100人ですから、1割前後は必ず海外実習を行うという傾向があります。

その中で、私たちはどういう形でこの海外臨床実習を進めているか、「I. 海外臨床実習資格試験日程について」ということですが、海外臨床実習を行うための資格試験を行っています。これは6月末から7月初め、つい最近終わったところですが、臨床実習の説明会、報告会を行います。そのあと、9月初めに資格試験の受験申込書を提出させます。そして9月半ばに、海外臨床実習資格試験の筆記試験を行います。9月末から10月初めにかけて、面接試験を行います。この面接試験は、英語で行います。ネイティブ・スピーカーが1人、それから日本人ですけれども、インタビュー程度の英語はできるだろうという先生方を含めまして、4人がインタビュアーとして学生にインタビューします。そこではもちろん、どうして外国で臨床実習を行いたいのかという動機について質問したり、またそのための準備はどのくらいしてきたのかということについて質問をします。

学生を支える教育体制

こうした形で、毎年海外臨床実習を行っているわけですが、それを支えていく教育体制についてお話をさせていただきます。これを支えていく教育体制、といいますと大げさですが、一般論でいいますと、やはり東邦大学医学部の英語教育全体が支えていると思います。ただ、その中でまず特徴的なものとして、CSAコースというものを当大学では設けています。これはClinical Skills Assessmentコースというものですけれども、海外臨床実習の資格試験に合格した学生、先ほど申しましたように、毎年10名前後がこの試験に応募し、1人ぐらいいは落ちてしまうこともありますけれども、ほとんどが受かります。そして、合格した学生にはこのCSAコースの受講を義務づけています。これは、カプラン (Kaplan) というエデュケーションナルサービスの会社から、英語で臨床実習のスキル、あるいは問診などを行えるドクターを派遣していただいて、そのコースを受講することを学生に義務づけています。

CSAコースは、20～30時限、毎年10～11月一杯、2月の初めぐらいまでかけて行います。そして、学生が10月～2月まで実習を行い、そして3月末から4月、5月という形で海外に出かけるわけです。要するに、海外臨床実習の直前の準備コースということで、このコースを設けています。

それから、United States Medical Licensing Examination (USMLE) というコースもあります。これは、正規の科目として設けているわけではありません。つまり、単位取得科目として設けているわけではないのですが、自由選択科目として、興味のある学生が選択できることになっています。少ない学生ですが、毎年1人ぐらいいはStep 1に合格する学生が出ています。毎年5～6名でしょうか、興味のある学生が自主的にこのコースに参加して、いろいろ勉強しているようです。

海外臨床実習を支える教育体制は他にも「1. 選択科目『国際化コース』の充実化」「2. ネイティブ・スピーカー中心の教員構成」「3. 東邦大学入学試験に占める英語の配点の割合」があります。

まず「選択科目『国際化コース』の充実化」ということについて説明させていただきますと、この国際化コースというのは、従来、東邦大学はコースのオファーが単位制ではないのです。これは私が医学部に不慣れだったものですから、赴任した当初は「何でこんなことをしているのだろう」と思ったのですが、単位制ではなかったと。それが、2004年度から東邦大学は3学期制を2学期制に改めました。それと同時に、学生にオファーする科目のうちの一部を、特に選択科目を単位制とすることにしました。そのことによって、英語の選択科目数が飛躍的に増加しました。それからまた、英語の開講授業が1年生だけでなく、2年生、3年生にその対象学年を広げることができました。

2002年に私が赴任したときは、英語は1年生にしかオファーされていなかったのです。2003年も同じような状態だ

ったのですが、2004年度からは、いま申しあげましたように、単位制を一部科目に導入する、そのことによって英語の科目数がすごく増え、またオファーする学年も2年、3年と上がってきています。今度はまた4年まで上がりますので、そうしますと、1年生のときに英語ができた連中が、好きな学生は2年、3年、4年でまた英語を選択できるわけです。そして5年、6年次の海外臨床実習につながっていくという橋渡しが、やっとできるようになりました。2002年度、2003年度は、それができていなかったのです。それができるようになったことというのは、すごく大きいと思います。

試みに、2006年度では、英語の開講選択科目数は教養英語のレベルでは15科目あります。また、基礎医学レベルでは、選択科目数は7科目あります。また、専門医学英語教育、高度に専門的とは言えないかもしれませんが、一応専門医学英語教育レベルでは、選択科目数として英語の科目が2個あります。東京医科大学のような形で、臓器別というような専門的なものではありませんけれども、一応そういう形で、オファー数がすごく増えているということです。それから、学年が2年、3年、4年と取れるようになってきている。そのことが非常に大きいと思います。

最後にちょっとつけ加えさせていただきますが、2006年度では英語の選択科目について、1年次学生は17科目の選択の幅を持っています。それから、2年次学生は18科目持っています。これは、その中から選択できるわけです。それから、3年次学生が8科目持っています。ですから、かなり幅広くオファーできるようになってきています。来年度は、4年次学生にもこれが波及すると思います。

その次ですけれども、「2. ネイティブ・スピーカー中心の教員構成」ということですが、これは大学の英語教育ならむしろ当然なのですが、東邦大学では常勤は私1人が日本人です。あとの1人がアメリカ人、もう1人は英語と日本語の純粋なバイリンガルです。それから非常勤は7名いますが、そのうち6人がネイティブ・スピーカーです。1人は基礎コース担当で、日本人ということになっています。これは当然なのですが、専任教員3人のうち2人がネイティブ・スピーカーで、それから非常勤講師7人のうち6人がネイティブ・スピーカーであると。そういうことが挙げられると思います。

そして「東邦大学入学試験に占める英語の配点の割合」ということがあります。これはなぜ挙げさせていただいたかと申しますと、東邦大学では入試に占める英語の配点が非常に高いのです。これは、ありがたいのか、厳しいのか。私は、いつもありがたいと思う反面、厳しいなとも思っているのですが、東邦大学の入試の点数の科目配点は、次のようになっています。英語が150点、数学が100点、理科が150点。理科は、物理、化学、生物の3科目のうち2科目を選択すると。つまり、物理、化学、生物は各75点で、そのうち2科目選択して150点なのです。それと同じ点数が、英語に与えられています。つまり英語150点、数学100点、

理科が2科目で150点ということです。合計400点のうち、150点が英語です。37.5%が英語の配点ということになります。入試において、100%のうち37.5%を英語が占めるというのは、私の感覚では非常に高い配点だと考えています。

また「海外臨床実習を支える教育体制」ということでいまお話しさせていただいたのですが、ここに書かなかったことで、1つ挙げたいことがあります。それは東邦大学の前身が実は帝国女子医専だということです。女医さんを育てる学校だったということは、大きいのではないかと考えています。と申しますのは、毎年新入生が100人いるのですけれども、そのうち30~40人が女子学生なのです。女子学生というのは、語学が好きなのです。ありがたいことに、語学が好きです。そういうわけで、男子学生に比べて女子学生が入りやすいということがあるかもしれません。

このような教育体制の中で、海外臨床実習を積極的に進めています。今後の方向としましては、先ほども申しあげましたように、東邦大学の海外臨床実習の特徴としては東南アジアが多いということだったのですけれども、今年は東南アジアで海外臨床実習を行う学生がいません。それはどうしてかと申しますと、今年は全面的に私が責任を負ったのです。そこで「好きなところを選んでよしい」と言いました。いままで東南アジアに行っていたのは、東南アジアのチェンマイ大学、ソクラ王子大学と東邦大学が姉妹校協定を結んでいたもので、それで何人が派遣する必要があって派遣していたのですけれども、もちろん自分の意志でそちらで臨床実習をやるという学生も多かったのですが、自分の好きに選んでよいということにしました。そうすると、やはり学生はアメリカとかイギリスに行きたがりです。そういうわけで、今年はイギリスに4人という形で、すごく人数がふえています。それからアメリカに2人ということで、今年は延べ人数で10人行きましたけれども、アメリカには2人、イギリスには4人行っています。アメリカはウィスコンシン医科大学とコーネル大学に1人、これは優秀な学生だったのですけれども、行って勉強しています。イギリスは、先ほど申しあげましたように、シェフィールド大学とリバプール大学にそれぞれ2人留学しています。

現在、東邦大学医学部としては、アメリカを希望する学生が多いものですから、ウィスコンシン医科大学と友好協定を結び、そこに学生を恒常的に派遣できるように努力しています。それから、いままで出ささせていただきました海外臨床実習の学生の人数の資料はオフィシャルなものです。オフィシャルでなければ、ハワイ大学などにもけっこう行っています。そうしたルートも、オフィシャルでないものをオフィシャルにしていく、行く行くは恒常的にハワイ大学にも学生を派遣できればと思っています。

留学の鍵：TOEFL

そのときにいちばん問題になるのは、やはりTOEFLのス

コアーです。TOEFLのスコアと、それからアメリカの場合にはStep 1が必要だということなのですが、アメリカのウィスコンシン医科大学では、友好協定を結ぶということでTOEFLの点数を230点ぐらい、コンピュータベースで要求してきます。ただ、私どもの学生にはそれだけ取れる学生がいないのです。だいたい頑張って200点をちょっと超えるぐらいなのです。そのところが、医学生としての資質の真面目さとかよさをわかってもらって、友好協定を結ぶと。そういうことによって、少しTOEFLのスコアが低くても受け入れもらおうということは考えています。

それからもう1つ、東邦大学にとって明るいニュースがあるのですけれども、この間、先ほど入学試験が400点中150点が英語だということを申しあげましたけれども、その甲斐があつてかどうかわかりませんが、2006年度の学生は非常に英語のできる学生が集まりました。ここに具体的な資料がありますが、昨年2005年度は、私たちは新入生が入ってきたときにクラス分けテストとして、pre-TOEFLというテストをしています。そのpre-TOEFLのテストは、従来のTOEFLの点数と対応するものとしては、500点が最高点なのです。それ以上は正確には出ないだろうということで、500点になっています。それが、2005年度は500点が100人中2人、450~499点が25名だったのです。つまり、450点以上といたしますと、だいたいアメリカで日常生活が送れるくらい、500点以上といたしますと、アメリカの大学で勉強ができるくらいと言われていますが、それが30%弱だったのです。これは、実は2002年、2003年、2004年、2005年とずっと30%弱、あるいは前後だったのです。ところが、2006年度入学者に関しましては、これは私は驚いたのですが、pre-TOEFLのクラス分けテストで500点を取った学生が9名いました。それから、450~499点が39名います。信じられないです。合計で48名です。つまり、100人の入学者のうち半分ぐらいが450点以上取っている、9人が500点を取っていると。

そういう中で、私たちがpre-TOEFLの結果をもう少し詳しく分析しましたところ、やはり女性の入学者が増えていて、そして帰国子女が増えていているということです。そのことで、私としては、東邦大学の医学部の英語教育の将来は帰国子女にかかっているのではないかと考えています。

東邦大学のスローガンは「よき臨床医の育成」ですけれども、これからは「世界の臨床医の育成」というように私はやっていきたいと思っています。

どうもありがとうございました。

Summary

Background. In medical universities in Japan, the curriculum rarely provides English courses for upperclassmen. To pursue a clinical clerkship abroad, therefore, 6th-year students often face handicaps in the language. Toho University School of Medicine changed from a 3-semester to a 2-semester system in 2004, and credit

bearing elective courses were introduced into the curriculum. The number and quality of elective English courses have gradually increased in the "International Curriculum," intended to bridge the first-year required English courses with the sixth-year optional overseas clinical clerkship. A variety of English courses are now offered as electives in the first through fourth years, allowing students to continue learning English, so that they will be better prepared for overseas clinical clerkship in their sixth year.

Objective. In this symposium, we have evaluated what has been accomplished in the past five years' experience in the overseas clinical clerkship and English education of Toho University School of Medicine and considered what remains to be done to advance the primary educational goal, i.e., to mold superior clinicians. We also compared the results of Pre-TOEFL placement tests given to first-year students in the 2005 and 2006 academic years, particularly in the light of the relatively higher scores of the 2006 group.

Conclusion. The results of this project suggest that by including elective courses in English for students in the upper years of university, Schools of Medicine in Japan can help their students to become more competent in the English skills necessary for clerkships abroad.

《質疑応答》

【元雄良治（座長）】どうもありがとうございます。東邦大学医学部における、本当に興味深いお話でしたけれども、いろいろ海外臨床実習に学生さんを送り出している大学も多いと思いますが、どなたかご質問は。

【植村研一（横浜市立脳血管医療センター）】私も浜松医大とか愛知医大にいたときに、海外留学をいろいろ考えたのですが、特にアメリカの場合、臨床実習といふのがなり医療行為をさせるものですから、医療過誤保険に入っていないとだめだということで、その医療過誤を含めた提携がないと採らない大学もあるのです。こういう大学では、そういうトラブルはなかったですか。

【松井】これはまだ恥ずかしい話なのですが、先ほども申しあげましたように、TOEFLで、例えばウィスコンシン大学は230点を要求してきます。それからアメリカは、一般的にですけれども、Step 1を取っていないと実習には参加させません。私どもの学生は、まだそこまでいっていません。そういうわけで、participation というよりは observation の形での参加ということです。ただ、それでも医療保険はきちんと入ることが要求されているので、これは入っています。

【井村 誠（大阪工業大学知的財産学部）】カリキュラムの関係で、単位数のことをおっしゃいましたが、卒業に必要な英語の単位数はどれくらいかということと、こういったカリキュラム改正に学校側の理解が非常にあると

いうことを羨ましく思いますが、学校側の理解をどのように得られていったのか、ちょっと political なことになるかもしれませんけれども。元から建学の精神でそういうことがあったのか、あるいは専門教員、あるいは学校側の理解をどのようにして得られて、カリキュラムがどんどん振られていったのかというか、そのあたりのご苦労を教えてくださいたいと思います。

【松井】卒業単位数ですが、そのうち英語が何単位ということではないようです。というのは、先ほども申しあげましたように、1年生次では英語は必修です。それは、総合英語コースと総合英語基礎コースというのがありまして、これは120時間ですから、6単位が7単位ぐらいでしょうか、1時間10分の授業を毎週4コマ学生はやっています。2年次以降は選択科目になりまして、選択科目合計の必修取得科目数が20科目だったのが、今年は18~20科目になりました。ただその中で、先ほど申しあげましたが、圧倒的に英語の開講科目数が多いのです。ですから「ここは英語学校ではないのか」と言われるぐらい、学生の不満はありまして、英語ではない、例えば基礎医学の選択科目数の開講数が少ないというようなことがあります。そういう問題が出てきていますが、18~20科目が選択科目数の必修取得科目数なのですから、そのうち半分ぐらいは学生が取ることになるだろうと思います。

もう一つ、学校の理解ということですが、これは私が入りました当時から、入試の英語の配点は400点中150点だったのです。それから、医学部長が学生に絶えず英語を勉強しなさいということは言っています。

【安藤千春（獨協医科大学国際学術教育センター）】予算のことを伺いたいのですが、実は獨協医科大学はミネソタ大学とカリフォルニア州立大学サンディエゴ校と若干提携を持っているのですが、特にサンディエゴ校の場合は1人1週間1,000ドルで、2週間いますので、1人当たり2,000ドル支払っているのですが、そういうお金の面は何も発生していませんか。

【松井】やはり高いです。例えばリバプール大学では、週4万円ぐらい要求してきます。ですから、4週間の実習をしますと16万円です。学校側として、それを学生が全部負担するというのは気の毒なので、学校側は40%ぐらい負担するということになっていると思います。それから、アメリカに関しましてやはり同じように、ウィスコンシン医科大学からは、この2年は実験段階ということで支払いは請求されていないのですけれども、来年度からは4週間で3,500ドルぐらい欲しいということを行っています。

これについてはいろいろと考えているのですが、東邦大学は、こちらから派遣するばかりでなくて、外国から来る学生もいるのです。その外国から来る学生についてはMOU、先ほどの友好協定を結んでいけば料金は取

らなかったのですけれども、リバプール大学の場合には、MOUを結んでいても、こちらから行く場合は料金を取られるのです。したがって、向こうから来た場合も取ることにしました。ホームページの英語版のところで「週2万円を取る」ということを明記しました。登録料1万円とか何だかんだで。そうすると、リバプール大学のちょうど半額くらいになるのです。

それから、ホームページに「外国からの Visiting Stu-

dent 歓迎」ということを出しています、まだ英語としては大したことはないのですけれども。それで、今年はシンガポール大学からも来ました。シンガポール大学から来た学生も、そういう料金は取ることにしています。将来、ゆくゆくは学生に対する援助金と、それから海外から来た学生の授業料がちょうどトントンくらいになることを目指したいと思います。

【元雄】どうもありがとうございました。

2. 米国のレジデント研修に日本人医師が参加する方法

Minoru Oishi (Nihon University School of Medicine, Department of Neurology)

米国のレジデント研修に、日本人医師が参加する方法について話させていただきます。

認定レジデント研修プログラムに参加することが、米国で医師免許証や専門医の資格を取得するのに必要です。認定レジデント研修プログラムに参加するには、ECFMG (Educational Commission for Foreign Medical Graduates) certification を取得する必要があります。ECFMG certification を取得するには、USMLE の Step 1, USMLE の Step 2 CK, USMLE の Step 2 CS の3つの試験に合格しなければなりません。

USMLE (United States Medical Licensing Examination) は、米国の医学生が受ける試験と同じ試験です。2004年以前は TOEFL, CSA という試験に合格する必要がありましたが、2004年から、スライドに示した3つの試験になりました (スライド1)。

USMLE の Step 1 は、基礎医学の CBT 方式の multiple-choice 試験で、医学部4年生以上で受験でき、東京または大阪で受験することになります。CBT はコンピュータを用いて行う試験で、試験日を選べるというメリットがあります。

USMLE の Step 2 CK の“CK”は Clinical Knowledge の略で、臨床医学の CBT 試験です。医学部5年生以上で受験でき、東京または大阪で受験することになります。ECFMG は、卒後臨床研修や医療を行うために米国に来ようとする外国医科大学卒業生の資格審査をし、試験を行って、その学力を評価する非営利団体です。

ECFMG certification を取得するには、まず Step 1 と Step 2 CK を受験します。これらの試験に関する情報は、インターネットで得ることができます。

USMLE の Step 1, Step 2 CS の受験申し込みは、インターネットで行うことができます。On-line Application Status & Information Service System; OASIS <http://oasis.ecfm.org> を用いると、住所などをいつでも変更することができます (スライド2)。

日本で Step 1, Step 2 CK を受験する場合は、アール・プロメトリック <http://www.prometric-jp.com/> というサイトで日程や会場を予約します。アール・プロメトリックは、USMLE 以外にも各種の試験を行っています。アール・プロメトリックのホームページでプロフェッショナル系試験を選ぶと、その中に USMLE があります (スライド3)。ここで、予約の仕方などの情報を得られます。試験日は祝祭日を除く毎日で、試験会場は東京と大阪にあります。practice という練習も1日2回ありますので、コンピュータ操作になれた人は practice をするのもよいと思います。

USMLE の Step 2 CS の“CS”は Clinical Skills の略で、これは米国で受験することになります。1度合格すると、何年経っても失効しません。Step 2 CS の試験場は、アトランタ、ヒューストン、シカゴ、フィラデルフィア、ロスアンゼルス の5カ所で、受験生がそのうちの1カ所を選ぶことになります。Step 2 CS を受験する場合も、インターネットで申し込みます。USMLE の Step 2 を受験する場合は、テストセンターを選びます。受験可能な試験日が画面に出てくるので、その中から選びます。Step 2 CS では、12症例を1症例あたり15分で診察、10分で記載します。全部で8時間くらいかかります。Step 2 CS の subcomponent には、Integrated Clinical Encounter, Communication & Interpersonal Skills, Spoken English Proficiency の3つがあります。Spoken English Proficiency がここで評価されるため、TOEFL の受験はする必要がなくなりました。

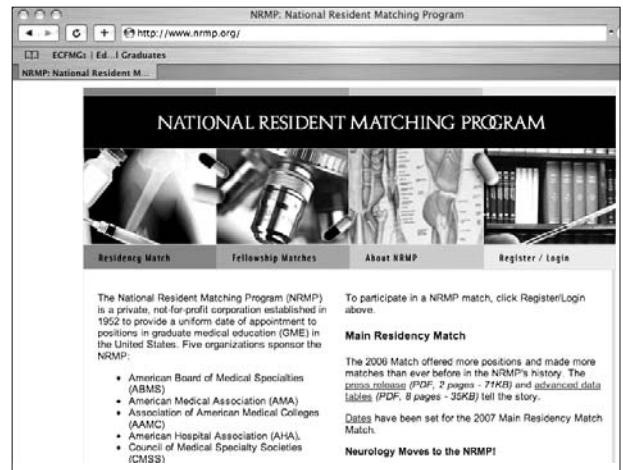
外国医科大学卒業生の合格率は、Step 1 が 49%, Step 2 CK が 48%, Step 2 CS が 83% と報告されています。Step 1, Step 2 CK, Step 2 CS は、1つの試験に合格してから7年以内に3つの試験に合格する必要があります。7年を過ぎると、最初に合格した試験を受け直すことになります。

3つの試験に合格すると、ECFMG certification をもらいます。これでは開業はできませんが、米国でレジデントとして有給で勤務することができます。

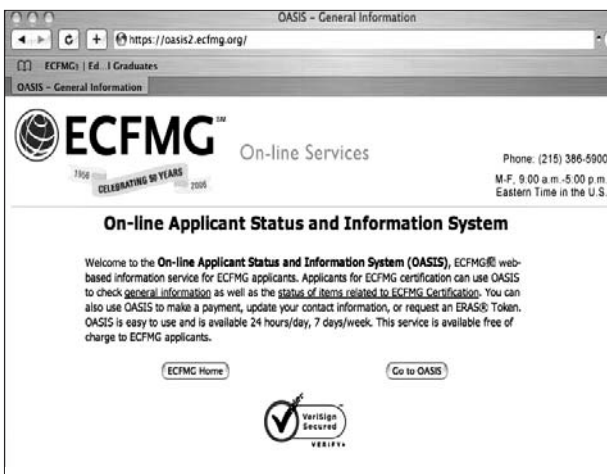
USMLE の参考書は数多くありますが、模擬テストをやっ



スライド 1 ECFMG certification の取得



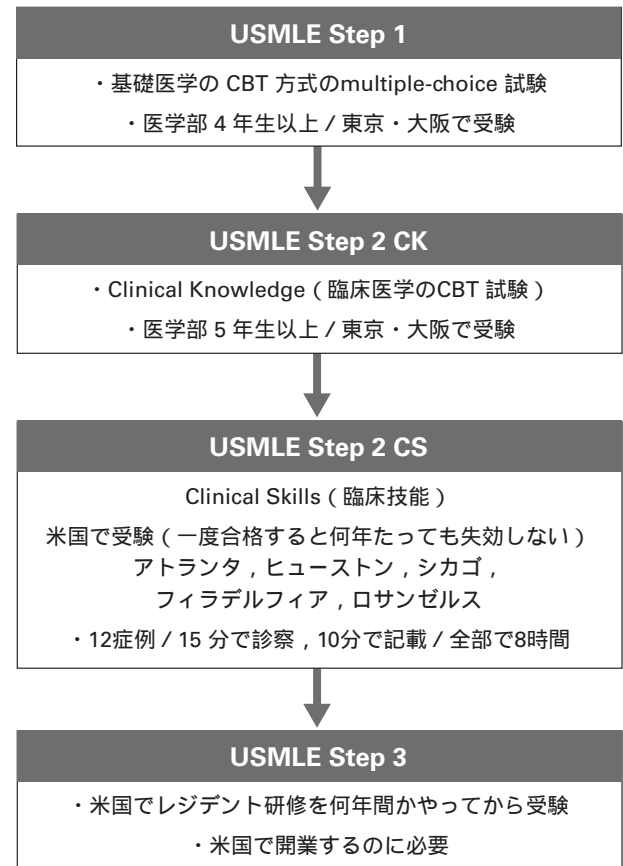
スライド 4 National Resident Matching Program (NRMP) のホームページ



スライド 2 OASIS (On-line Applicant Status and Information System) のホームページ



スライド 3 R-PROMETRIC のホームページ



スライド 5 USMLE の流れ

たり、英語の教科書を読むのもよいと思います。

ERASはElectronic Residency Application Serviceの略で、これに自分の情報を入力すると、その情報で多数の病院に応募できるサービスです。

ERASに加えて、National Resident Matching Program (NRMP) にも参加します(スライド 4)。NRMPの residency

matchは、レジデントを募集している病院と、それに応募した医科大学卒業生のそれぞれに自分の希望順位を示すリストをつくらせ、コンピュータで希望順位の高いほうにマッチングするプログラムです。米国の医科大学卒業生のほとんどは、これを介して病院を決めています。外国医科大学卒業生も、ECFMG certification 取得に必要な3つの試験

に合格していれば、参加できます。

米国のレジデント研修プログラムは、通常7月1日に始まりますが、前年の秋に registration をし、2月までに自分の希望順位を提出します。外国医科大学のマッチ率は、2006年のデータですが、米国人が51%、米国人以外が49%と発表されています。外国医科大学卒業生の28%は米国人でしたが、米国人と米国人以外であまり差はありませんでした。

レジデント研修を終了すると、病院から修了証をもらいます。USMLEのStep 3は、米国でレジデント研修を何年間かやってから受験します。米国で開業するには、これに合格する必要があります(スライド5)。

米国では、連邦政府は医師免許証を発行せず、各州がその州で通用する医師免許証を発行しています。USMLEのStep 3の受験資格は州により異なるので、自分が開業したい州のState Medical Boardに問い合わせる必要があります。ある州の医師免許証を持っている人が、他の州の医師免許証を取得する場合は、USMLEのStep 3を受け直さずに、endorsement という方法で取れるのが普通ですが、カリフォルニア州は口答試験を受ける必要があります。

米国では、専門分野別に24のboardが、認定レジデント研修プログラムを修了した人を対象に専門医試験を行い、それに合格した医師を専門医として認定しています。日本では、専門医でも専門医でなくても保険点数は同じですが、米国では専門医のほうが高いことが多いので、レジデント研修を修了すると専門医試験を受けるのが普通です。以上です。

《質疑応答》

【元雄良治(座長)】ありがとうございました。実際の先生ご自身の certificate をお示しいただきましたが、先生は6年生のときに ECFMG を取られたのですか。

【大石】日本で博士号を取ってから行きましたので、行ったのは卒後6年です。

【元雄】それはレジデントですよ。

【大石】レジデントです。

【元雄】ECFMGは1973年ですから、6年生ではないかと。

【大石】ECFMG自体は取ったのですが、実際に行ったのはちょっとあとです。

【元雄】3年間のレジデントですね。

たくさんご質問があるかと思いますが、どうでしょうか。

【玉巻欣子(神戸大学医学部)】基本的な言葉についての質問なのですが、Clinical Skillsはインタビューするというのは、私も実際の場面を見たことがあるのですが、Clinical Skills Assessment というのは。

【大石】Assessment というのは、昔あった試験なのです。以前は外国人だけを対象にして、症例を見せて、それに失礼なことを言ったりすると減点があったりして、通る

とアメリカに行けるという、外国人だけを対象にした試験、CS A というのがありまして、それが2004年に変更になりました。アメリカ人の医科大学生もそれを受けなくてはいけなくなりました。外国人だけというのが取れて、全部に対して行われるようになったので、Clinical Skills (CS) と名前が変わったのです。

【元雄】先生のように、学生時代から motivation が高い学生はよいのでしょうかけれども、平均的な学生ですとなかなかそうもいかないのですが、先生は現在いらっしゃる大学で、こうした学生のやる気を出させる工夫などはいかがでしょう。

【大石】「やりたい」と言ってくる人はいるので、年に3人くらい受けて、1人くらい受かっているような状況ですが、行きたい人にはいろいろな情報を提供したり、いろいろやり方とかの指導はしています。

【元雄】では、個別にされているということですか。

【大石】個別にしています。

【大井静雄(東京慈恵会医科大学脳神経外科)】私たちのころは、ECFMGの試験は日本人はほとんど通るくらいのレベルだったのですが、いまはこのUSMLEになって、日本人がアメリカのレジデントに入るのがかなり難しくなりましたよね。合格率が最近はどうかということと、それから先生の学会が来年ありますが、こういうものに対応するようなセミナーなどは非常に役に立つと思いますが、いかがでしょうか。

【大石】合格率は、昔は発表されていたのですが、最近はその全部の外国人の合格率しか発表していないのです。それでStep 1, Step 2 がだいたい50%くらいで、Step 2 CS というのはアメリカに行くと受けますので、ちょっとよくなっているのです。交通費とか、何度も受けてはかわいそうだからということでしょうけれども、80%とか。ですから、それは外人全部を平均していますので、インド人とかフィリピン人とかは英語が得意ですから、すごくできるわけです。日本人は、やはり世界平均より悪いですから、合格率は悪いと思いますが、来年はぜひたくさんの人に来ていただきたいので、いろいろなことをやりたいと思いますので、これもその中の1つにしたいと思います。

【玉田吉行(宮崎大学医学部)】Step 3の、アメリカでの最近の病院の受け入れ状況が少し変わったという話なのですが、

【大石】外人受け入れは、率と発表が毎年あるのですが、今年の7月からの分はもう発表になっていまして、先ほど出したと思うのですが、外人が50%くらいです。アメリカ人は90%で、ほとんどマッチングされるのですけれども、外人はやはり合格率というか、マッチングされる率が少ないわけです。それは、各病院が勝手に自分の採りたい人のリストをつくるわけですから、例えば卒後6年目であれば、アメリカの卒後1年目よりも高く評価す

る大学はあると思います。1年目同士を比較したら、たぶんアメリカ人のほうがよいと。

【玉田】そのものもそうですが、何か、国の政策で受け入れを前は割と奨励していたみたいですが、

【大石】アメリカは、ベトナム戦争のときは医師不足でどんどん採っていたのですが、その後は医師過剰ですから、そんなに採りたくないのが実情です。

【玉田】受け入れたら、政府のほうから何か奨学金を出すみたいな奨励策をとっていたときもあったみたいですが、最近はかなり厳しくなって、なかなか行けないみたいな話を聞きます。

【大石】でも、50%くらいは通りますので、そんなに悲観する必要はないと思います。

【植村研一（横浜市立脳血管医療センター）】USMLE になってだいぶ様子が変わったみたいですが、私がアメリカにいたころは、ほとんどの医学部が National Board の

USMLE の Step 1 に受からないと臨床実習をさせないというような大学が多かったのですけれども、いまの先生の発表では、アメリカ人ですら 50% 落ちるといことは、50% は留年しているということになりますね。

【大石】これは、何回でも受けられるのです。

【植村】でも、年に何回かしかかないでしょう。

【大石】いいえ、これはコンピュータベースですから、何回でも受けられるのです。2回受ければ1回受かるのです。

【植村】受かるから、大丈夫ですね。

【元雄】予定の時間になりました。大石先生は、来年の本学会総会の会長でもいらっしゃいますので、またこのテーマに関してはいろいろな企画があると思います。

これでシンポジウムを終わります。どうもありがとうございました。

(2006年7月15日、ウェルシティ金沢にて収録)

Continuing Professional Education
Some Little Words That Make Us Stumble

Part 1. How would you improve these sentences? Underline the unnatural spots, and rewrite each sentence in natural English.

1. The less the patients, the more time we can spend with each one. [1 spot]

2. Even this study had less patients than our previous work, the new implant outperformed all other prosthetic devices previously tested for use in total knee replacement. [2 spots]

3. The body temperature measuring instrument is called a thermometer.

4. Did you move your bowel today? (nurse to patient)

5. The boy had been having this problem during six weeks.

6. Thank you for letting the author contact me. (e-mail from reader to publisher)

7. Would you let the publisher contact me by e-mail please? (e-mail from reader to editor)

8. We want to let the students enjoy English.

9. We make the students take a mini-test at the beginning of each class.

10. The doctor let the boy go on insulin as soon as the diagnosis of diabetes was confirmed.

11. Today we have 30 percent less obstetricians and pediatricians than ten years ago.

12. In adults at rest, the normal heart rate is between approximately 50 to 90 beats per minute.

Part 2. In each group, choose the sentence using standard English appropriate to medical research papers, as recommended by the American Medical Association and certain high-profile medical journals.

Circle A or B. 例 (A) B. C. D.

1. *New England Journal of Medicine* (2004) 351(9):902–910 (Table 2)

- A. In Stevens-Johnson syndrome treated with trimethoprim and sulfamethazole, fatalities due to severe adverse reactions may occur.
- B. In Stevens-Johnson syndrome treated with trimethoprim and sulfamethazole, fatalities may occur due to severe adverse reactions.

2. *New England Journal of Medicine* (2007) 357(17):1698

- A. Dose reductions were made mostly due to nonhematologic toxin effects.
- B. Dose reductions were made mostly because of nonhematologic toxin effects.

3. *New England Journal of Medicine* (2007) 357(17):1721

- A. No significant differences were seen between the groups of patients with a baseline glycat- ed hemoglobin level of less than 8.5% or 8.5%.
- B. No significant differences were seen between the groups of patients with a baseline glycat- ed hemoglobin level of > 8.5% or 8.5%.
- C. No significant differences were seen between the groups of patients with a baseline glycat- ed hemoglobin level of smaller than 8.5%.
- D. No significant differences were seen between the groups of patients with a baseline glycat- ed hemoglobin level of 8.5% or less.

4. *New England Journal of Medicine* (2008) 358(5):494–501

- A. Abdominal aortic aneurysms are more common in atherosclerotic patients than in without the disease patients.
- B. Abdominal aortic aneurysms are more common in patients with atherosclerosis than in patients without the disease.
- C. Abdominal aortic aneurysms are more common in patients with atherosclerosis than in without the disease patients.
- D. Abdominal aortic aneurysms are more common in atherosclerotic patients than in patients without the disease.

5. *New England Journal of Medicine* (2004) 350(16):1646–1654

- A. The hepatorenal syndrome is characterized by renal failure due to severe vasoconstriction of the renal circulation.
- B. Due to renal failure, the hepatorenal syndrome is characterized based on severe vasoconstriction of the renal circulation.

6. *New England Journal of Medicine* (2007) 356(8):841

- A. Central retinal artery occlusion is associated with a variety of medical conditions, including embolic events and rheumatologic conditions, such as temporal arteritis, etc.
- B. Central retinal artery occlusion is associated with a variety of medical conditions, including embolic events and rheumatologic conditions, such as temporal arteritis.
- C. Central retinal artery occlusion is associated with a variety of medical conditions, for example, embolic events and rheumatologic conditions, such as temporal arteritis, etc.

7. *New England Journal of Medicine* (2007) 356(8):841

- A. A 76-year-old male with hypertension presented with a sudden, painless, and very great loss of vision in the right eye.
- B. A 76-year-old man with hypertension presented with a sudden, painless, and profound loss of vision in the right eye.

8. A. The happening to people at home injuries are seen more often than the happening away from home injuries.
- B. Injuries happening to people at home are seen more often than injuries happening away from home.

9. *New England Journal of Medicine*

- A. On examination, he was pale, profusely diaphoretic, and in extreme discomfort.
- B. On examination, his face was very pale, and he was sweating very much and was very uncomfortable.
- C. On examination, he was very pale and his breathing was very heavy, so his chest was heaving up and down very rapidly, and he was in very much discomfort.

10. *New England Journal of Medicine* (2007) 365(8):873–874

- A. We did not biopsy the subcutaneous nodule in the abdominal wall because it was thought to be of low diagnostic yield at the time.
- B. The subcutaneous nodule in the abdominal wall was not biopsied because it was thought to be of low diagnostic yield at the time.
- C. We did not perform a biopsy of the subcutaneous nodule in the abdominal wall because it was thought to be of low diagnostic yield at the time.

11. A. The biopsy was negative.
 B. The biopsy was found to be negative.
 C. We found that the biopsy was negative.
 D. The results of the biopsy were negative.
12. *New England Journal of Medicine* (2006) 355(23):2452–2466
 A. The myeloproliferative disorders comprise several clonal hematologic diseases that are thought to arise from transformation in a hematopoietic stem cell.
 B. The myeloproliferative disorders are comprised of several clonal hematologic diseases that are thought to arise from transformation in a hematopoietic stem cell.
13. A. The patient had a fever of 39.5°C.
 B. The patient had a temperature of 39.5°C.
14. A. While the patient is in a fasting state, at least 20 ml of blood should be drawn into a tube that has not been treated with anticoagulant.
 B. While the patient is fasting, at least 20 ml of blood should be drawn into a tube that has not been treated with anticoagulant.

Part 3. Write either *by* or *until* in each blank. Be sure to take the full passage into consideration, not just individual sentences out of context.

I am terribly sorry, but I cannot finish the analysis and graphs (1) _____ the deadline you gave me. I tried to finish (2) _____ that date, but it is impossible. Can you give me (3) _____ next Tuesday please? If I can work on the project every day (4) _____ next Tuesday, I am pretty sure I will be able to complete everything (5) _____ then.

Answers may be seen on pages 74–76.

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

Continuing Professional Education
Some Little Words That Make Us Stumble
Answers

Part 1.

1. The **fewer** the patients, the more time we can spend with each one.
2. **Even though** this study had **fewer** patients than our previous work, the new implant outperformed all other devices previously tested for use in total knee replacement.
3. The **instrument for measuring body temperature** is called a thermometer.
Also acceptable: The instrument that measures body temperature ...
The instrument measuring body temperature ...
4. Did you **have a bowel movement** today?
Comment: Although function of the colon engages both voluntary and involuntary activities, the natural expression is "have a bowel movement."
Caution: "a bowel movement" is natural English, not "your bowel movement."
5. The boy had been having this problem **for** six weeks.
6. Thank you for **having** the author contact me.
Alternative: Thank you for **asking the author to** contact me.
Caution: "Letting" carries the connotation of parents "allowing" their child to go out and play or to take an extra piece of cake or do something else the child enjoys, where the person in authority "gives permission."
7. Would you **have** the publisher contact me by e-mail please?
Alternative: Could you **ask the publisher to** contact me? Would you ask the publisher to contact me please?
8. We want to **make English enjoyable for** the students.
9. We **have** the students take a mini-test at the beginning of each class.
Alternative: We **give** the students a mini-test at the beginning of each class.
10. The doctor **had** the boy go on insulin as soon as the diagnosis of diabetes was confirmed.
Alternative: The doctor **put** the boy on insulin
11. Today we have 30 percent **fewer** obstetricians and pediatricians than ten years ago.
12. In adults at rest, the normal heart rate is between approximately 50 **and** 90 beats per minute.
Comment: Proper combinations are *between / and, from / to*.

Part 2.

1. A. In Stevens-Johnson syndrome treated with trimethoprim and sulfamethazole, fatalities due to severe adverse reactions may occur.

Comment: The *due to* phrases are supposed to be used as adjectives. Here, the phrase tells which fatalities may occur. Unfortunately, high school English textbooks in this country do not teach the adjective usage, and many *due to* phrases are used (or abused) as adverbs. The distinction may be undergoing a paradigm shift whereby the phrase is going through transition from adjective to adverb, but the unfortunate loss is that the teachers and students are being deprived of exposure to the precise meaning. For brevity, newspaper headlines are also using *due to* where *because of* would be correct instead. See the *American Medical Association Manual of Style, Guide for Authors and Editors* 9th edition, p. 247 Section 9.1 about commonly misused words and phrases (also in Japanese).

2. B. Dose reductions were made mostly because of nonhematologic toxin effects.

Comment: The *because of* phrase is an adverb telling **why**, modifying the verb *were made*.

3. D. No significant differences were seen between the groups of patients with a baseline glycosylated hemoglobin level of 8.5% or less.

4. B. Abdominal aortic aneurysms are more common in patients with atherosclerosis than in patients without the disease.

Comment: In D, the term *atherosclerotic patients* does not name the disease, but this sentence requires a noun to which "the disease" refers. In addition, *patients with ...* is considered more professional and mannerly than labeling the patients in such combinations as atherosclerotic patients, diabetics, asthmatics.

5. A. The hepatorenal syndrome is characterized by renal failure due to severe vasoconstriction of the renal circulation.

Comment: The *due to* phrase is a postnominal adjective telling which kind of renal failure.

6. B. Central retinal artery occlusion is associated with a variety of medical conditions, including embolic events and rheumatologic conditions, such as temporal arteritis.

Comment: The word *including* signals the reader that the list is not necessarily complete or inclusive; here, *etc* would be superfluous. Do not use *etc* when the listing is preceded by *e.g.* or *for example*. Use a comma before *etc* when it is preceded by more than 1 term but not when preceded by 1 term only. If omission of *etc* would be detrimental, substitute more specific phrasing such as *and other conditions*, for example *temporal arteritis and other conditions*. See Kameda P. 15 left, lines 23–24, in this issue.

7. B. A 76-year-old man with hypertension presented with a sudden, painless, and profound loss of vision in the right eye.

Comment: The single-word adjectives *sudden* and *painless* need the single-word adjective *profound* to complete the parallel structure. The word *very* has come to

be so overused that the term loses its punch if it appears in several articles in the same issue of a journal. *Profound* makes a dynamic substitute for *very* and combines well with *loss*. *A man, not a male.*

8. B. Injuries happening to people at home are seen more often than injuries happening away from home.

9. A. On examination, he was pale, profusely diaphoretic, and in extreme discomfort.

Comment: B is a poor choice because his face was not the total focus of examination. Either *the patient* or the pronoun *he*, in this case, must follow *on examination*. C badly overworks *very*.

10. C. We did not perform a biopsy of the subcutaneous nodule in the abdominal wall because it was thought to be of low diagnostic yield at the time.

Comment: The word *biopsy* is not to be used as a verb. (This sample was taken from a letter from the author, in response to correspondence from a physician commenting on the original research article. Hence, use of the pronoun "it" is acceptable and clear, although the phrase "such a biopsy" would be preferred in the original article.)

11. D. The results of the biopsy were negative.

Alternative: *We examined the biopsy specimen and found it negative for paragonimiasis.*

Comment: Examination and observation are made on the *biopsy specimen*, not on the biopsy itself.

12. A. The myeloproliferative disorders comprise several clonal hematologic diseases that are thought to arise from transformation in a hematopoietic stem cell.

Alternative: The myeloproliferative disorders are composed of ... / ... disorders include ...

Comment: Never combine *comprise* with *of*. *Comprise* is in the active voice, but *composed of* requires the passive voice.

13. B. The patient had a temperature of 39.5°C.

Comment: Every person has a temperature, either normal or abnormal. The word *fever* cannot substitute for *temperature*. Fever is a condition in which the body temperature rises above normal. See Editorial Perspective p. 6.

14. A. While the patient is in a fasting state, at least 20 ml of blood should be drawn into a tube that has not been treated with anticoagulant.

Part 3.

(1) by (2) by (3) until (4) until (5) by

Comment: The verb is usually our main clue for choosing between *by* and *until*. A verb that indicates continuation (work on it, extend the time, practice) goes with *until*. A verb that is not accompanied by "not" and that suggests a cut-off or a start-line (finish, send, start to work on it, arrive) goes well with *by*.

第 11 回 日本医学英語教育学会 総会

会 期：2008 年 7 月 12・13 日（土・日）
会 場：笹川記念会館
（東京都港区三田 3-12-12, TEL 03-3454-5062 (代),
URL: <http://www.sasakawahall.jp/>)
会 長：佐地 勉（東邦大学医療センター大森病院）

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
TEL 03-5228-2057 (ダイヤルイン)
FAX 03-5228-2062
E-MAIL jasmee@medicalview.co.jp

【口述演題募集のご案内】

下記の分野について口述演題を募集いたします。

1. 医学英語の教育法
2. 医学英語の教材（開発・使用経験等）
3. 医学英語原稿の編修・執筆
4. その他，医学・医療英語教育に関連するテーマ（看護英語などを含む）

* 演題受付は，原則としてオンライン登録経由のみとなります。
演題のご応募は下記のフォームより受け付けています。

* 筆頭演者は本学会会員に限り，非会員の方は演題提出前に必ず本学会に入会してください。

口述演題応募切日：2008 年 4 月 13 日（日）

演題応募用ホームページアドレス：

<http://www.medicalview.co.jp/JASMEE/gakujutu.shtml>

Announcement of the 11th annual JASMEE conference

Date: July 12 & 13, 2008 (Saturday & Sunday)
Place: Sasakawa Hall
Address: 3-12-12 Mita, Minato-ku, Tokyo
Phone: 03-3454-5062 (key number)
URL: <http://www.sasakawahall.jp/>
Chair: Tsutomu Saji, M.D., Ph.D.
(Toho University Omori Medical Center)

Contact Address:
Secretariat, JASMEE
c/o Medical View Co., Ltd. 2-30 Ichigaya-hommuracho,
Shinjuku-ku, Tokyo 162-0845, Japan
Phone: +81-3-5228-2057
Fax: +81-3-5228-2062
E-mail: jasmee@medicalview.co.jp

Call for conference papers

Proposals for papers on the following subjects should be submitted by the 13th of April, 2008.

1. The teaching of medical English
2. Developing and using texts of medical English
3. Editing and writing medical English
4. Other relevant issues in medical English

All submissions should be made online on the submission form at:

<<http://www.medicalview.co.jp/JASMEE/gakujutu.shtml>>.

Only submissions by JASMEE members in good standing can be accepted.

開催案内 Notices

第 1 回 医学英語検定試験

日 程：2008 年 4 月 13 日(日) 午後 1 時～5 時

会 場：関東 東京慈恵会医科大学
東京医科大学
近畿 兵庫医科大学
北陸 富山大学医学部

検定料：3 級：6,500 円(税込)
4 級：4,000 円(税込)

主 催：日本医学英語教育学会

【受験申込方法】

受験を希望される方は，下記のホームページにアクセスして受験申込用紙（PDF）をダウンロードし，所定の事項を記入した上で写真を貼付して事務局宛にお送りください。

<http://www.medicalview.co.jp/JASMEE/epemp/>

【受験申込受付期間】

2007 年 10 月 1 日～2008 年 2 月 28 日（消印有効）

日本医学英語教育学会
理事・評議員
(任期 2007 年 8 月 ~ 2010 年 7 月)

名誉理事長

植村 研一 横浜市立脳血管医療センター長

理事長

大井 静雄 東京慈恵会医科大学 脳神経外科 教授

副理事長

J. Patrick Barron 東京医科大学 国際医学情報センター 教授

理 事

安藤 千春	獨協医科大学 国際交流センター 教授	Reuben M. Gerling	日本大学医学部 医学教育企画・推進室 教授
飯田 恭子	日本医療科学大学 教授	佐地 勉	東邦大学医療センター大森病院 小児科 教授
大石 実	日本大学医学部附属練馬光が丘病院 神経内科 准教授	清水 雅子	川崎医療福祉大学 医療福祉学部/ 大学院 医療福祉学研究科 教授
大野 典也	東京慈恵会医科大学 名誉教授	西澤 茂	産業医科大学 脳神経外科 教授
亀田 政則	福島県立医科大学看護学部 総合科学部門 (外国語) 教授	菱田 治子	聖路加看護大学看護学部 基礎(英語) 教授
Nell L. Kennedy	酪農学園大学獣医学部 バイオメディカル イングリッシュ研究室教授	本郷 一博	信州大学医学部 脳神経外科 教授
		吉岡 俊正	東京女子医科大学 医学教育学 教授

評議員

相浦 玲子	滋賀医科大学 基礎学医療文化学講座 (英語) 教授	Ann C. Tang(鄭珠)	東京女子医科大学 医学教育学教室 国際コミュニケーション室
板倉 徹	和歌山県立医科大学 脳神経外科学 教授	内藤 永	旭川医科大学医学部 英語学 教授
伊藤 昌徳	順天堂大学医学部付属順天堂浦安病院 脳神 経外科 教授	西村 月満	北里大学一般教育部 教授
押味 貴之	日本大学医学部 医学教育企画・推進室 助教	野村 隆英	藤田保健衛生大学医学部 薬理学 教授
園城寺康子	前・聖路加看護大学 教授	林 皓三郎	Lab. of Immunology, National Eye Institute, National Institutes of Health, USA
加藤 智啓	聖マリアンナ医科大学 疾患プロテオーム・ 分子病態治療学 教授	一杉 正仁	獨協医科大学 法医学教室 准教授
木下 栄造	兵庫医科大学 教授	平野美津子	聖隷クリストファー大学リハビリテーショ ン学部 言語聴覚学専攻 教授
齊藤 卓弥	日本医科大学 精神医学教室 准教授	Raoul Breugelmanns	東京医科大学 国際医学情報センター 准教授
笹島 茂	埼玉医科大学進学課程 講師	松井 秀樹	岡山大学医学部 生理学第一講座 教授
高橋 明	東北大学大学院医学系研究科 神経病態制御 学 教授	元雄 良治	金沢医科大学 腫瘍治療学 教授・ 集学的がん治療センター長
伊達 勲	岡山大学医学部 脳神経外科 教授	森 茂	大分大学医学部 英語 准教授
玉田 吉行	宮崎大学医学部 英語科 教授	森岡 伸	札幌医科大学医学部 教授
玉巻 欣子	近大姫路大学 看護学部 講師		

投稿申請書

Submission Consent Form

受付番号 _____

(コピー可)

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

We are submitting our manuscript entitled as undermentioned for your consideration of its suitability for publication in the *Journal of Medical English Education*. The undersigned authors agree to transfer, assign, or otherwise convey all copyright ownership to the Japan Society for Medical English Education in the event that this work is published in the *Journal of Medical English Education*.

申請日 (Date of submission) _____

論文題名 (Title)

著者 (Authors)

氏名 (Name) ・ 所属 (Institute)

署名 (Signature)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

通信著者 (Corresponding Author)

氏名 (Name)

連絡先 / 校正紙送付先 (Contact Address)

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

入会手続き

1. 入会申込書に所定の事項をご記入のうえ、下記の提出先へお送りください。
ホームページでの入会申し込みも可能です(<http://www.medicalview.co.jp/JASMEE/index.shtml>)
2. 郵便振替口座に年会費を振り込んでください。
平成 19 年度年会費：一般 ¥7,000，学生 ¥1,000
入会申込書の受領ならびに年会費振込の確認をもって、入会手続きの完了とします。
学生会員の年会費には会誌の購読料が含まれ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)

入会申込書類 請求・提出先： 〒 162 0845 新宿区市谷本村町 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 2057 FAX 03 5228 2062
E-MAIL jasmee@medicalview.co.jp
URL <http://www.medicalview.co.jp/JASMEE/index.shtml>
郵便振替口座： 口座番号 00160 6 26362
口座名称 日本医学英語教育学会

Journal of Medical English Education Vol. 7 No. 1

日本医学英語教育学会会誌

2008 年 2 月 1 日発行 第 7 巻 第 1 号 頒価 1 部 3,000 円

編集人 ネル・L・ケネディ / 企画 日本医学英語教育学会

発行所 メジカルビュー社

〒 162 0845 東京都新宿区市谷本村町 2 30

TEL 03-5228-2057 / FAX 03-5228-2062 / E-MAIL jasmee@medicalview.co.jp

(年会費には本誌の購読料を含む)

印刷 日経印刷株式会社

Journal of Medical English Education Vol. 7 No. 1

日本医学英語教育学会会誌

2008年2月1日発行 第7巻 第1号 頒価1部3,000円

編集人 Nell L. Kennedy / 企画 日本医学英語教育学会

発行所 メジカルビュー社

〒162 0845 東京都新宿区市谷本村町2 30

TEL 03 5228 2057 / FAX 03 5228 2062 / E-MAIL jasmee@medicalview.co.jp

(年会費には本誌の購読料を含む)

印刷 日経印刷株式会社