Medical English
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特集：日本医学英語教育学会 第７回学術集会

【シンポジウム】医師国家試験への英語の導入を考える

Medical English

Journal of Medical English Education

The official publication of the Japan Society for Medical English Education

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Guidelines for Authors Submitting Manuscripts to *Medical English*

1. Article categories and *Journal* aims

Medical English, 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,and international conferences. Categories are the *Original Article, Special Article*, *Short Communication*, and *Letter*. Original Articles involve quantitative and qualitative research ranging from discourse analysis and needs assessment to materials development and teaching/testing techniques. 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 New Times 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 every 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, Doctor) 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), 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 but cannot substitute for the full word in the sentence. Example: *The test was 80 min long. But NOT* "*The test took several min.*" *NOT* "*For most students, an h was enough time.*"

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 superscript is used, the numerals are separated by a comma but no space. The superscript goes AFTER the comma or period.

5.5. Author-and-date citation, i.e., the Harvard system, known also as the American Psychological Association (APA) system, will **NOT** be used in forthcoming issues of this *Journal*.

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 often cited in the Introduction, but subsections are discouraged in favor of keeping the Introduction brief.

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.* Each result is stated in the past tense. *Results* and *Discussion* may be independent divisions of the paper or may be combined into a single division of the paper, depending on the 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. Prudent use of verb tense helps the reader distinguish between the author's local findings and the applicability of the findings to situations beyond the study being reported.

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. Table footnotes, if any, belong immediately below the bottom line of the table. Vertical lines are not necessary inside the table except in special cases. If figures are 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 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, *Medical English* 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 name*, the first letter of each word is in *uppercase*, and the *Journal name* is italicized. The full *Journal name* 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. Numbered references to personal communications, unpublished work, or manuscripts "in preparation" or "submitted" are unacceptable.

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.* pp. 78–89. Oxford: Oxford University Press.
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.* pp. 112– 121. London: BMJ Books.
4. Sackett DH, Rosenberg W, Gray J, Haynes R, and Richardson W. 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. Gary, 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 *Medical English* 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, *Medical English,*
Medical View Co., Ld.
2-30 Ichigaya–honmuracho, Shinjuku-ku
Tokyo 162–0845, JAPAN
Phone +81-3-5228-2052 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 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 pho-

tographs that may identify an individual, and quotation of unpublished results or private communications.

9. Japanese Articles

When writing an article in Japanese, use 10.5-point typeface of a common Japanese font, and follow most of the English Guidelines (except Reference Example 5). In addition, provide 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. Temporary Japanese Instructions (投稿規定), currently under revision, are shown below the English Guidelines.

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, who may or may not be a co-author of the work submitted, 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 if the student author may have graduated.

10.2. WJEMA special 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.

11. Review of Manuscripts

All manuscripts except Special Articles will be evaluated by 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 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).

投稿規定

小誌では，医学および医学関連領域における英語学習・英語教育に関する記事(総説，原著論文，教育記事，特別寄稿，エッセイ，告知［広報，学会案内等］等)を掲載いたします。当編集委員会では，投稿をお待ちしております。下記の投稿規定にしたがってお送りください。

□ 原著論文は未発表であること。ただし，すでに口頭で発表したものについては，発表した会合の名称，日時，会場を明記している場合に限り審査の対象となる。
□ 論文はオリジナルのほかにコピー2部，計3部を提出すること。原稿の返送を希望する場合は，返信用封筒(切手貼付)を同封すること。
□ フロッピーディスクなどでの投稿も歓迎する。ディスクを用いる場合は，WindowsまたはMacintosh形式でフォーマットしたディスクにテキスト形式で保存することがが望ましい。またディスクで投稿する場合も，必ず上記の印刷原稿3部を同封すること。
□ 著者全員の氏名・所属を明記し，出版に同意する旨を全員が署名した送付状を同封すること(本誌後半に掲載されている「投稿申請書」を参照)。
□ 著者のうち1名を連絡先とし，氏名・所属・住所・電話番号・FAX番号・E-mailアドレスを明記すること。
□ 図表類を他の文献より引用する場合は，出典を明記し，著作権者の許諾状を同封すること。また個人を特定できる肖像写真を使用する場合には，本人の同意書を同封すること。
□ 原稿は横書きでA4判用紙を用い，図表・引用文献も含め10,000字以内とする(図表は1点につき400字換算とする)。手書きの場合はA4判400字詰め原稿用紙を用いる。英文の場合は“ Instructions for Authors ”(前頁)を参照。
□ タイトル，抄録，本文，引用文献，図表はそれぞれ改頁し，頁番号を振ること。
□ タイトル頁には，論文のタイトル，全著者の氏名・所属，キーワード，連絡先を明記すること。
□ キーワードは英語で6つ以内とする。
□ 抄録は英語で250語以内とする。
□ 略語の使用は最低限にとどめ，使用する場合には初出時に必ずフルスペルで表記すること。ただし，MKS単位に準ずる記号(m，g，mL，sec，等)は説明なしに使用可能とする。
□ 引用文献は，本文・表・図(説明文)の順で引用順に番号を振り，該当個所に肩付き数字で明記すること。著者名が6名以内の場合は全著者名を明記し，7名以上の場合は最初の3名のみを明記し，et alを付すこと。

［文献表記例］

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.* pp. 78–89. Oxford: Oxford University Press.
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.* pp. 112–121. London: BMJ Books.
4. Sackett DH, Rosenberg W, Gray J, Haynes R, and Richardson W. Evidence-based medicine: What it is and what it isn't. <http://www.cebm. net/ebm_is_isnt.asp> (Accessed December, 2004).

□ 私信・未発表データ・投稿準備中ないし投稿中の原稿は，引用文献に含めない。必要な場合は，本文中の該当個所にその旨を明記すること。
□ 原稿の採否ならびに掲載時期は編集委員会が決定する。
□ 採用論文の執筆者抜刷は校正終了時に申し込んだ場合に限り，20部まで無料で作成する。期限後に申し込む場合，および21部以上を希望する場合は，超過分について実費を執筆者が負担する。
□ 校正は執筆者が1回のみ行うこととするが，この際の訂正加筆は植字上の誤りに限るものとし，内容に関する訂正加筆は認められない。

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□ なお，原著論文以外の総説，教育記事，特別寄稿，エッセイの投稿を希望される方も上記の規定に準じた形で原稿をお送りください。また，告知・広告などの掲載を希望される場合は，上記編集部へお問合せください。

Editor's Perspective

Empowering Tomorrow's Health Care Professionals by Meeting the Needs of Today's Students

This issue of the *Journal* shows innovative educators on the lookout for new ways of presenting ideas to the students and making scholarly and conscientious efforts to equip them for real encounters beyond the classroom. As with the symposium presentations, all the papers on classroom trials and other research attest to the authors' academic excellence coupled with a genuine respect for the practical.

■ One paper specifically addresses the wide gap between the two-year general studies program and the upper years of medical studies, during which the students forget much of their English. To help them retain more English, a program has been instigated by which the younger students focus on a number of diseases, immersing themselves in a diverse series of colorful booklets, then the groups present their findings to the class, discuss the results, and evaluate each other's presentations by thinking, communicating, and reasoning together.

Other papers address:

■ The issue of how to meet the multilingual needs of nurses for communicating with international patients requiring hospital care in Japan;

■ The issue of word compatibility versus the unnatural English resulting from transfer of the Japanese counterpart when one is writing research papers for the journals; and

■ The ever-present issue of just how to go about training the students in their development of listening power as opposed to a reading-only course.

■ Still another angle, heart-to-heart communication, is brought out in a paper exploring how medical schools in the U.S. and U.K. put their students in touch with the total patient by having the students experience a little poetry and other literature, which, like music and other art forms, may have a power of its own to draw one human to empathize with another. Informed by the philosophy of physicians like William Osler and Shigeaki Hinohara, the coupling of literature with medicine adds a bit of spice to the *Journal* menu and rekindles the debate over the integration of science and literature. If not "in spite of" but perhaps "because of" an already bulging curriculum, the paper offers a compelling argument for the socio-psychological value of student encounters with literature.

Through the pages of the *Journal*, the authors have openly and bravely transmitted their collective wisdom to fellow-teachers. We sincerely welcome feedback from readers and invite each and every one of you to submit your own papers to forthcoming issues of the *Journal*.

Nell L. Kennedy,

Editor-in-Chief, for JASMEE

日本医学英語教育学会 第7回学術集会
【シンポジウム：医師国家試験への英語の導入を考える】

医療は国際化しており，医師国家試験の一部を英語で出題すべきである

Japanese National Medical Licensing Examination: Now Is the Time to Add Even a Mini-Section in English

— In the Interest of World Health Care —

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はじめに

2004年より医師国家試験合格後2年間の臨床研修が義務化され，2005年から医学生が臨床実習に進む前に全国共用試験が実施されるなど，我が国の医師国家試験は変革期を迎えている。

一方，医療は国際化しており，医師にとって英語力はますます必要になってきている。医師国家試験の一部を英語で出題すれば，医学部は英語教育にもっと力を入れ，医学生も英語の勉強をするようになり，医療の国際化に対応できる。

英語を排除しているための不利益

現在の医師国家試験は英語を排除しており，それにより生じている不利益は多大である。医学部は医師国家試験の合格率を上げるため，国家試験に出題される科目の教育に力を入れ，国家試験に出ない英語には力を入れない傾向にある。

医学生は医師国家試験に合格することに専念し，英語の勉強をおろそかにしている。日本語の病名に英語の病名を併記しない医学書が多くなっており，英語で病名も言えない医師が増えている。国家試験に合格してから医学英語の勉強を始めるのは困難で，医学生の時に日本語の病名と一緒に英語の病名も覚えたほうがよい。

ECFMG Certification は，米国以外の医科大学卒業性を対象にした試験で，米国でレジデント研修をする，米国の医師免許証を取得する，米国の専門医の資格を取得するのに必要であり，世界全体で毎年1万人が取得している。その取得人数はインド，パキスタン，中国が多く，日本はフィリピンよりもずっと少なく，日本人の英語力の不足が一因と思われる。

インターネットの普及によりSARS などの情報が速く伝わるようになり，英語での情報を理解することが日常の診療にも必要になっている。無料の文献検索にはPubMedやCochrane Libraryがあり，著者のホームページ（http://homepage.mac.com/minoru_oishi）からもリンクしている。

医学論文の読み書き，学会発表，外国人患者の診療，E–mail による外国人との情報交換などでも医師は英語が必要であるが，必要になってから勉強したのでは遅く，医学生のときから連続して英語を勉強することが重要である。

医学英語教育のレベルアップ

医師国家試験に英語が導入された場合は，医学英語教育のレベルアップも必要になる。英語式発音では，リドカイン（lidocaine）は[láɪdəkèɪn]，シェーマ（schema）は[skí:mə]となり，またsulci [sʌ́lsa]，tabes [téɪbiz]などにも注意し，また血圧160/95（mmHg）はone hundred sixty over ninety five，4 x 6 インチのガーゼはfour by six，アルファベットのZは[zí:]，A'はA primeと読む。下記の発音にも注意が必要である。

連絡先：
〒179–0072　東京都練馬区光が丘2–11–1
日本大学練馬光が丘病院神経内科
TEL　03–3979–3611
FAX　03–3979–3868
E–MAIL　minoru_oishi@mac.com

本稿は，日本医学英語教育学会第7回学術集会（2004年7月11日，東京慈恵会医科大学）のシンポジウム「医師国家試験への英語の導入を考える」において，「医療は国際化しており医師国家試験の一部を英語で出題すべきである」と題して口頭発表した内容を加筆訂正したものである。

ascites [əsáɪti:z]（腹水）
cecum [sí:kəm]（盲腸）
diastase [dáɪəstèɪz, -stèɪs]（ジアスターゼ）
genitalia [dʒènətéɪljə]（生殖器）
hiatus [haɪéɪtəs]（裂孔）
iodate [áɪədèɪt]（ヨウ素酸塩）
iron [áɪən ｜ áɪən]（鉄）
xanthoma [zænθóʊmə]（黄色腫）
lipase [láɪpeɪs]（リパーゼ）
opaque [oʊpéɪk]（不透明な）
rhinitis [raɪnáɪtɪs]（鼻炎）
vagus [véɪgəs]（迷走神経）
sciatica [saɪǽtɪkə]（坐骨神経痛）
trigeminal [traɪdʒémən(ə)l]（三叉神経の）

医学英語では，身長，体重，体温などは国際単位系を用いる（1フィート＝30 cm，1インチ＝2.5 cm，1ポンド＝0.45 kg，104°F＝40.0°C）。視力は米国では20/50のように表記するのが普通であるが，日本では0.4のように表記する。米国での視力20/20は日本での視力1.0と同じであり，米国での視力20/40は日本での視力0.5と同じである。米国での視力を割り算すれば，日本での視力になる。

将来医学論文も英語で書けるように，英語論文の書き方も教育すべきである。医学英語の実力がない人は翻訳業者に依頼したり，米国人が書いた論文で自分が使えそうな文をファイルしておき自分が書くときにそれを使ったり，CD–ROM付きの『英語，日本語による医学論文，学会発表』（大石実，望月葉子・著，中外医学社，1999）という本から「コピー」&「ペースト」することもできるが，自分で英語で書けた方がよい。

人名の発音

日本の医学書や医学辞典をみると，フランス人の人名をフランス語読みではなく，ローマ字読みまたは英語読みでカタカナ表記しているものも多い。これはデパートのPrintemps（「春」という意味のフランス語）を一般の人は「プランタン」と読んでいるのに，教養のある医療関係者が「プリンテンプス」と読んでいるようなもので，そのようなカタカナ表記が使われていることは恥ずかしい限りである。

外国語ができない米国人の発音をまねするのではなく，米国人がKimuraをカイミュラと発音していたら，日本語読みではキムラであると直してあげるべきである。人名はその人の母国語読みで発音すべきであり（**表1**），人名の母国

表1　人名の母国語式発音

英語	
Paget's disease	**パジェット病**
Colles' fracture	**コリーズ骨折**
Alexander's disease	**アレグザンダー病**
ドイツ語	
Basedow's disease	**バーゼドー病**
Hurler's syndrome	**フルラー症候群**
Simmonds' disease	**ジンモンツ病**
Krebs cycle	**クレープスサイクル**
Ludwig's ganglion	**ルートヴィヒ神経節**
Lobstein's ganglion	**ロープシュタイン神経節**
フランス語	
Bourneville's disease	**ブルヌヴィーユ病**
Apert's syndrome	**アペール症候群**
Lembert suture	**ランベール縫合**
Froin's syndrome	**フロワン症候群**
Malgaigne's fossa	**マルゲーニュ窩**
Hayem's disease	**エヤン病**
イタリア語	
Giannuzzi's cells	**ジャンヌッチ細胞**
Majocchi's disease	**マヨッキ病**
Civinini's canal	**チヴィニーニ管**
スペイン語	
Cajal's cell	**カハル細胞**
Houssay phenomenon	**オーサイ現象**
Alias–Stella phenomenon	**アリアス–ステヤ現象**
ポーランド語	
Mikulicz' disease	**ミクリッチ病**
Simchowicz granules	**シムホヴィッチ顆粒**
Danysz phenomenon	**ダニシ現象**
ロシア語	
Anitschkow cell	**アニチコフ細胞**
Pavlov method	**パヴロフ法**
nucleus of Darkschewitsch	**ダルクシェーヴィチ核**
スウェーデン語	
Crafoord clamp	**スラフォード鉗子**
Lindau's disease	**リンダウ病**
Bergenhem's operation	**ベリエンヘム手術**
ハンガリー病	
Békésy audiometry	**ベーケーシー聴力検査法**
Jendrassik's maneuver	**イエンドラッシク操作**
Korányi method	**コラーニュイ法**
オランダ語	
Leeuwenhoek's canals	**レーウェンフーク管**
Voorhoeve's disease	**フォールフッフェ病**
Boerhaave's glands	**ブールハーフェ腺**

語式発音を調べる場合は，『ステッドマン医学大辞典』を参照するとよい。

Stellwag sign：シュテルヴァーク徴候，Buchwald atrophy：ブーフヴァルト萎縮，Ludwig nerve：ルートヴィヒ神経などは，ドイツ語式に発音すべきである。

Lembert suture：ランベール縫合，Froin's syndrome：フロワン症候群，Hayem's disease：エヤン病などは，フランス語式に発音すべきである。また，英語の医学書にもpetit mal：プティマル，absence：アプサンスなどのフランス語の用語が出てくるが，これらもフランス語式に発音すべきである。

人名のハイフンにも注意すべきである。Ramsay Hunt syndromeは1人の姓と名であるので，ハイフンが入らない。Adams–Stokes syndromeは2人の姓なので，ハイフンが入る。Brown–Séquard syndromeは1人の姓である。ブラウン・セカールはフランス人で，もともとハイフンが入った姓である。ちなみにアクサン・テギュ(´)は強く発音する記号ではなく，セカールの「カ」を強く発音する。

処方箋の書き方

米国と日本では処方箋の書き方が異なるので注意を要する。米国では1回何錠を1日何回投与という書き方をするが，日本では1日量を書き何回に分服という指示をするのが普通である。

米国ではオーダーシート等に “famotidine 10 mg, 2 tablets, P.O., b.i.d.” のような指示を書くことが多いが，これは「ファモチジン10 mg錠を1回2錠，経口で1日2回投与する」という意味であり，1日の投与量は40 mgになる。これを「ファモチジン10 mg錠を2錠，経口で1日2回」と和訳すると，日本人は1日量が2錠で2回に分服と解釈してしまい，1日の投与量が20 mgと誤解してしまう。

処方箋の記載を和訳する場合は直訳ではなく，「ファモチジン10 mg錠を1回2錠，経口で1日2回投与」と意訳する必要がある。逆に「1日20 mg，2回に分服」を英訳すると，“a dosage of 20 mg/day in two divided doses” になる。dosageは用量，doseは1回量である。

P. O.（*per os*, by mouth）とかb. i. d.（*bis in die*, twice a day）という略語は米国では広く使われているので，覚えておく必要がある（**表2**）。

表2　処方箋に用いられるラテン語の略語

略語	ラテン語	意味
q. d.	quaque die	**毎日**
semel in d.	semel in die	**1日1回**
b. i. d.	bis in die	**1日2回**
t. i. d.	ter in die	**1日3回**
q. i. d.	quater in die	**1日4回**
q. 4 h.	quaque 4 hora	**4時間毎に**
p. r. n.	pro re nata	**必要に応じて**
stat.	statim	**直ちに**
h. s.	hora somni	**就寝前に**
a. c.	ante cibum	**食前に**
p. c.	post cibum	**食後に**
P. O.	per os	**経口で**
ad lib.	ad libitum	**適宜に**
M.	misce	**混和せよ**
Sig.	signa	**表示せよ**
gtt.	gutta	**滴**

医師国家試験の英文問題例

医師国家試験の一部として出題する英文問題の例を示す。

Basedow's disese occurs most frequently in

a. the first and second decades of life.
b. the second and third decades of life.
c. the third and fourth decades of life.
d. the fourth and fifth decades of life.
e. the fifth and sixth decades of life.

Basedow病（Graves' disease）は30代と40代に発症することが多い。first decadeは0～9歳を指すので，30代はfourth decadeであり，正解はdである。

おわりに

医師国家試験に英語を導入することにより，最新の医療情報を取捨選択できる医師が増え，我が国の医療レベルが向上する。最近の国家試験では医療倫理など幅広い医学全般の問題も出題されるようになってきており，それを更に広げて医師国家試験の一部を英語で出題することが一般教養を持った医師の養成に役立つと考える。

日本医学英語教育学会 第7回学術集会
【シンポジウム：医師国家試験への英語の導入を考える】

Introduction of English to the National Medical Licensing Examination

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The idea of introducing English into the National Medical Licensing Examination (NMLE) has been under consideration for more than two decades as of July 2004. Without going into the question of the various necessities and merits, we will discuss the practical aspects of how this can be implemented on a national level, based on our personal experience teaching English for medical purposes (EMP) at Tokyo Medical University (TMU), and also based on discussions with members of the Medical English Communications Research Association (MECRA) and the Medical Interpreters and Translators Association (MITA).

We will first introduce what we see as possible types of questions to include in the NMLE, either testing examinees in English about their clinical knowledge, or testing them on their medical English ability per se.

If English were to be included in the NMLE, this would necessitate significant changes in English education at medical schools. We will present our ideas on an integrated EMP curriculum covering the 1st through 6th year of medical school, which we are currently in the process of implementing at TMU, and which we believe will prepare students not only for English questions on the NMLE but also for a career in academic medicine.

Finally, we will discuss the main problems that we anticipate to arise should such an integrated EMP curriculum be implemented on a national level, namely guaranteeing the uniformity of teaching contents, the training and recruitment of qualified EMP teachers, the development of teaching materials, the uniformity of examinations, the weight given to EMP in the total evaluation, and the relationship with English tests for the residency matching program. In this respect, I will discuss how, in addition to the important role JASMEE is already playing, it can be even more instrumental in solving some of these problems.

We believe that the purpose of having English on the NMLE should be to prepare students for functionally interacting in medicine using English. Doctors should be able to download information in English from the Internet, read and understand it, and if necessary, write letters with questions. Any English test on the NMLE should therefore not be a test of general English ability, but rather a test of ability in EMP.

Test Construction

We will now introduce what we see as possible types of questions to include in the NMLE. One possibility is to test examinees in English about their clinical knowledge, using translations of the equivalent Japanese language questions that are currently used, or using case presentations in English with questions in English but answers in Japanese, either written or multiple choice. Another possibility is to test examinees on their medical English ability per se, using questions that test terminology, communication, logical thinking, and comprehension of papers. In this paper we will focus on the latter.

Let's take a closer look at the four categories: terminology, communication, logical thinking, and comprehension of papers.

1. Terminology

To test terminology, there could be multiple choice questions in English only, as in the following example.

Example 1

What is the meaning of blepharospasm?

A) any disease of the eyelid
B) twitching of the eyelid
C) radiography of the hand
D) cramping of the hand

Alternatively, the multiple choice questions could contain both English and Japanese, as in the following example.

Example 2

What does cytology mean?

1. Study of disease in general	a. 病理学
2. Study of cells	b. 組織学
3. Study of tissue	c. 細胞学
4. Study of function	d. 生理学

A) 4 and d
B) 1 and a
C) 2 and c
D) 2, 3 and b
E) none of the above

2. Communication

To test communication, examinees could be asked to select phrases suitable for communication among colleagues, and phrases suitable for communication with patients, as in the following example.

Example 3

Which of the following phrases can be used to ask a patient with dyspnea if his/her condition is aggravated on exertion?

1. Do you feel short of breath when you exercise?
2. Do your symptoms get worse when you have a cigarette?
3. Do you feel better when you move around?
4. Do your symptoms get worse when you move around?
5. Does cessation of exercise relieve the headache?
6. Do you breath more easily when you don't smoke?

A) 2, 6
B) 1, 4
C) 5
D) 1, 3
E) none of the above

3. Logical thinking, reasoning

To test logical thinking, examinees could be asked to order sentences to reconstruct a mini abstract, as in the following example.

Example 4

Order the following sentences to make a mini-abstract

1. We randomly assigned patients with completely resected pathological stage II adenocarcinoma of the stomach to receive either oral A–B for two years or no treatment.
2. Randomization was performed with stratification according to the pathological tumor category, sex, and age.
3. A subgroup analysis disclosed that most patients who benefited had pathological stage II adenocarcinoma.
4. X patients were assigned to receive A–B and Y were assigned to observation.
5. In a previous phase 3 trial of chemotherapy after resection of gastric cancer, a combination of A and B taken orally was shown to extend survival.
6. Adjuvant chemotherapy with A–B improves survival among patients with completely resected pathological stage II adenocarcinoma of the stomach.
7. The difference in overall survival between the two groups was statistically significant in favor of the A–B group (P = 0.03 by a stratified log-rank test).

A) 1–2–6–3–4–7–5
B) 1–6–3–5–7–4–2
C) 5–3–1–2–4–7–6
D) 4–2–1–7–6–5–3
E) 3–6–1–5–4–2–7

4. Comprehension of journal papers

Finally, to test examinees on the comprehension of papers, the test could include actual abstracts that examinees are asked to read, followed by questions about the content of the abstract.

Educational Preparation

1. Curricula revision

Next, we will take a look at how we believe the EMP curricula at medical schools need to be revised should English be included on the NMLE.

Recently, we have seen an increased interest in EMP from our students. Each year we conduct a survey of our first- and third-year students on their awareness of the importance of EMP, and the results of the survey conducted in July 2004 (unpublished observations) show a marked increase in interest. How do we explain this sudden increase in awareness? We believe that one reason for this increased interest is the introduction of the residency matching program. Some institutions have started including English examinations as part of their selection procedures for the residency matching program. This

has made students much more aware of the importance of EMP. For the first time in history, Japanese medical students now actually need EMP in order to enter the institutions of their choice. We have also seen a great increase in membership of the English Speaking Society (ESS) of Tokyo Medical University, from only 20 students in 2000 to 48 in 2004.

If inclusion of English on the residency matching program examinations of some institutions has this much effect on students, then inclusion of English on the NMLE would have a tremendous impact. There would be a huge demand and pressure from both students and institutions for EMP programs.

What then is the ideal EMP program? We would like to inform readers about the program that we are currently developing at TMU. It will be an integrated EMP curriculum covering the first through the sixth year of medical school, except the fifth year, which is devoted to polyclinic rotations. The main aims will be to provide all students the basic ability to function in medicine in English and to prepare students so desiring for a career in academic medicine. It will be designed to be flexible to adapt to future developments such as with the residency matching program and the NMLE.

The first through third year component will be compulsory and based mainly on medical English terminology. At TMU, we divide our students by level into five groups of approximately 22 students, taught by five teachers. Group A is the highest level, group B is the second highest level, and then group C, D, and E are divided alphabetically, because dividing them further would result in great difficulty teaching group E. The aim of these three years is to teach medical students to understand medical terminology, learn the Japanese equivalent, and also be able to explain it to lay persons. Currently we are using a textbook named *Building a Medical Vocabulary*, which was written for native English speaking persons working in fields related to medicine who are not medical doctors, e.g., people working in the medical insurance industry, who need to know the medical vocabulary.

The elective fourth year will consist of reading, reporting and discussing medical topics.

The sixth year will also be an elective course and will be aimed at students who are interested in publishing in medicine and building an academic career.

What are the problems to be solved should medical English be included in the NMLE? Qualified EMP teachers need to be trained and recruited, and educational materials need to be developed. The uniformity of teaching content and examinations needs to be guaranteed. The weight given to EMP in the total evaluation and the relationship between English tests and the residency matching program need to be considered.

2. Teacher training and recruitment

We will now take a more detailed look at each of these problem areas. One of the main problems is the training and recruitment of qualified EMP teachers. If English were to be included in the NMLE, there would be a huge demand for EMP courses, and there would also be a huge shortage in qualified EMP teachers. Training somebody to become a qualified EMP teacher is not something that can be done overnight. Now is therefore the time to develop teachers.

a. Teaching medical English

It was with this in mind that MITA (www.lingua medica.jp/mita) was founded in 1993. MITA is an informal research group that now has over 160 members. It holds monthly meetings and also has a mailing list. Its main purpose is to promote the interests of medical communicators, including translators, interpreters, editors and teachers, but a secondary purpose is to identify and develop EMP specialists. Freelance medical translators are the most likely candidates for teaching EMP on a part-time basis, because they have experience with medical English and Japanese, and have relatively flexible schedules that enable them to teach on a part-time basis.

b. Editing papers for journal submission

The English requirements of medical schools are not

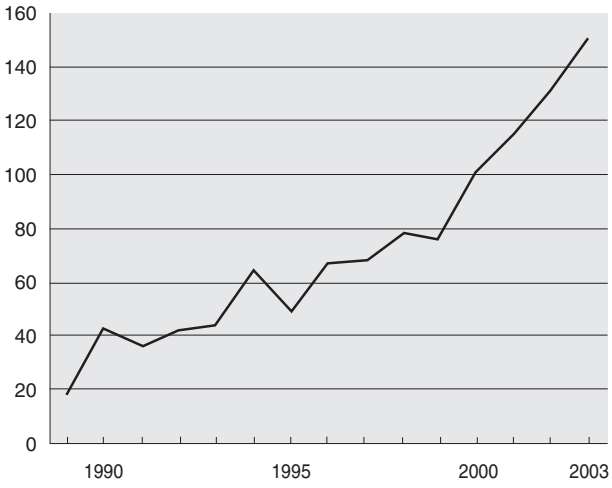

Fig. 1. Articles from Tokyo Medical University indexed on MEDLINE.

limited to the need for EMP education. Medical schools also have a need for publication of research in top level international biomedical journals. We therefore believe that there is a need for medical schools to establish medical communications centers such as the International Medical Communications Center (IMCC) at TMU or the Section of Scientific Publications at the Mayo Clinic. The IMCC has a dual role: the editing of research papers from TMU and the EMP education of TMU students and staff. The staff of the IMCC consists of two full-time instructors/editors, two assistants, and three part-time instructors. As a result of the establishment of the IMCC in 1989, the number of publications from TMU has greatly increased, as shown in Fig. 1.

If more doctors are going to have basic English ability, there also will be more publishing. However, these papers will still need to be edited, as is the case even at the Mayo Clinic in the US, where most of the authors are native English speakers. The Mayo Clinic established a Section of Scientific Publications in 1908 with its main role being the editing of scientific manuscripts for peer review.

Medical communications centers can effectively increase the acceptance rate of papers submitted to international journals. The staff of such centers can be involved in both the editing of manuscripts and the EMP education of undergraduate medical students, graduate students and researchers. Not all institutions have the funds for establishing a center, and one center could, therefore, cover multiple institutions.

Establishing medical communications centers, therefore, is a solution for the two needs of medical schools: the need for education and the need for increased publications.

To facilitate the establishment of such centers, two of the authors (JPB and RB) founded MECRA last year, with Dr Ito, the president of TMU, as its president, and Dr Uemura as a founding director. The main objectives of MECRA are to promote the establishment and functioning of medical communications centers in Japanese medical educational institutions, in particular medical schools and medical universities, to facilitate the flow of medical information from Japan, and to promote the professional and educational development of individuals interested in medical English communications.

Another obstacle to the training of qualified EMP teachers is the lack of quality reference and study materials available for those who are interested in pursuing a career in EMP education. Recently, however, textbooks have been developed which can be used for self-study by EMP teachers.

One such publication is『医学英語コミュニケーション』,[1] a series of three textbooks which were published in Japanese in May 2003. The series is aimed at Japanese medical researchers wishing to develop an international career and it covers all areas of international medical communications. Designed to be used either as a self-study text or as a reference book, it is also ideal for future teachers of EMP.

Other books which are suitable for such use are『流れがわかる学会発表・論文作成』,[2] and『医師のための英語論文執筆のすすめ：11の教訓・8つの極意』.[3]

The University of Edinburgh has developed a summer course in the teaching of English for medicine, which is very much recommended for those involved in EMP education. It is a two-week intensive course open to native and non-native speakers of English who have two years of language teaching experience, but not necessarily in EMP.

To train qualified EMP teachers, we also recommend establishing electives in medical communications in English departments of non-medical universities. The focus of such courses would be on medical translation and the aim would be to give prospective English teachers a basic knowledge of medical terminology, without the "fear" of medical English which is so common among teachers of general English.

We also propose the establishment of a certificate program for EMP teachers along the lines of the American Medical Writers Association (AMWA) workshops offered at AMWA conferences. Such programs could cover a range of basic through advanced workshops taught by EMP specialists and it could possibly be organized by JASMEE, maybe as part of future JASMEE conferences.

3. Materials development

In addition to the training and recruitment of qualified EMP teachers, another major problem is the development of teaching materials.

Recently a book called *English for Doctors* by Mária Györffy,[4] was published in a Japanese version with translation by one of the authors (JPB).

JASMEE is also working on textbooks, which will be a three-part series covering a very wide area from simple English to rather advanced medical communications.

However, there still is a huge lack in high quality teaching materials for EMP and more materials will need

to be developed.

The uniformity of teaching contents and examinations has to be guaranteed. There has to be a core curriculum to make sure that the same minimum requirements are met; otherwise, students of one school would have an unfair advantage over those of another when sitting for the NMLE. Therefore, a uniform textbook and curriculum, maybe supervised by JASMEE, should be implemented on a nation-wide scale.

It is impossible to have the same examination in every medical school, but examinations could be composed of certain modules. On each examination the same weight could be given to each module. For example, grammar could be 50%, medical terminology could be 30%, and advanced medical expressions could be 20%. There would be a bank of questions for each module from which different universities could select. For example, the bank could consist of 1,000 questions, from which University A selects 20, University B selects 20, and so on. This would guarantee not only uniformity of content, but uniformity of level. This bank could also be managed by the examination committee of JASMEE.

The weight given to EMP in the total evaluation is another issue that needs to be considered. Within each institution, this should be up to the discretion of the faculty of the institution. On the NMLE, medical English should be phased in gradually. At first, 5% of the total exam could be in English, and this could be raised gradually, eventually to 20% of the evaluation reflecting the ability to function in English.

With regard to the relationship with English tests for the residency matching program, introduction of medical English to the NMLE could result in all new physicians having a basic ability in EMP, because the NMLE is a requirement for becoming a physician. The residency matching program then would serve as a further selection. Each institution can bring its own focus to bear on how they want to design the English component of their residency matching examination. Some institutions may be more interested in candidates who can handle large amounts of information in English, others may be more interested in having doctors who can relate to patients in natural English, some may want residents who can go on to a career in international academic medicine. To get into the institutions of their choice, students will, therefore, need advanced ability in EMP, and there will be a need for advanced elective EMP courses tailored to the students' needs.

If EMP is introduced to the NMLE, a basic level of functioning in English would be an unavoidable necessity for all medical students in Japan. That ability should be part of the evaluation of the NMLE. There is a need for assuring a certain uniform basic level in the curricula of all medical schools, and JASMEE could play an important role in this. For evaluation of English ability over and beyond that level, it will be a matter to be decided on by each institution.

We hope that the Ministry of Health, Labour and Welfare will take these thoughts into consideration in its approach to future NMLE examinations.

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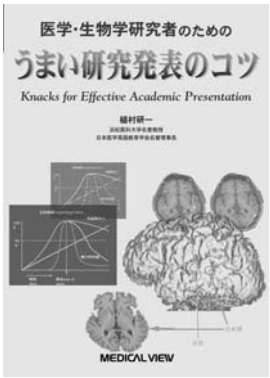


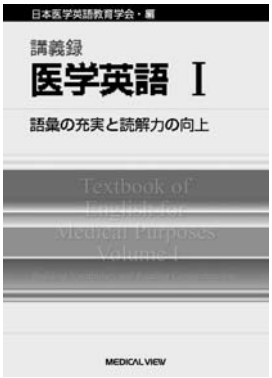
医学・生物学研究者のためのうまい研究発表のコツ

植村研一（著）

A5判，168頁，定価3,150円(5％税込)，2005年4月刊行，メジカルビュー社

■学術論文のうまい書き方とは？　うまい学会発表の仕方とは？　脳の仕組みからみた効果的な英語学習法とは？　ネイティブ・スピーカーが違和感を覚えない うまい英語表現とは？

医学英語教育の第一人者として全国各地で指導を続ける著者が説く，日本人英語の弱点とその対策。アクセプトされる論文を書き，説得力ある発表をするために，今まで誰も教えてくれなかった目から鱗のコツが満載！



講義録　医学英語 I　語彙の充実と読解力の向上

Textbook of English for Medical Purposes, Volume I: Building Vocabulary and Reading Comprehension

日本医学英語教育学会（編），清水雅子（担当編集委員）

B5判，168頁，定価2,625円(5％税込)，2005年1月刊行，メジカルビュー社

■英語での診療・学会発表・論文執筆を最終到達目標として，医師・医療関係者に求められる英語力を総合的・体系的に学ぶために企画された，日本で初めての医学英語教科書。本書はその第1段階（初級編）として，語彙の充実（専門用語の習得やその語源の理解，および文章としての表現）と読解力の向上（一般向け医療関連読み物を題材にして）を主眼とする12章から構成されている。

講義録　医学英語 II　科学英語への扉

Textbook of English for Medical Purposes, Volume II: Entering Scientific English in Context

日本医学英語教育学会（編），Nell L. Kennedy・菱田治子（担当編集委員）

B5判，164頁，定価2,625円(5％税込)，2005年12月刊行，メジカルビュー社

■英語での診療・学会発表・論文執筆を最終到達目標として，医師・医療関係者に求められる英語力を総合的・体系的に学ぶために企画された，日本で初めての医学英語教科書。本書はその第2段階（中級編）として，一般向け医療記事の読解，医療ニュースの聴取，専門論文の読解，症例報告の読解を主眼とする12章から構成されている。

看護英語読解 15 のポイント

園城寺康子，名木田恵理子，渡邉容子，川越栄子（編著）

B5 判，136 頁，定価 2,100 円(5 %税込)，2005 年 5 月刊行，メジカルビュー社

■看護に関連する 15 のトピックを読みながら，専門用語や文法の解説，さらには練習問題を通して，英文読解の基本事項が学べるように構成されている。とりあげたトピックは英字新聞の記事から専門誌に掲載された論文までと幅広く，看護師として広い知識を得るための英文読解力アップに最適。

Word で医学英語論文を書こう Word 2003, 2002, 2000 対応

芦田　廣（著）

B5 判，144 頁，定価 3,990 円(5 %税込)，2005 年 7 月刊行，メジカルビュー社

■医学英語論文を執筆する際には，ほとんどの人が Microsoft の Word を使用しているが，多機能なあまりなかなか使いこなせず，かえって余分な機能のために時間をとられ，スムースに論文執筆に専念できない状況に遭遇しやすい。

本書では，Word で英語論文を執筆する際に必要な機能のみをピックアップし，効率良く作成するためのノウハウを解説している。また，「科学論文用 Word テンプレート」などを掲載した読者限定ページにアクセスすることができる。

Microsoft Word 2000, 2002, 2003 対応。

留学はいかが？ Let's create your one & only!

小谷順一（編）

A5 判，240 頁，定価 3,780 円(5 %税込)，2004 年 1 月刊行，メジカルセンス

■単なる留学の手引き書ではなく，いかに留学や海外勤務を現実のものにするかという点に重点を置いた新しい留学の参考書。海外での勤務・留学経験者にアンケートや役立ちウェブサイトも収録。

Integrating the English Classes with the Medical Curriculum

Reuben M. Gerling
Nihon University School of Medicine

Background and Objectives: The need for English in medicine is an established fact, yet at this particular school a teaching programme that will reflect this reality has not yet been integrated into the curriculum. This paper describes an alternative teaching programme that has been developed to equip the students with some of the English they will need.
Methods: The programme teaches in English clinically related material to first and second-year students. The students are divided into groups and each group studies a different clinical condition using a text from a series published with the help of the British Medical Council. They learn how to use the medical information they acquired in writing medical transcriptions.
Results: Although students found it difficult at times to cope with concepts that they had yet to learn, they approached the tasks with enthusiasm and produced work that, although far from perfect, showed understanding of the subject and an improvement in their English.
Conclusion: Although an integrated programme would have been preferable, this course does introduce the students to the subject-matter and will enable them to deal with the challenges of medical English which they are certain to face.

Key Words: Medical English; integration; gap between learning and application

In the modern field of medical education, the curriculum has been divided into a core curriculum and associated degrees, studies that may prove helpful but are not crucial to the future doctor.[1,2] The first tries to define the knowledge and skills that the graduate medical specialist will need, whereas the second tries to provide the medical student with a broader and more comprehensive view.

As the changes have taken root at an increasing number of medical institutions, especially in Europe and North America, a third area of medical skills has been added and a list of skills that the graduate medic needs has been compiled.[3] Whereas these are mostly clinical skills, the present article will argue that English, in its narrow medical application, is also a skill without which the modern doctor cannot survive.

The need for English is self-evident. Most medical publications are in English, and those that are not are usually translations from the English. Communication among doctors at the international level, e.g., at medical conferences, is almost entirely in English and 70% of the Internet is in English. The Internet has become an increasingly important source of information and any attempt to instigate international cooperation and instruction via the Internet will inevitably be in English.[4]

Isolation versus integration

As, however, integrated modern teaching methods are slow to make inroads in Japan, the teaching remains divided and isolated. English is taught as a separate, unrelated topic and its relevance remains a theoretical concept. When asked, most medical students will agree that they need English and that it is important, but they are rarely going to apply themselves to the study of the language with the necessary energy as long as it is a separate learning field. In terms of time devoted to each field of learning, English will always prove insignificant in comparison with the main language of instruction, Japanese,[5] and students will find it difficult to employ this skill without being provided with any immediate, practical

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benefits.

The question stands, therefore, as to what English teachers can do in order to rectify the situation in such a manner that when the students begin to feel the need for English, they will not find themselves, like so many Japanese doctors forced to sit with a dictionary and labour through a long, not so easy text, translating it word by word. The first possibility is (1) to teach English without any reference to the medical curriculum. Providing a full programme of English ought to result in the students' being able to work with the language, whatever their needs. They could then apply it to medicine themselves. As this option is not open to most medical institutions, there remains the second possibility, (2) to integrate the English curriculum with the main medical curriculum.

The approach at Nihon University School of Medicine

Without an integrated curriculum, and with English at Nihon University School of Medicine restricted to the first two years, the English teacher may find it difficult to integrate language skills that students will need two years later—a sort of 'remote integration'. This is the dilemma that faced us. We, therefore, devised a programme that aims to rectify the situation so that when students reach the upper years they will still possess some practical ability in the language.

We have, therefore, devised a programme based on medical transcriptions. This is a field that medical specialists will certainly need. With it they can deal with papers in their field, understand professional talk and be able to read the literature without resorting to the dictionary with each sentence.

Methods

The students work in groups. Each group is given a text, a book explaining one clinical topic, such as Parkinson's disease, diabetes or heart surgery.[6] Each group of students receives a different text. The groups study their texts and supplement them with medical texts and the Internet. Once they have mastered their topic, each group gives an oral presentation explaining its topic. They then learn how to write up a case report about one aspect of the condition they have learned. They are also taught to work with other types of medical transcription such as referrals, consultation letters and operative reports in addition to learning to understand laboratory reports.[7] The cases are presented to the class to elicit questions and discussion and the teacher explains points of English at the end of each discussion.

Assessment

1. The weakest point of this programme is the time lapse between the lessons (first and second year) and their application (mainly fifth- and sixth-year students). In a lecture-examination type curriculum, students learn to 'finish' whatever they are doing at each stage without carrying it to the next stage. Thus, when reviewing anatomy for the state exams, for example, they will usually study it anew rather than review something they have learned during their early years. As language is a skill, i.e., something that demands regular use if proficiency and retention are to be achieved, the gap of two years or more without practicing their newly acquired language skills may undo whatever the students may have achieved.
2. Another disadvantage to the programme is that the first and second-year students are not yet familiar with the subject matter being studied. Difficult medical concepts are beyond their comprehension at this stage. The texts we use, however, are designed for the layman, namely patients and other interested persons, and the students usually do not find them overly difficult. They sometimes are not able to follow some of the professional works they consult, either in book or journal form or on the Internet. At the same time, consulting these works gives them a chance to get used to professional medical oriented writing, a type of writing they will encounter for the rest of their professional life.
3. There may also be some objections to the fact that the English teachers are not experts in the medical topics being introduced. There is, however, evidence that non-expert tutors are just as good as, if not better than, the medical professionals.[8]
4. An advantage of the programme is that, as the students learn more about the particular medical condition they have been assigned, they are able to explain things both to the teacher and to their fellow students, who will have tackled different clinical cases. This creates a more egalitarian situation and adds meaning to the work the students do.
5. One additional factor needs attention in evaluating this programme. First-year students are more enthu-

siastic than students in the upper years. This trend is well established in the literature and evident to the teachers in this programme, who are witnessing the differences even between the first and the second-year students. Thus, the onus in this work is on the first-year students—whatever they have been able to master may be retained, whereas the second year is devoted to reinforcing the skills already mastered.

The students' writing

As the students' writing is commented upon in front of the class as a whole, students generally can benefit from the mistakes of others (provided they pay attention, of course). Commenting on all groups as well as making the students feel comfortable with the remarks (you are not being scolded, this is a discussion of everyone's work) is crucial to the success of the work. Unfortunately, students do not necessarily relate the work of other students and the comments upon these works to their own work. They, therefore, tend to repeat mistakes that had already been corrected; indeed, there is a tendency for the same problem sentences to keep popping up. One reason for this tendency may be that the students go with everything through Japanese, instead of working directly in English.

a. Thus, students tend to write up sentences that may make perfect sense in Japanese but make no sense in English, e.g., "Negative point is he has been fever", or the common, "He is diabetes".
b. One obvious type of mistake that keeps cropping up is that of confusing the plural and the singular. Indeed, in most instances the plural disappears altogether. Students often ignore the simple logic of such sentences e.g., "Vital signs was normal." "The fraternal twins take away the needless matter" (do they indeed?) "He have nausea," and so on.
c. In sentences like: "On physical examination his vital signs was normal," the mistake is more than a matter of grammar; in many instances it can lead to misunderstandings and errors of judgement. Did the physician actually examine all the vital signs, or was it only one sign that acted as the representative for the lot?
d. There is also a tendency to misconstrue the workings of the English sentence. Who did what to whom, and whose intention was it? "He reduced his weight 9000 g" makes it seem that the patient actually tried to become slimmer, whereas the truth is that the reduction in weight, be it welcome or not, has happened as a result of an illness.
e. With some students, the stringing of words while disregarding the way the language works went into high gear with sentences such as "The patient complaining with weakness which was both legs while going upstairs".

The question that such examples raise is whether familiarity with the subject-matter can effect improvement in the writing. Once students memorize literal meanings of individual sentences one by one, as students commonly do in Japan, their rendering of the original meaning of the original English charts into the English of the case report may become more nearly correct as it goes through the Japanese version in the students' minds. This accuracy, however, comes at the price of comprehension, as the students are not able to work in English. It remains to be seen whether the kind of training in the early years as that described here will help some students to overcome this impediment and be able to actually comprehend the meaning in the original language.

f. At times the students' writing reveals an obvious failure to understand the meaning of the original and their transcription is, therefore, patently wrong. A sentence like "His neck looked like dilated" shows complete failure to understand the picture, as does "The patient was treated with presumptive diagnosis of acute appendicitis", where the student failed to understand the meaning of the word 'presumptive'.
g. Within this group there are students unable to remember the meaning of abbreviations. Abbreviations are common in medical writing and must be remembered by every practicing physician. The students here are at the preclinical stage and do not really need to know these abbreviations, and very few are introduced. At times, however, students fail to remember even those few and that weakness shows up in their writing. A sentence like "The patient smoked 35 pkts. of cigarettes 1/12 per day" is a good example of this phenomenon. There is some question as to whether the student understood the meaning of 'packets', but the real problem is with the 1/12 which stands for 'per month'. The student did not understand that and wrote 'per day', leaving the original notation of 1/12 as well. Of course, if the patient had smoke 35 packets a day, he would not need a doctor. He would need an undertaker!

Conclusions

This programme was set up to enable the students to benefit from their English classes. The programme suffers from the fact that no English is being taught at the upper levels. Greater benefit would be possible if the English programme could be integrated with the clinical and basic sciences curriculum. After all, the students need the English to pursue studies in these fields. The first and second-year students do find it difficult to write up their case reports and to work with other kinds of transcription mainly because they are trying to work through Japanese instead of comprehending the English. However, provided the two-year lapse does not erode the body of knowledge acquired in this course, it seems that this sort of 'one-way integration' is the most beneficial for the students under the present circumstances.

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Importance of Humanistic Studies for Future Health Care Professionals

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Medicine is a caring profession. Medical education is, therefore, a twofold commitment: to prepare the students towards both the medical and the moral/ethical questions that will challenge their profession. With rapid advancements in technology, however, more time and weight have been put on the acquisition of knowledge and technical skills than on the humane aspects of medicine. Thus, the moral/ethical side of education has been neglected or taken for granted. To help bridge the gap in the curricula of medical and nursing schools in Japan, we are producing a new English syllabus, *Thinking through Literature*, intended to help the students raise their ability in English for medical purposes while leading them, at the same time, through selections from literature, to talk about and gain understanding of the socio-psychological needs of the patients. The objectives of this paper are (1) to report on the current use of literature in medical schools in the United States and Great Britain and (2) to introduce the new syllabus by describing trial runs of the material in English classes at two medical universities in Tokyo. In the United States and Great Britain, a large number of literary courses were found at medical schools, in addition to databases and journals linking literature to medicine. In the classroom trials in Tokyo, *Thinking through Literature* was received enthusiastically and the students made substantial progress in English, as recognized by themselves, peers, and teachers. The syllabus shows promise toward helping equip tomorrow's healthcare professionals with the skills they need.

Key Words: humanistic studies, literature and medicine, *Thinking through Literature*

Rapid advancements have been made in technology and, as a result, the medical universities increasingly put more time and weight on the acquisition of knowledge and technical skills. Training students in the humane aspects of medicine has, consequently, been neglected or taken for granted. Education for medical students, however, is expected to be twofold in its commitment. The first is to prepare the students towards the medical. This is the physical aspect—to gain scientific knowledge and acquire technical skills. The second is to prepare them for the moral and ethical questions that will challenge their profession. This is the psycho-spiritual aspect—to gain a deeper understanding of humanity and develop empathy for the patients. It is this second part of the education that is currently deficient in the medical and nursing schools in Japan.

It should be noted, however, that medicine is a caring profession that deals with people. As part of their care, medical professionals are challenged to listen to, understand, and empathize with the patients and are expected to help the patients and their families move on with their lives. Given that the various patients and their families have different sets of values, it becomes necessary for medical students to acquire a deep understanding of humanity.

To address the shortcomings of the psycho-spiritual side of current medical education, this paper proposes the study of humanities through critical thinking and reading of literary passages incorporated into English classes. First, we trace the century-old educational debate between science and the humanities. Second, we look into how the humanistic side of medical education is

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currently approached in the United States and Great Britain. Finally, we introduce our new syllabus, *Thinking through Literature*, which focuses on the humanistic needs of future healthcare professionals while at the same time guiding them to make progress in English for medical purposes. Here, we give an overview of the syllabus and describe the classroom trials conducted in English classes at Tokyo Women's Medical University and at Tokyo Medical University.

Science versus the humanities

1. In favor of science

Abraham Flexner (1866–1959) was an educator who played a major role in leading the medical schools in the United States towards science-centered education and away from the humanities. Having been instructed by the American Medical Association and supported by the Carnegie Foundation to make a survey on the medical schools, Flexner evaluated more than 150 medical schools and reported on what he considered to be the need for reform. He published his report, *Medical Education in the United States and Canada*, in 1910. The medical schools he visited in Germany led him to take a strong stand in favor of the importance of science as the basis of medical education. He would eliminate the studies of Latin and Greek and limit the studies of literature and history. He held that the active exercise of the faculties should "store his [the medical student's] mind with information and train him in a technique that makes all experience contribute to his growth, and finally equip him with the various practical skills ...."[1]

2. In favor of humanities

On the other hand, a strong concern and high interest arose over the lack of humanistic studies being offered to medical students. William Osler (1849–1919) was a Canadian physician who was deeply concerned over the neglect of the study of the humanities, which he termed as "far too general ...."[2] He had been a founding member of the Association of American Physicians, the first professor of medicine at Johns Hopkins University School of Medicine, and one of the most outstanding medical educators of his time. Many people stressed the importance of humanistic studies but no one expressed it better than Osler in his lectures delivered at many medical schools and in his writings published both during his lifetime and posthumously:

a. The Humanities are the hormones.

b. Twin berries on one stem, grievous damage has been done to both in regarding Humanities and Science in any other light than complemental.[3]

c. As the practice of medicine is not a business and can never be one, the education of the heart—the moral side of the man—must keep pace with the education of the head. Our fellow creatures cannot be dealt with as man deals in corn and coal; 'the human heart by which we live' must control our professional relations.[4]

Osler's philosophy spread and, in 1967, the first humanities program with departmental status was established at Pennsylvania State University (PSU) College of Medicine. By 1973, there were 40 humanities "programs" and by 1984, there were not just programs but four full departments of humanities in American medical schools. By the year 2000, 33 years after the first program had been established at PSU, one-third of the medical schools in the U.S. had literary programs.

Current syllabi abroad

By searching the curricula of medical schools in the U.S. and Great Britain, we found a wide variety of humanistic studies being offered. A small sampling of the course descriptions in literature is given here.

1. In the United States

● Harvard Medical School

[2004] NARRATIVE ETHICS: LITERARY TEXTS AND MORAL ISSUES IN MEDICINE.[5] The course uses literary narratives and poetry to study ethical issues in medicine. Students are required to keep a reading journal that examines the meaning of illness; the moral role of the physician; and the relevance of emotions, culture, faith, values, and social realities to patient care.

● Stanford University School of Medicine

[1999] LITERATURE AND MEDICINE.[6] Stories, poems, and essays about illness and health, the art of medicine, and the perspectives of patients and doctors are discussed to enhance the understanding of the patient–doctor relationship and the moral and ethical issues imbedded in medical care. Readings include works by Emily Dickinson, John Donne, and Alice Walker.

[2004] LITERATURE AND MEDICAL INTERVENTIONS.[7] Literature related to the practice of modern medicine and its effect on patients and physicians are read and discussed.

● University of California, Irvine

[1999–2001] PATIENT–DOCTOR I: REQUIRED MEDICAL HUMANITIES COMPONENT AND LINKED LITERATURE AND MEDICINE, ELECTIVE.[8] The course provides an introduction to particularly problematic aspects of doctor–patient communication. Students develop increased empathy for the patient's experience in medical interviewing.

[1999–] THE USES OF LITERATURE IN BEHAVIORAL SCIENCE TRAINING.[9] The course covers topics such as doctor–patient relationship, common psychological disorders, domestic violence, death and dying. Students learn how reading fictional work can supplement understanding of common psychosocial aspects of primary care medicine.

2. In Great Britain

Also in Great Britain, the medical universities offer a variety of courses in literature. A few are listed in Table 1.[10]

The study of literature in the United States and Great Britain challenges the medical students to think critically and understand human life better through the characters and issues they read about.

Journals and databases

1. In the United States

In addition to the course offerings, there are various journals such as *Literature and Medicine* published semiannually by Johns Hopkins University, and databases and networks discussing the importance of literature. The New York University School of Medicine has been one of the leading institutions in promoting humanistic studies both in their curriculum and on the Internet. Their philosophy of education is aptly expressed as "cultivating the humanistic physician-scholar."[11] They built a network on the Internet called "Literature and Medicine Discussion Group" where doctors and medical students from various medical universities discuss the issues, share their knowledge, and offer advice.

Dr. Rafael Campo, who is a practicing physician at Harvard Medical School and at the Beth Israel Deaconess Medical Center in Boston, is also a poet. Dr. Campo welcomes ideas about incorporating literature in the education of medical students. On the Internet, he wrote:

> I'm very interested in how poetry and literature in general might be used as tools in creating discussion among aspiring health care providers about empathy. Medical school training, or at least mine, seemed terribly devoid of this kind of learning.[12]

In reply to this message, Dr. Martin Kohn at Northeastern Ohio Universities College of Medicine introduced him to a professional organization named the Society of Health and Human Values, and also invited him to join the mailing list of the Center for Literature, Medicine, and the Healthcare Professions at his university.[13] Thus doctors enthusiastically exchange e-mails attesting to the importance they place on literature in the medical profession.

2. The situation in Japan

● No journals nor databases

We tried to find databases in Japan similar to those described above, but have not found any yet. However, this may not necessarily reflect a lack of interest on the part of the healthcare professionals and medical students themselves. The absence of databases for journals and discussion groups linking literature and medicine suggests that the humanistic training of medical students in Japan needs to be explored further.

Table 1. Sampling of literary courses at medical schools in Great Britain.

Medical School	Literary Course
Leicester–Warwick Medical School	The Arts in Medicine
Newcastle Upon Tyne	Literature and Medicine
Oxford University	Literature and Medicine
Royal Free & University College Medical School, University College London	Poetry and Prose in Medicine
University of St. Andrews	Literature and Medicine
University of Wales College of Medicine	Developing the Study of Medicine and Literature

● Reading, on the decline

In Japan an alarming number of students and young adults do not read today. According to a 2003 poll by the Agency for Cultural Affairs, about 30–40% of the general public between the ages 16 and 29 do not read a single book in one month (Table 2).[14]

When asked what the benefits of reading are, respondents answered that reading gives them access to new knowledge and information. Emotional growth or the development of sensitivity did not earn priority as a reason for reading (Table 3).

A survey we conducted on 135 freshmen and sophomores in medical universities in 2004 disclosed similar results: 37.8% of the students indicated they do not read a single book in one month. As for what they considered the benefits of reading, those who answered "for gaining knowledge" (37.0%) exceeded twice the number of students who answered "for emotional growth or the development of sensitivity" (17%).

These findings indicate that the university students are not adequately enhancing their emotional growth or developing in sensitivity through extracurricular reading on their own. This gives rise to the view that the school curriculum is the appropriate avenue through which to provide reading opportunities directed specifically toward stimulating humanistic concerns.

Filling the gap

Students in Japan have admitted that they do not have time to read outside the classroom; and teachers have related that they have more than enough already to teach in the medical school curriculum and that it would, therefore, be difficult to provide classes solely for the study of literature. Informed by the "medicine-and-literature" approaches taken by educators in the U.S. and Great Britain, we have constructed a new course for use in English classes and tailored it to the specific needs of Japanese medical students. In agreement with the stand taken by both the students and teachers in regard to the time limitations in the Japanese curricula, the course would not be just for literature appreciation. Rather, the course is designed to be practical, bringing literature close to the students' lives through a wide variety of topics for discussion, critical thinking, and writing intended to enrich their medical profession as well as their daily lives. By amalgamating the studies of English and literature, the course aims to guide the students to make progress in English and acquire medical terms while at the same time attaining a deeper understanding of humanity through encounters in literature.

The new syllabus introduced here, *Thinking through Literature: for Future Professionals in Health Care*, has three purposes: first, to lead the students to think about life from many perspectives other than medical technology; second, to help them gain from literature the strength and courage necessary in facing life; and third, to help them improve their four basic English skills by engaging them in a variety of activities centering around works of literature selected specifically with medical students in mind.

Each unit has basically three interrelated sections: Dialogue, Reading of the Passage, and Japan and the World. The Dialogue presents a short episode in a specific healthcare environment which students might expect to encounter. In the dialogues, we have made a special effort to bring in terms that many Japanese doctors had found very difficult in definition and usage when they first entered the English-speaking medical community. Expressions such as *take a listen, sponge bath, change the dressing, shrinks, arrested, scrubs, smart* and others, enter into the dialogue; and at the end of the dialogue, exercises are provided for vocabulary reinforcement.

The "Reading of the Passage" section presents an excerpt from either English or American literature and proceeds along carefully guided stages for learners of

Table 2. Readers of less than one book a month.*

Respondents		Readers of Zero books/Month
Men	16–19 years old	38.2%
	20–29 years old	32.7%
Women	16–19 years old	31.6%
	20–29 years old	29.8%

* Survey by Agency for Cultural Affairs, 2003 (Japan); Magazines and comics are not included.

Table 3. Survey on the benefits of reading.*

Respondents		Reasons for Reading	
		New Knowledge /Information	Emotional Growth.
Men	16–19 years old	60.0%	29.1%
	20–29 years old	66.6%	31.0%
Women	16–19 years old	56.1%	33.3%
	20–29 years old	55.3%	39.5%

* Survey by Agency for Cultural Affairs, 2003 (Japan).

English as a foreign language. To enhance understanding, Time Lines are included, along with "Before You Read" and "After You Read" questions, followed by additional information on the literary work and the author featured in the unit.

Finally, the "Japan and the World" section at the close of each unit encourages the students to study further some of the issues brought out by the literary work they will have just read. The students are challenged to place those issues in the global context and examine them from interdisciplinary perspectives.

1. Sample unit: Dylan Thomas

The unit on Dylan Thomas treats a poem which appears almost always in the Literature-and-Medicine courses at American medical schools. The Dylan Thomas unit, as all units, opens with a thematic subtitle. The subtitle of this unit is, "How do you wish to accept death?"

● Dialogue

In a hospital ward, Mr. Monroe has undergone several rounds of surgery; a recent PET scan leads the physician to the suspicion of metastasis. The patient talks with his attending physician, Dr. Wilson.

Dr. Wilson: I have just discussed your case with the chief-of-surgery and we would like to place you under a new procedure. The medication and the treatment we've administered don't seem to be taking effect.

Mr. Monroe: What? After all I've had to go through?

Dr. Wilson: I'm sorry, Mr. Monroe. However, there is a new procedure. It's a controversial one but it may ....

Mr. Monroe: Oh, no! As far as I'm concerned, I'm done. So why bother?

More conversation follows and ends with Mr. Monroe saying:

Mr. Monroe: Look, Doctor. I'm not afraid of dying. I'm afraid of having to die without self-respect. Don't force me to go through more suffering. Just let me go. In fact, I'd like to sign the Death with Dignity form right this minute with the DNR, No CPR, and whatever.

Terms in the Dialogue for which we have provided exercises are *DNR, CPR, rounds of surgery, suspicion of metastasis, to place under a new procedure, to administer medication, to knock on wood, to respect a living will* and others.

● Time lines

The upper Time Line shows the poet belonging to the Modern Period of English literature (Fig. 1). In the shorter Time Line underneath, the students can see at a glance some of the history-making events that took place during the poet's lifetime. On the world stage, there are World Wars I and II, Fleming discovers penicillin, the UN established, and BBC radio broadcast begins. Then inside Japan, there are the Great Kanto earthquake, the atomic bomb in Hiroshima, Dr. Yukawa awarded the Nobel Prize, the first TV airing, etc.

● Before you read

In the Before You Read questions, students are asked

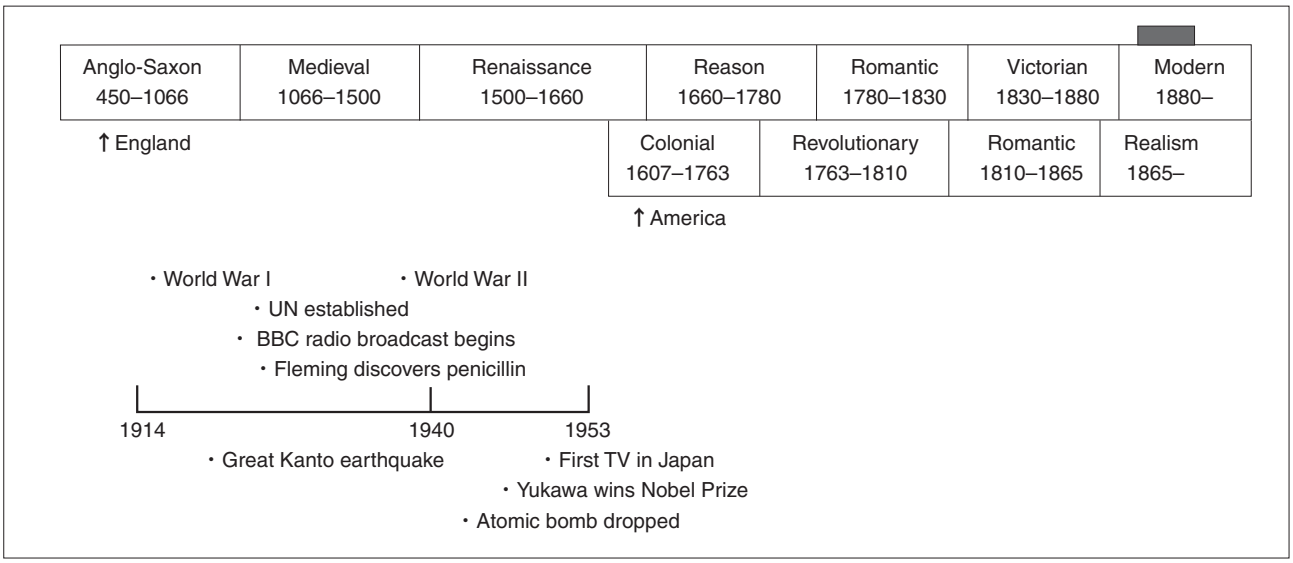

Figure 1. Dylan Thomas (1914–1953).

to explain their image of death by using descriptive nouns and adjectives. In our trial of this unit, what surprised us was that all the student responses were negative: death was dark, frightening, hopeless, black, no oxygen, misery, hell, punishment, etc. It was not until we introduced Emily Dickinson's poem "Because I Could Not Stop for Death" in a later unit that the students were struck with the thought that death could be kind, civil, irresistible or welcomed.

● Reading of the passage

Now the students are ready to read Dylan Thomas. Here is a three-line excerpt:

Do not go gentle into that good night,
Old age should burn and rave at close of day;
Rage, rage against the dying of the light.

Like Mr. Monroe in the dialogue, Dylan Thomas' father is afflicted with a grave illness. The poet asks his father to rage and rave and not to go gentle into death. The poem is forceful and imperative.

● After you read

The After You Read questions check the close reading of the poem and invite class discussion. Students are asked to write out all the verbs the poet uses in the poem and give their opinions on what the poet thinks a person facing death should do. They are led to talk about Dylan Thomas' attitude toward death.

● About the work/ About the author

Providing more information on the poem and the author, these two short sections are in Japanese to help the students understand and enjoy the work with minimal hardship.

● Japan and the world

Finally, the section Japan and the World, shows that Dylan Thomas' poem includes issues about the elderly. So we ask the students to go beyond the syllabus and, using other disciplines, find answers to questions such as these: (1) What are the top three causes of death among the elderly in Japan? In other countries? (2) How is nursing home vs. home care regarded in Japan? In other countries? (3) What is one example of a new, controversial medical procedure in Japan? In other countries? To answer these questions, the students necessarily go into such disciplines as geriatrics, gerontology, sociology, psychology, law, and others.

2. Sample unit: William Butler Yeats

William Butler Yeats' poem "When You Are Old" was the students' most popular choice. The unit opens with the thematic subtitle "What makes a woman beautiful?"

● Dialogue

In the waiting room of a plastic surgeon, between a sixty-something-year-old woman and a nurse. After exchanging the preliminaries, the nurse asks ...

Nurse: Now, what brings you here today, Mrs. Madison?

Mrs. Madison: I'm here to become a completely new woman.

Nurse: And how can Dr. Lincoln help you?

Mrs. Madison: Well, I want him to make me look forty years younger.

Nurse: Then may I ask you to go through this list and check off all the work you wish to have done?

Mrs. Madison: (without looking) Everything that's listed.

Nurse: Um, you might want to give it a good reading first, Mrs. Madison.

Mrs. Madison: I know what I want. Everything. Laser rejuvenation, tick. Breast-lift, tick. Liposuction, tick. Rhinoplasty, tick. Tick. Tick. Tick. Tick. There, I'm done with all the ticking.

Nurse: Mrs. Madison, you are sure you want the whole works?

Mrs. Madison: Oh, yes, absolutely.

Nurse: And, incidentally, Mrs. Madison, you are aware that you would not be covered by insurance?

Mrs. Madison: Oh, yes. Money is the least of my worries as long as I get my beauty back. When I'm beautiful once again, I can get my husband back.

● Time lines

What happened on the world stage during Yeats' lifetime: Mendel discovers the law of heredity, the germ theory of disease is proven, Roentgen discovers X-rays, and the Modern Olympics begin. Directly involving Japan are the Sino-Japanese war, the Russo-Japanese war, the postal service is established, Rokumeikan is completed, Einstein visits Japan, and NHK is established (Fig. 2).

● Before you read

The Before You Read questions ask how age reflects on a person's physical appearance. This turned out to be an exciting brainstorming session. One student surprised the class by coming forward to show what she herself had actually undergone to make herself look younger. She was twenty-one.

● Reading of the passage

The poet addresses a woman who had been a raving beauty when young. Now old and no longer so, the woman inspires the poet to write:

When you are old and gray and full of sleep,
And nodding by the fire, take down this book,
And slowly read, and dream of the soft look
Your eyes had once, and of their shadows deep;

How many loved your moments of glad grace,
And loved your beauty with love false or true,
But one man loved the pilgrim soul in you,
And loved the sorrows of your changing face;[15]

Had Mrs. Madison been versed in the poetry of Yeats, would her values regarding beauty have been affected in any way? This connecting of our thoughts to men and women of letters in other times and places makes us feel life more deeply.

● After you read

One of the After You Read questions excited the students, particularly since plastic surgery seems to be the thing for young people today. This was the task: A person with a "pilgrim soul" may not need cosmetic surgery. Share your ideas on cosmetic surgery with your classmates.

We expected the majority of students to say that beauty is merely skin-deep and that spiritual beauty is what counts. We were terribly wrong. One student explained that cosmetic surgery brings self-confidence. Another insisted that everybody has the basic human right to design his/her own looks.

● Japan and the world

Japan and the World has the students do some research on topics such as these: (1) How is cosmetic surgery looked upon in Japan? In other countries? (2) What is the share of cosmetics for men in the Japanese cosmetic industry? In other countries? (3) Find out how the appreciation of beauty changes with time, places, and peoples. Thus in this section, the students learn to connect medicine to other disciplines such as the economy, marketing, sociology, etc., from a Japanese perspective and a global perspective.

3. Overview of the course

The syllabus comprises thirty units covering the major periods in English and American literature.

- Robert Frost's "The Road Not Taken" makes students think of life as continuous choices and of the values to uphold in deciding which choice to make. Thematic subtitle: What values guide you in making choices?
- Thomas Hardy's "The Man He Killed" makes students consider how war dehumanizes the person in his relationships with others. Thematic subtitle: How are human relationships forced to change?
- William Wordsworth's "My Heart Leaps Up" makes students think about how to maintain freshness in life and how to view the poet's words "the Child is father of the Man." Thematic subtitle: What have we forgotten of childhood?

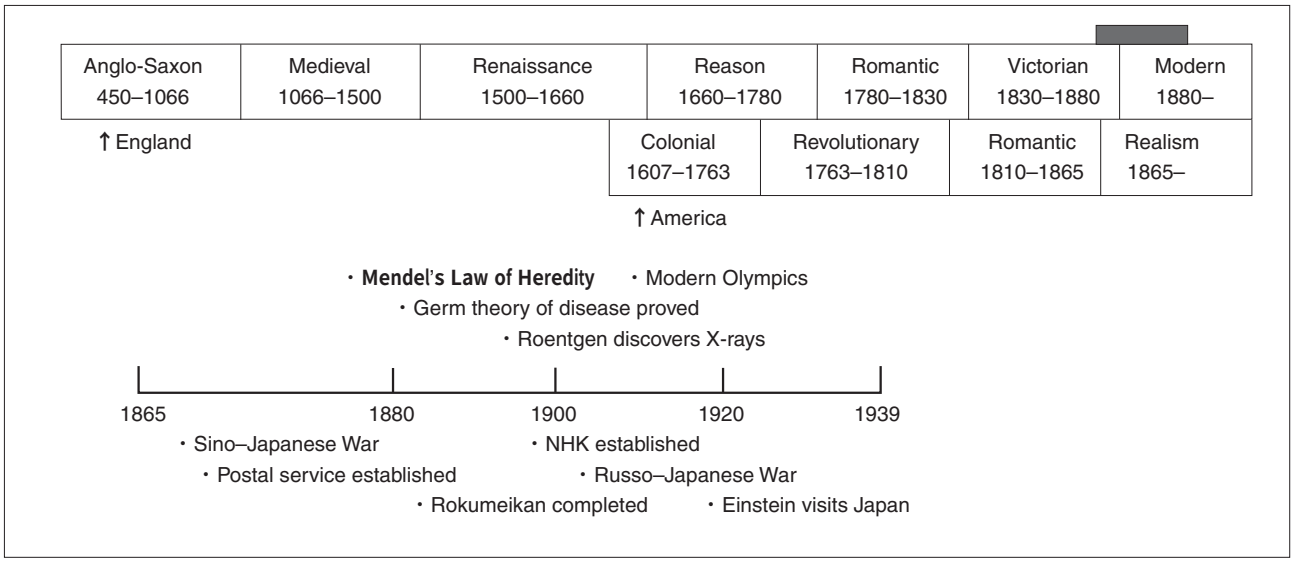

Figure 2. William Butler Yeats (1865–1939).

Other writers represented in the syllabus include F. Bacon, W. Blake, R. Browning, G. Chaucer, D. Defoe, C. Dickens, E. Dickinson, R.W. Emerson, F.S. Fitzgerald, E. Hemingway, G.M. Hopkins, S. Johnson, J. Keats, C. Marlowe, J. Milton, T. More, A. Pope, W. Shakespeare, G.B. Shaw, P.B. Shelley, A. Tennyson, M. Twain, W. Whitman, O. Wilde, M. Wollstonecraft.

Our selections do not ask easy questions. American poet Walt Whitman writes: "There are who teach only the sweet lessons of peace and safety; / But I teach lessons of war and death to those I love. / That they readily meet invasions, when they come."[16] We take "invasions" to mean conflicts in life.

Conclusion

Before testing the syllabus in classes, we had given serious concern to one question in particular: Were we not overtaxing the students by giving them a triple challenge, i.e., to learn medical terms, improve their English skills, and develop an appreciation for literature—all in the same course? The responses during the classroom trials of the syllabus, however, confirmed our conviction that medical students want to take on the challenges. Students in the trial classes found the syllabus different from English textbooks they had had and reported that they quickly found themselves immersed in the issues brought out by the dialogues and discussions. In conclusion, *Thinking through Literature* used as an English syllabus for medical and nursing students is deemed useful in helping them as future healthcare professionals to enact the advice of William Osler, i.e., to spend a part of the day "in communion with the saints of humanity" (Hinohara, p. 271)[3] so that they will be better able to respond to the Hippocratic Oath.

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Collocational Deviation Involving *possibility/probability* in English Abstracts by Japanese Medical Researchers

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This study focuses on English collocational deviations produced by Japanese medical researchers in their academic writing. In particular, we examined the problems they encounter in using expressions involving *possible/probable, possibility/probability,* and *possibly/probably.* In this regard, it has been found that Japanese learners of English are largely unable to differentiate between the words within each word pairing and tend to perceive each of these pairs as being equivalent in meaning. These words are therefore used interchangeably without regard for their meaning differences. The inability to use these words appropriately can then lead to imprecision in reporting academic research. The method of investigation involved a comparative analysis of the above words on the basis of statistical evidence obtained from native and non-native English corpora respectively. Concordance results confirmed the difficulty that Japanese learners have in distinguishing these words from one another. Such difficulty would appear to stem from a negative transfer from the Japanese language and the problem of differentiating English words that share the same Japanese word or expression when translated into Japanese. This finding suggests that learners would benefit from referring to concordance evidence taken from English native-speaker corpora in order to gain insights into lexical collocations and the selection restrictions that govern them. Through exposure to multiple samples of collocational patterns, learners may become more sensitive to how words combine and thereby avoid collocational mismatches in their writing.

Key Words: corpus analysis, collocational deviation, medical research writing, *possibility* versus *probability*

Introduction

In this study, we examined the language of medical discourse and the linguistic problems confronting Japanese medical researchers writing academic articles in English for medical journals. Such articles sometimes contain a number of lexico-syntactic anomalies that deviate from the commonly accepted forms produced by native speakers of English. When certain word combinations or expressions do not follow the conventions governing a particular field, this could have an adverse effect on the proficient reader, who may be disturbed to find irregular language patterns occurring in an academic text. Irrespective of the quality of research, if the language is stilted and difficult to read, this often makes an article less accessible and detracts from its content. It is necessary, therefore, for Japanese researchers, as learners of English, to become more aware of the importance of conventional practices in academic writing.[8]

In the case of learners of English as a foreign language (EFL), there are relatively few opportunities for implicit learning, as they have little exposure to the commonly occurring word patterns and set phrases inherent in everyday native-speaker discourse.[10] They therefore do not have access to the substantial number of words and collocations underlying native-speaker competence. While their knowledge of grammar may be adequate, they are often betrayed by their imperfect understanding

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of vocabulary, which may result in grammatically acceptable but awkward expressions in their writing. In particular, they do not have the propensity for native-like selection in that they are not able to choose the preferred linguistic sequence from a number of grammatically acceptable alternatives.[27] Using an inappropriate word or expression may lead to imprecision in their writing and distract from the meaning they wish to convey.[17] This could then lead to the writer's marginalization within the academic community.[13]

In this regard, research has found that learners themselves consider vocabulary to be of prime importance when writing in English.[5,12,20] Learners are aware of their lexical deficiencies and of the need to have greater control over basic vocabulary and grammatical conventions. They recognize the need to quickly retrieve or access relevant lexical and grammatical forms.[33] The importance of vocabulary is also reflected in writing evaluation, where mistakes in lexical selection are viewed with disfavor and are less tolerated than other types of error.[3,6,30] Furthermore, vocabulary proficiency is closely related to the quality of one's writing.[1] Rather than the number of words one knows, however, it is the degree of word knowledge that is the essential component in the production of text.[16] Learners need to be sensitive to the range of potential meanings expressed by a given word and be able to produce appropriate words and word combinations in their academic writing.[9] They need to have ready access to the relevant vocabulary if they are to become better writers with ready-made language patterns at their disposal that can be automatically retrieved from long-term memory. Without such lexical access, the production process will be interrupted and this is likely to have a detrimental effect on the resulting text.[18]

Nevertheless, an understanding of English grammar and the acquisition of a large number of English lexical items do not necessarily guarantee that learners will be exempt from producing erroneous English sentences. Unless they have been exposed to a substantial amount of authentic English, they will have considerable difficulty in distinguishing natural sounding collocations from skewed ones. This can be detrimental in many ways, especially in the writing of an academic paper. However, given the actual conditions under which Japanese students are learning English, with relatively little exposure to natural English, it is unrealistic to expect them to develop native-like intuition regarding English usage. Even when they have acquired considerable competence in English grammar, they will still be inclined to make mistakes such as, "We review previous reports and *discuss about* the treatment of IHD in dialysis patients" (extract from a Japanese research paper).

Although the expression *discuss about* is grammatically incorrect, Japanese learners tend to be unaware of the error since it can be translated into a natural sounding Japanese expression, *ni-tsuite-giron-suru*(について議論する). Even for learners who are proficient in grammar, it is not unusual for them to inadvertently insert *about* after *discuss*. The awkward sentence cited above is likely to be the product of a verbatim translation of the Japanese expression, thus allowing the writer to insert the preposition *about*(について) immediately after the transitive verb *discuss*(議論する). This error suggests that the more Japanese learners adhere to Japanese expressions when writing a paper in English, the more likely they are to produce unnatural word collocation patterns because of the transfer effect of their native language.[4] To help them overcome this tendency, more emphasis is needed on the teaching and learning of English collocation patterns in the language classroom.[14,21] In this regard, corpus linguistics offers EFL learners a productive approach to collocational understanding.

Among expressions that Japanese learners find particularly challenging are the patterns involving *possibility* and *probability*. The purpose of the present study was to evaluate how helpful the application of corpus linguistics can be for learners of English by investigating the various collocations associated with *possibility* and *probability*, along with those of the adjective and adverb forms of these words, in the medical writing produced by both Japanese researchers and native speakers of English.

Corpus linguistics

Advances in corpus linguistics have led to the collection of vast quantities of language data and provided insights into lexical collocations and recurring patterns of usage.[31,39] As a result, it has become possible to more accurately identify the linguistic conventions and constraints of a language on the basis of empirical evidence. Through such a focus on lexical relations, it can be seen that words interact with each other not in random clusters but in a clearly principled way. Words tend to form predictable and stable combinations that consistently occur in fixed linguistic patterns in conventional everyday discourse.[26]

While some learner dictionaries contain a wealth of information on lexical patterns and collocational usage,

this is often overlooked by learners who tend to focus on only a small fragment of the definition.[19,22,24] The effectiveness of the dictionary is therefore reduced in that many learners are content to consider only the most accessible part of the definition and ignore other potentially useful information. In particular, learners are inclined to use dictionaries merely as a reference for basic information on spelling and meaning rather than for information on usage and collocation.[7] Consequently, they remain largely unaware of the associative values of words and how they combine in particular ways to produce a given meaning. As a result, it is difficult for learners to avoid using inappropriate collocations in their writing. Conversely, the use of corpora and concordance techniques may provide more accessible information on collocations and on the selection restrictions that govern them. Learners may come to avoid collocational mismatches by being exposed to multiple examples of words that tend to co-occur. As EFL learners become more sensitive to the ways in which words combine in conveying specific meanings, they may improve their command of the language and enhance their academic writing ability.

Corpus evidence

1. Comparative analysis

Here, we focus on a number of English collocational anomalies produced by Japanese researchers working in life-science related disciplines. Through the use of corpora, concordance, and statistical analysis, we provide a sampling of deviant expressions related to *possibility* and *probability* found in the English abstracts attached to Japanese medical articles published in Japan (with the main body written in Japanese) and compare them with native-speaker norms relevant to this particular field. The reason for examining the English abstracts in journals published in Japanese was that the English used in those abstracts was considered less likely to have been rigorously reviewed, corrected, or revised by native speakers of English. Such abstracts may therefore more closely reflect the Japanese writer's actual level of English than an article in an international journal where the English has been edited and modified during the screening process.

To collect English abstracts written by Japanese researchers, we accessed PubMed[28] on the Internet, and the retrieval system enabled us to compile a corpus consisting of some 56,000 abstracts. This Japanese corpus (J-Corpus) contained approximately 11 million running words. For comparative analysis, we consulted the Life Science Dictionary Project[15] corpus (LSD Corpus), a collection of about 144,000 abstracts accompanying English academic research papers from approximately 30 distinguished life-science related journals around the world. The LSD Corpus currently contains over 31 million running words (Table 1). This corpus was felt to be a valid source of authentic English materials since it is almost entirely composed of English abstracts written by native speakers of English, and also because the articles and abstracts found in such eminent journals as *Nature* and *Science* are known to undergo a strict review prior to publication.

2. Collocational deviation

For Japanese learners of English, the meaning differences inherent in the words *possible* and *probable, possibility* and *probability, possibly* and *probably* are fuzzy and difficult to distinguish from one another. This type of discrimination problem often results in Japanese learners having particular difficulty using these words properly.

● *Possible* versus *probable*

If Japanese medical doctors were introduced to an erroneous meaning of the term *prognosis*, as in "A forecast of the possible course and/or outcome of a disease," most of them would fail to notice the inaccuracy or inappropriateness of the definition. To convey the true meaning of the technical term *prognosis*, the definition should read "A forecast of the *probable* course and/or outcome of a disease," not "the *possible* course" (see *Stedman's*

Table 1. Overview of the LSD Corpus and J-Corpus.

Corpus Name	Abstracts (n)	Token	Type
LSD Corpus (English native)	144,787	31,054,802	221,601
J-Corpus (Japanese native)	55,973	11,120,652	150,178

LSD: Life Science Dictionary Project, J: Japanese,

Token: total number of words, Type: the number of different words

Concise Medical Dictionary)[34] in order to accurately reflect a doctor's judgment of how an illness or disease is likely to develop. This example demonstrates how Japanese learners of English are unable to discriminate between the two words *possible* and *probable* because of the ambiguity caused by Japanese translation. In this case, the two English words *possible* and *probable* share the same Japanese core meaning, *kanou-na*(可能な), which leads Japanese learners to believe *possible* and *probable* can be used interchangeably. This type of semantic transfer through the mediation of the first language often results in lexical errors.

With the outbreak of a new deadly epidemic, Severe Acute Respiratory Syndrome (SARS), the two technical terms *a probable case* and *a suspect(ed) case* have been used repeatedly in newspaper articles reporting SARS all over the world, as can be seen in the following extract (italics added).

> Under the new guidelines, the number of *suspected* and *probable* cases in Ontario's latest outbreak has grown from 33 to 43, including those patients who died but whose causes of death have not been determined. On Thursday, the national agency Health Canada said that of the 33 *probable cases*, four people have died ...
>
> Some of the latter group are likely to be classified as *probable cases*, but D'Cunha put the number in perspective by pointing out that during the height of Toronto's initial outbreak, in March, as many as 3,000 people were under investigation. Fewer than 300 ever became *"probable"* cases.
>
> In both *probable* and *suspect cases*, patients have respiratory symptoms and fever. A case is deemed *probable* if the patient also has lung illness confirmed by an X-ray. (Excerpt from CNN, May 31, 2003)

These two technical terms are understood by native speakers of English to mean that the patients' condition as described by either one of the terms should be considered as very serious. Without the benefit of the above passage, in which the respective meanings of these two terms are clearly defined, it may be a little difficult even for native speakers of English to tell which term reflects the more serious condition from the medical point of view. It is clear from the article, however, that *suspect(ed) cases* is close in meaning to *possible cases* and therefore has less force than *probable cases*, which denotes a strong likelihood of infection rather than simply a possibility. The expectation of infection is therefore higher in the case of *probable* than in the case of *suspect(ed)*.

In Japanese newspaper articles, *a suspect(ed) case* is translated into *utagairei*(疑い例), and a probable case into *kanouseirei*(可能性例), either of which may be considered as serious by Japanese readers. Conversely,

Table 2. Positional frequency of words collocated with *possibility* in the LSD Corpus.*

2nd left		1st left		1st right		2nd right	
raise	**348**	the	2,362	that	1,737	the	324
raises	**227**	this	318	of	680	a	160
raising	**216**	one	61	we	111	that	79
with	97	**intriguing**	**39**	is	93	this	78
the	93	a	28	for	29	these	66
investigated	84	**interesting**	**15**	by	25	an	50
investigate	77	latter	9	was	24	using	43
test	71	any	8	the	14	it	35
explore	70	another	8	to	10	other	24
suggest	69	**distinct**	**6**	has	9	some	23
raised	**67**	**alternative**	**5**	in	9	they	17
examined	6	**novel**	**5**	a	7	have	17
suggesting	51	**exciting**	**5**	remains	6	in	16
out	50	that	4	and	5	examined	13
examine	48	**theoretical**	**3**	exists	5	of	12
explored	46	no	3	therefore	4	there	12
and	45	**attractive**	**3**	further	3	one	12

*total occurrences: 2,928; LSD: Life Science Dictionary

when *a probable case* is taken as an equivalent for *kanouseirei*(可能性例) in Japanese, it is unlikely that the original English term, *a probable case*, would be reproduced from the translated Japanese expression. Many Japanese learners of English would assume that *kanouseirei* (可能性例) is rendered in English as *a possible case*. When confronted with the expressions *a possible case* and *a suspected case*, most Japanese learners will infer that the patients' condition in either case is very serious. However, few Japanese learners would recognize that *a probable case* is far more compelling and persuasive in conveying the gravity of a situation than *a possible case*. This stems from the tendency of Japanese people to fail to discriminate between *possibility* and *probability*, partly because it is a little difficult to match the meaning of *probability* with an appropriate Japanese equivalent. The difficulty in finding a proper equivalent for *probability* is certainly a contributing factor in the misinterpretation of the two words *possible* and *probable*.

In this respect, we sometimes hear the expression *It's possible but not probable* used among native speakers of English as, for example, in the famous American drama *Twelve Angry Men*.[29] In the course of the argument between the 12 jurors concerning the guilt or innocence of the defendant, the following exchange takes place (Act I):

11th Juror. It would still be an incredible coincidence ...
3rd Juror. That's right! He's right.
7th Juror. The odds are a million to one.
8th Juror. *It's possible.*
4th Juror. *But not very probable.* (Italics added)

In this dialogue, the respective meanings of the two words *possible* and *probable* are highlighted and the difference between them becomes very clear (i.e., *It's possible but not very likely*). Japanese learners of English, however, have few opportunities to encounter such clear-cut examples of how these two individual words are actually used by native speakers and of the particular force they convey. As a result, Japanese learners tend to be unaware of the semantic differences between the words and treat them instead as two word variants expressing the same meaning, *possible*. In Japanese, therefore, the direct translation of the expression *It's possible but not probable* would be understood to mean *It seems possible but it is not possible*, in which case the original nuance is lost. It is not unusual, however, to find this type of misinterpretation in cases where two English words share the same Japanese core meaning or translation.

● *Possibility* versus *probability*

In addition to the adjectives *possible* and *probable*, the noun counterparts *possibility* and *probability* were compared. The nouns were analyzed in terms of their respective collocations with other words, as shown by the corpus data derived from abstracts published with medical

Table 3. Positional frequency of words collocated with *possibility* in the J-Corpus.*

2nd left		1st left		1st right		2nd right	
is	**127**	the	1,503	of	1,329	the	280
and	98	a	307	that	528	a	77
suggest	98	this	32	to	86	this	28
of	80	**high**	**31**	for	40	that	23
suggested	65	and	22	was	23	an	22
suggests	53	no	11	is	19	using	20
to	53	one	10	in	14	these	17
suggesting	45	**strong**	**10**	exists	13	recurrence	13
a	42	of	10	and	10	application	12
consider	42	**little**	**9**	we	6	some	12
the	42	some	8	as	5	suggested	12
have	**36**	**has**	**7**	has	4	early	12
indicate	35	**great**	**7**	when	4	malignancy	11
has	**33**	future	6	a	3	applying	11
investigate	32	another	6	could	3	be	11
examine	28	its	5	remains	3	malignant	11

*total occurrences: 2,144; J: Japanese

research papers. The words appearing immediately before and after the word *possibility* are shown by frequency of occurrence in the LSD Corpus (Table 2) and the J-Corpus (Table 3). Thus, Table 2 sheds light on how educated native speakers of English tend to use *possibility*, whereas Table 3 provides information on how educated Japanese researchers are inclined to use the word.

a. Adjectives before *possibility*

In the J-Corpus, after *the*, *a*, and *this*, the word *high* was the most frequently used adjective modifying the word *possibility* (Table 3), while *intriguing* was the adjective of choice in the LSD Corpus (after *the, this*, and *one*). In addition to *high*, such words as *strong, little,* and *great* were listed as frequently-used qualifiers immediately before *possibility* in the J-Corpus (Table 3). In the native-English corpus, however, other than *intriguing* at the top, the next most frequently used adjectives included *interesting, distinct, novel,* and *exciting* (Table 2). This distinctly different way of choosing adjectives immediately before *possibility*, on the part of native and non-native speakers, indicates that Japanese researchers try to intensify or rank the degree of likelihood (*high, strong, little, great* possibility), whereas native speakers of English have a strong tendency to describe the quality or nature of the possibility instead (*intriguing, novel, exciting*).

The statistical evidence that *high possibility* is not found in the LSD Corpus suggests that *high* does not usually collocate with *possibility* in mainstream academic writing. Table 4 shows the lines containing the erroneous expression *high possibility* found exclusively in the Japanese corpus. As in the aforementioned example of *discuss about* (p. 32), the expression *high possibility* can be trans-

Table 4. Complete concordance for *high possibility* in the J-Corpus.

1 ...	The authors emphasized a	*high possibility*	of opportunistic fungal ...
2 ...	raumatic thoracic aortic aneurysm had a	*high possibility*	of rupture even in the ...
3 ...	Although, SRCA has a	*high possibility*	of application on an ind...
4 ...	factors and males who show two have a	*high possibility*	of being permanently hyp...
5 ...	mall incidental renal tumors may have a	*high possibility*	of benign tumor compared ...
6 ...	BRMs have a	*high possibility*	to enhance radiation eff...
7 ...	lesion in the sense of having a	*high possibility*	of progressing into brea...
8 ...	support index of under 8 indicated a	*high possibility*	of various disorders aft...
9 ...	Choriocarcinoma involves a	*high possibility*	of intratumoral fatal he...
10 ...	cortical venous drainage there is a	*high possibility*	of developing hemorrhagi...
11 ...	initiative score are high, there is a	*high possibility*	of increased BMI in the ...
12 ...	hearing disturbance because there is a	*high possibility*	that hearing disturbance ...
13 ...	There is a	*high possibility*	that these individuals w...
14 ...	2) There is a	*high possibility*	that this manuscript of ...
15 ...	Thus, in view of a	*high possibility*	of difficult tracheal in ...
16 ...	patients who received CI, because of a	*high possibility*	of hemorrhage in the inf...
17 ...	very difficult, and that there was a	*high possibility*	of a pulmonary embolus d...
18 ...	cases involving lung, and there was a	*high possibility*	of the occurrence of 2nd ...
19 ...	The above suggest that their was a	*high possibility*	that the Pasteurella mul ...
20 ...	mains below 1,000/mm3, the patients has	*high possibility*	to die within the next t...
21 ...	like bioglass, and this resulted in	*high possibility*	of direct bond with bone ...
22 ...	doctors in charge judge that there is	*high possibility*	of repeated suicide, MSW ...
23 ...	examination is necessary because of its	*high possibility*	of hepatocellular carcin...
24 ...	with aortic stenosis and the relatively	*high possibility*	of developing non-cardia...
25 ...	hexavalent chromium compounds and the	*high possibility*	of binding with proteins ...
26 ...	that such a program includes the	*high possibility*	of detecting clinically ...
27 ...	of left lung cancer, because of the	*high possibility*	of contralateral mediast...
28 ...	in thoracoscopic biopsy because of the	*high possibility*	of malignancy. ...
29 ...	plantation was conducted because of the	*high possibility*	of recurrence. ...
30 ...	related malignant diseases with a very	*high possibility*	of complete cure. ...
31 ...	But the cases undergone TAE with	*high possibility*	of the influx of gelatin ...

J: Japanese

lated into a commonly used Japanese expression, *takai-kanousei*(高い可能性), so that Japanese learners tend to be unaware of its unnaturalness. When they think in Japanese and depend on a sort of verbatim translation, simply transferring Japanese collocations into English, this sometimes results in inappropriate word combinations. It should be pointed out to them that the same idea can be expressed in different ways in English, and they should be strongly encouraged to master those forms of expression frequently produced by native speakers of English.

b. Words 2nd to the left of *possibility*

In the J-Corpus, the word appearing most frequently in the second left position before *possibility* was the copula *is* (Table 3), even though *is* was not listed among the words used most frequently in the same position in the native-English corpus (Table 2). Rather, the predominant word in the second left position in the LSD Corpus was *raise*, which was not found among the most frequently occurring words in the J-Corpus (Table 3). In using the word *possibility*, therefore, it would appear that Japanese researchers are not aware that *raise the possibility* is one of the most naturally occurring collocational patterns in English.

In their propensity to use the copula *is* in the second left position before *possibility*, many Japanese researchers depend on the expletive *there* in their preferential use of *there is a/the possibility* (Table 5), which can be readily translated into the natural sounding Japanese expression *kanousei-ga-aru*(可能性がある). The expression *there is a/the possibility* does not necessarily consti-

Table 5. Concordance excerpts for *there is a/the possibility* in the J-Corpus.

1 ...		*There is a possibility* of elucidating the ...
2 ...		*There is a possibility* of the risk of sec...
3 ...		*There is a possibility* that all of these ...
4 ...		*There is a possibility* that CCCD reflects ...
5 ...		*There is a possibility* that children aged ...
6 ...		*There is a possibility* that corpora amyla ...
7 ...		*There is a possibility* that DI can estima...
8 ...		*There is a possibility* that DI estimates ...
9 ...		*There is a possibility* that host resistan...
10 ...		*There is a possibility* that hypoperfusion ...
11 ...		*There is a possibility* that initial local ...
12 ...		*There is a possibility* that intravenous a ...
13 ...		*There is a possibility* that MRSA through ...
14 ...		*There is a possibility* that myocardial ox...
15 ...		*There is a possibility* that not only cerv...
106 ...	This case suggests that	*there is the possibility* of occurrence of ...
107 ...	Therefore,	*there is a possibility* that an immunosupp...
108 ...	Therefore,	*there is a possibility* that atlantoaxial ...
109 ...	Therefore,	*there is a possibility* that the commercia. ...
110 ...	Therefore,	*there is a possibility* that the scent gla...
111 ...	Therefore,	*there is a possibility* that the tumor was ...
112 ...	Therefore,	*there is a possibility* that those patient ...
113 ...	ccur in acute poliomyelitis; therefore,	*there is a possibility* that the involveme...
114 ...	oices for induction of children, though	*there is a possibility* of occurrence of c...
115 ...	l thrombosis also had thrombocytopenia,	*there is a possibility* that aCL and LA mi...
116 ...	Thus,	*there is a possibility* that past reports ...
117 ...	e inverted papilloma is a benign tumor,	*there is a possibility* of recurrence or d...
118 ...	he case of MPO-ANCA related vasculitis,	there is the possibility of intracranial ...
119 ...	From out study in vivo,	*there is a possibility* of some ameliorati...
120 ...	than the arterial switch operation when	*there is a possibility* to remain left ven...
121 ...	This is a very rare case in which	*there is a possibility* of congenital or i...
122 ...	While	*there is a possibility* of skin infections ...

J: Japanese

Table 6. Concordance excerpts for *One possibility* in the LSD-Corpus.

1	... *One possibility* consistent with these dat...
2	... *One possibility* is physiologic variation ...
3	... *One possibility* is population structure, ...
4	... *One possibility* is that 5-HT1B receptors ...
5	... *One possibility* is that attachment to the...
6	... *One possibility* is that AXPs are highly m...
7	... *One possibility* is that cells release fac...
8	... *One possibility* is that changes in the st...
9	... *One possibility* is that chromosomes are m...
10	... *One possibility* is that DNA damage causes...
11	... *One possibility* is that each isoform is e...
12	... *One possibility* is that genes involved in...
13	... *One possibility* is that heterochromatin p...
14	... *One possibility* is that hypoxia is linked...
15	... *One possibility* is that IgM myeloma invol...
16	... *One possibility* is that junctions are for...
17	... *One possibility* is that KSHV, like the ly...
18	... *One possibility* is that native channels i...
19	... *One possibility* is that reactive metaboli...
20	... *One possibility* is that single-gene chang...
21	... *One possibility* is that sympathetic vasoc...
22	... *One possibility* is that T cells specific ...
23	... *One possibility* is that T(+7) is flipped ...
24	... *One possibility* is that TGF-beta opposes ...
25	... *One possibility* is that the cellular resp...

LSD: Life Science Dictionary

tute an error from the standpoint of collocation but it is seldom, if ever, found in the LSD Corpus. According to the statistical evidence, therefore, it cannot be considered a conventional feature of English academic discourse. Instead, *raise the possibility* was found to be the first choice among native speakers (Table 2). Moreover, the second and third choices were forms of the same verb, namely *raises* and *raising*, respectively (Table 2). If Japanese researchers are to align their academic writing more closely with conventional English academic discourse, these findings suggest that they ought to refrain from using *there is* in their writing and consider using *raise/raises/raising the possibility* instead.

c. Concordance

Sifting through the J-Corpus, we encountered as many as 122 instances where the expression *there is a/the possibility* was used (Table 5), while only five sentences containing this expression appeared in the LSD Corpus (data not shown). The high frequency of *there is a/the possibility* in the J-Corpus correlated inversely with the low frequency of the more natural expression *One possibility is that* (Table 6), which appeared only twice in the Japanese corpus (data not shown). In the LSD Corpus, sentences starting with *One possibility is that* were observed in markedly high frequency (46 instances), suggesting that the expression is a fixed expression in academic writing by native speakers of English (Table 6). Even though Japanese researchers may feel comfortable using *there is a/the possibility*, the expression is not in conventional use in mainstream English academic writing.

The high frequency of *have/has* in the J-Corpus (Table 3) demonstrates that Japanese learners predominantly use the expression *have/has/had a/the possibility*, which

Table 7. Concordance excerpts for *increase the probability* in the LSD Corpus.

791 ...	These alterations	*increase the probability*	for abnormal thalamocortical ...
792 ...	sensitivity, and they can	*increase the probability*	of a diagnosis by verifying t...
793 ...	isite enhancer elements to	*increase the probability*	of an interaction between the...
794 ...	traints, can substantially	*increase the probability*	of cell immortalization. ...
795 ...	p penalty can dramatically	*increase the probability*	of detecting a similarity con...
796 ...	Such techniques often	*increase the probability*	of detecting linkage, but are...
797 ...	rotein interactions, which	*increase the probability*	of establishing an active loc...
798 ...	iency virus (HIV) load may	*increase t he probability*	of HIV transmission by sexual...
799 ...	t environmental stress can	*increase the probability*	of hybrid formation by reduci...
800 ...	sician involvement in care	*increase the probability*	of long ICU stays. ...
801 ...	tential which may serve to	*increase the probability*	of neoplastic progression. ...
802 ...	o more than 2 kcal/mol can	*increase the probability*	of nucleation of disordered a...
803 ...	an reduce the power and/or	*increase the probability*	of obtaining false positive r...
804 ...	Predators may	*increase the probability*	of prey extinction resulting ...
805 ...	arturient women, which may	*increase the probability*	that a fetotropic strain is t...
806 ...	pression of genes and also	*increase the probability*	that affected genes undergo a...
807 ...	ient-physician contact may	*increase the probability*	that patients will continue t...
808 ...	of the sexual swelling,	*increase their probability*	of mating with females more l...
809 ...	, but with significantly	*increased open probability*	(P(o) = 0.577 +/- 0.090) comp...
810 ...	ches showed that NH(2)Cl	*increased open probability*	of a 257-pS channel in symmet...
811 ...	owth factor or NT-3, and	*increased open probability*	was prevented by the tyrosine...
812 ...	which have dramatically	*increased open probability*	while retaining the basic pro...
815 ...	60.9; 95% CI, 51.2-72.5)	*increased the probability*	of cancer to 71.8% (95% CI, 6...
816 ...	l of external Ca(2+) ions	*increased the probability*	of channel opening (Po) sixfo...
817 ...	actin polymerization and	*increased the probability*	of further Cdc42 accumulation...
818 ...	ins or mechanical probing	*increased the probability*	of lead growth cone retractio...
819 ...	e nicotinic receptors, we	*increased the probability*	of ligand unbinding from the ...
820 ...	of the proviral enhancer	*increased the probability*	of maintenance-coupled de nov...
821 ...	ptor antagonist yohimbine	*increased the probability*	of occurrence of NCTs by 55 + ...
822 ...	open state of one channel	*increased the probability*	of opening of its neighbor. ...
823 ...	blood cells significantly	*increased the probability*	of pore formation by GPI-HA; ...
824 ...	radio/television) further	*increased the probability*	of supine placement (OR, 6.01 ...

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can be interpreted as the equivalent of *kanousei-wo-motsu*（可能性をもつ）in Japanese. The use of *have/has/had a/the possibility* is far less common among native speakers, however, as shown by the fact that only two instances of this expression were found in the LSD Corpus (data not shown). This finding indicates that *have/has/had a/the possibility* cannot be regarded as a favored form in expressing matters relating to *possibility*.

In addition, nine instances of *increase(d) the possibility* were found in the J-Corpus, as opposed to a single instance in the LSD Corpus (data not shown). Given that the Japanese Corpus was only about one-third the size of the LSD Corpus (Table 1), the nine instances in the J-Corpus can be regarded as unusually high. This expression may not always pose a problem in relation to native-speaker intuition in that it may be regarded as a natural-sounding utterance in informal everyday discourse. In more formal situations such as academic writing, however, a clear-cut distinction is evidenced by comparing the native-English corpus data for *possibility* with the data for *probability*. Whereas *increase the possibility* was limited to a single sentence in the LSD Corpus examined in the present study, *increase the probability* was used widely (Table 7).

The problem here appears to stem from a negative transfer from the Japanese language, namely simple verbatim translations from Japanese expressions into English, and the difficulty of differentiating English words that share the same Japanese word or expression when translated into Japanese. For most Japanese learners of English, learning the distinct difference between *possibility* and *probability* can be really challenging because both of these English words share the same core meaning *kanousei*（可能性）in Japanese. This explains why Japan-

Table 8. Concordance excerpts for *high probability* in the LSD Corpus.

1	...	sults allowed the identification of 113	*high probability* matches with putative fu...
2	...	f replicate spots required to achieve a	*high probability* of detecting a significa...
3	...	Therefore, to ensure a	*high probability* of bilateral strand clea...
4	...	resides in a charged domain that has a	*high probability* of adopting a coiled-coi...
5	...	enders in general, a finding that has a	*high probability* of application to indivi...
6	...	numbers to be stored and scanned, has a	*high probability* of recognition error and...
7	...	r chemical promotion, these mice have a	*high probability* for developing papilloma...
8	...	-bond donors and acceptors) will have a	*high probability* of good oral bioavailabi...
9	...	Climbing fiber (CF) synapses have a	*high probability* of release and show pair...
10	...	inity to the receptor lattice, having a	*high probability* of being attached by one...
11	...	At synapses, where there is a	*high probability* of opening of postsynapt...
12	...	There is a	*high probability* of survival in recipient...
13	...	netic changes in matched tumor pairs, a	*high probability* of a common clonal proge...
14	...	r EBV seropositivity (EBV+) predicted a	*high probability* for seroconversion (P=0....
15	...	The docking results show a	*high probability* of interaction between t...
16	...	d sequence of pTombetagal 4 suggested a	*high probability* for secretion based on t...
17	...	isease as inexorably progressive with a	*high probability* of advancing over time t...
18	...	Patients with a	*high probability* of CAD have stress tests...
19	...	pre-mutation alleles in humans, with a	*high probability* of expansion in future g...
20	...	vely); employment in occupations with a	*high probability* of exposures to dusts, g...
21	...	relapsed but was also associated with a	*high probability* of relapse in standard-r...
22	...	strate concentrations associated with a	*high probability* of toxicity, fast turnov...
23	...	n, and gene expression are shown with a	*high probability* to have changed along th...
24	...	lding probability than for those with a	*high probability* to unfold. ...
25	...	ostsynaptic target cells were analysed;	*high probability* connections exhibiting t...
26	...	ff between rapid library enrichment and	*high probability* of sampling the best lig...
27	...	ons that converge in regions of low and	*high probability*. ...
28	...	velop lymphoma with long latency and at	*high probability* (more than 85% over 2 ye...
29	...	chicks (post-hatch days 1-11) exhibited	*high probability* of firing a well timed p...
30	...	In two group II patients, V-P scans had	*high probability* for acute embolism, but ...
31	...	nant syndrome were designated as having	*high probability* of being neuroleptic mal...

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ese learners assume that both *possibility* and *probability* collocate with *high* (Tables 3, 4). The LSD Corpus, however, demonstrated that *high* collocates very frequently with *probability* (Table 8) but not with *possibility*. Accordingly, the verb that collocates most frequently with *probability* is *increase*, as revealed in our concordance analysis (Table 7). One of the most typically used expressions was *increase the probability* (Table 7). The Japanese researchers' inclination to use the unacceptable expression *increase the possibility* may be attributed to their strong tendency to enhance the degree of likelihood, as seen in their marked use of *high* or *great* before *possibility* (Tables 3, 4).

● *Possibly* versus *probably*

The analysis of the J-Corpus also revealed that, as in the case of *possibility* and *probability*, Japanese learners have a problem differentiating between the adverbs *possibly* and *probably*.[23,25] When Japanese learners rely solely on their grammatical knowledge, they often produce skewed expressions like *may probably* (Table 9). Generally, for non-native speakers of English, this type of collocation error is extremely difficult to detect. In the native-speaker discourse examined, the concordance analysis showed that *may* collocates with *possibly* (Table 10) but not with *probably*. These results support the view that some skill and practical experience in corpus linguistics would benefit Japanese researchers in selecting collocational patterns that are conventionally used in academic discourse.

Pedagogical implications

This study has shown that in English abstracts written by Japanese medical researchers, the collocations and phrases involving *possible/probable, possibility/probability,* and *possibly/probably* deviate markedly from those produced by researchers who are native speakers of English. Of particular pedagogical concern is our finding that where native speakers often use the expression *raise/raises the possibility*, Japanese writers tend to use *increase/increases the possibility*, even though this is not found in the native-English corpus. The conspicuously low frequency of *raise/raises the possibility* in the Japanese corpus may be due to the difficulty Japanese learners have in finding a proper translation equivalent, which hinders them from acquiring this particular expression. Even when they routinely encounter this quite common expression and successfully store it into their productive vocabulary, there still remains a problem owing to the polysemous nature of the phrase. Many Japanese learners assume that the meaning of *raise the possibility* can be

Table 9. Complete concordance for *may probably* in the J-Corpus.

1 ...	of amyotrophic lateral sclerosis (ALS)	*may probably* be related to the impairment...
2 ...	platelets by suction or centrifugation	*may probably* play the most important role...
3 ...	n of RV afterload produced with an IABP	*may probably* be due to degree of recovery...
4 ...	bed reticular formation in the midbrain	*may probably* account for the remaining of...

J: Japanese

Table 10. Complete concordance for *may possibly* in the LSD Corpus.

1 ...	rogesterone may stimulate breathing and	*may possibly* improve symptoms of hypovent...
2 ...	to changes in iron content and form and	*may possibly* be used as indicators of suc...
3 ...	or studying rapid channel movements and	*may possibly* act as a fluorescent activit...
4 ...	t that mechanoperception in plant cells	*may possibly* be transduced through intrac...
5 ...	ectin further suggests how some domains	*may possibly* be important for protein int...
6 ...	While various unknown factors	*may possibly* give rise to selective activ...
7 ...	Microfilaments	*may possibly* act by uncoupling Lyn from t...
8 ...	an unitary displacements, this mutation	*may possibly* perturb the mechanical coord...
9 ...	A meaningful fraction of patients	*may possibly* be cured when treated as agg...
10 ...	This local response	*may possibly* assist in limiting the clini...
11 ...	d implicate them in CNS disorders, that	*may possibly* be induced or exacerbated by...
12 ...	es in estrogen metabolism and, thereby,	*may possibly* explain interindividual diff...
13 ...	to trigger transcription and therefore	*may possibly* serve as a transcription act...
14 ...	ogs have not been fully explored, which	*may possibly* have limited the scope of th...

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inferred from the grammatically similar looking expression *raise the risk of cancer*. Hence, we constantly come across Japanese learners who firmly believe that *raise the possibility* is equivalent to *increase the possibility*. In view of this misunderstanding, when introducing *raise the possibility* to Japanese learners, language teachers need to make it clear that the expression is not an equivalent of *increase the possibility* but that it is used instead with the meaning of *suggest the possibility*.

A second finding of pedagogical importance is that when referring to the degree of likelihood of something occurring, Japanese writers often assign a rank or try to enhance the possibility, producing the collocational mismatch a *high possibility*. This deviant usage appears to be related to the Japanese propensity to use *increase the possibility*, as noted above. In normal English medical research, however, *probability*—not *possibility*—is the word reserved for use with adjectives of degree such as *high, higher, highest, low,* and *lower*. *Possibility*, in native-speaker usage, collocates with *intriguing, interesting, exciting*, and other words describing the *possibility*, but not with words referring to its degree.

These findings are in line with principles established in the linguistics research literature, whereby words are not considered purely independent entities in that they derive their meaning in association with other words.[2,11] That is to say, some words seem to have a preference for certain co-occurrence patterns. English language education in Japan, however, has tended to pay very little attention to lexical relations.[32,35] As a result, learners have devoted themselves to memorizing long lists of independent words without considering their typical collocations. This neglect has had a detrimental effect on learners' attempts at producing academically acceptable sentences in English in that their writing is sometimes characterized by arbitrary vocabulary selections that are inappropriate in certain contexts. They assume they can freely create an English sentence as long as they abide by syntactic rules and do not realize that words usually have a sort of unwritten rule dictating which words are used together. If learners are to become more proficient writers, they therefore need to acquire more information on which words typically co-occur and on the contexts in which the words may be used.[38,40]

Results of this study bear out that concordance information may provide learners with the necessary contexts in easily accessible form. By focusing on multiple examples of words that tend to co-occur, learners may become more sensitive to the restrictions affecting particular word combinations and to the contexts in which the various combinations tend to appear. This type of intensive exposure to common patterns of language use may therefore help EFL learners in particular to better understand the ways in which certain words behave. As a result, they stand to gain a greater appreciation of how words interact with each other and thereby learn how to avoid awkward combinations.

In conclusion, there is a need to provide learners with guidance on how to extract and interpret the corpus data so that they are able to make full use of the information available.[36] It will therefore be necessary for teachers to focus on those lexical items in a particular field that are often used erroneously in the writing of non-native speakers of English. In this regard, information on frequency would help in determining which particular lexical items should be focused upon in the classroom. Representative samples of frequently-used collocations in various contexts will provide Japanese learners with the comprehensible input they need to understand the syntactic and collocational properties of words that tend to be troublesome for them, such as *possible* vs. *probable, possibility* vs. *probability*, and *possibly* vs. *probably*. With guidance, EFL learners may be encouraged to self-correct and thereby reduce the number of habitual errors appearing in their academic English writing.[37] With sufficient attention to collocational patterns and subsequent practice, learners may then overcome their tendency to translate verbatim from their mother tongue and, instead, come to assimilate the patterns common to written academic discourse and to use those patterns when writing their own research papers.

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リスニング力と速読力の養成およびスキル転移を目指した授業実践報告
看護学生対象の DVD 映画利用授業を通しての事例研究

Report on an English Speed-Reading Course with Possible Transfer of Reading Skills onto Listening Skills:
A Classroom Trial on Nursing Students Using DVD Movies

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OBJECTIVE. The purpose of this study was twofold: first, to examine which method is the more effective in enhancing one's reading speed in reading classes—integrating paper-based reading materials or studying DVD L2 captions—and second, to observe any skill transfer between listening and reading skills when only one of the skills is in focus. **MATERIALS AND METHODS.** The subjects were 150 Japanese university students majoring in nursing. The students shared the same input about learning how to sight-translate during their reading classes, but additional activities in their classes differentiated them into 5 groups. The first group was provided with only paper-based reading practice, while the remaining four groups received DVD movie viewing instead, with a differing emphasis on either L2 caption or sound-track. Pre-tests showed no group differences in reading efficiency or in L2 listening skills. **RESULTS.** In Experiment 1, paper-based reading materials proved useful in improving fast-reading skills and also contributed to skill transfer resulting in better listening scores. In Experiment 2, both the standard mode (L1 caption and L2 sound) and reverse mode (L2 caption and L1 sound) failed to improve target skills (L2 listening and L2 caption reading, respectively), but the standard mode enhanced reading efficiency (skill transfer). In Experiment 3, neither the group with only L2 sound-track nor the group with L2 caption and sound-track while watching a DVD movie showed any improvement in target skills (L2 listening and L2 caption reading, respectively) nor any skill transfer. **CONCLUSION.** Overall results suggest that, for intermediate EFL nursing students, paper-based fast-reading materials prove to be the most effective way to improve their reading speed as well as listening skills, though it is also implied that DVD movies could be used effectively in enhancing these skills as long as the movie is appropriately chosen to suit their English level.

Key Words: second language acquisition (SLA), listening skill, reading skill, skill transfer, DVD movies

はじめに

1．リスニング力とリーディング力の相互転移

リスニング力とリーディング力間の転移に関して，さまざまな研究がなされてきた。例えば，日本人 EFL 学習者を対象にした研究として，Suzuki(1999)[23]はリスニング訓練を十分行った後に，テープ教材を聞きながら英文を目で追う速読指導をすることで，速読訓練のみを行うよりも速読力やスニング力の向上が見られるという結果を得た。また，吉田・吉田・小林(1992)[29]はコンピュータを利用した速読トレーニングにより，速読力のみならずリスニング力の向上もあったと報告している。Asher(1972)[1]は TPR(total physical response)によるドイツ語のリスニングトレーニングを受けたグループの方が，リーディングトレーニングだけを受けたグループよりもリーディング力が付いたことを報告している。

このような先行研究結果を踏まえて，門田・野呂(2001: 203)[15]は，第 2 言語に関してスキルが高ければリスニングからリーディングへの転移は比較的容易に起こるが，スキルが十分発達していない学習者の場合，リーディングからリスニングへの転移は困難であるとした。確かに Hirai

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(1999)[10]の日本人 EFL 学習者対象の研究によると，上級者の場合，最適読解速度と最適聴解速度はそれぞれ 1 分間 140 語であり(相関関係は 95%)，読解にウェイトの高い日本の英語教育を受けた学習者でもリーディングスキルが上がるとリスニングに転移していることがわかる。

リスニングとリーディングの 2 スキル間転移の理論的な説明として第 1 に考えられるのは，2 スキルともに “interactive approach”(Grabe, 1991)[9]を取ることが挙げられている。これによると，下位レベルでは音素や文字の認識(高速に作動する自動化された認識)が起こり，一方高次レベルでは内容理解に関する処理が起こると考えられ，リスニングとリーディングでは，音素や文字の知覚段階では異なった処理が行われるが，それ以外の文や談話の理解では類似したメカニズムが遂行されるとする説である。具体的なモデルとしては第 1 言語に関しては Levelt(1989)[19]の speech production model，第 2 言語をも包括したモデルとしては de Bot (1992)[4]モデルがあり，それぞれ speech input, written input として input レベルでは異なる処理がなされるが，それ以降は lexeme(形態・音韻情報)→ lemma(意味・統語情報)→ concept と同一のボトムアップ処理過程を通ると仮定されたモデルである。同様の仮説は O’Malley and Chamot(1990)[22]からも提起されている。

転移の説明として第 2 に考えられるのは，読解は聴解を含む活動であり，読解においても音韻符号化を経る音声処理過程が存在しているという説である。黙読中に音声器官の筋電位(electromyogram: EMG)を測定することや，brain-scanning(fMRI，PET，MEG 等)を用いて賦活部位を特定することで，この説は支持を得ているが(門田, 2002)[13]，それ以外にも生まれつき聾である人たちの読解力は小学校 4 年生レベルで止まってしまうことが Gibson and Levin(1975)[8]から報告され，読解力に占める音韻化の重要性が示されている。

このような 2 スキル間転移を対象とした研究結果より，第 2 言語学習の場への応用として提起されているのが，音声・テキストの同時提示(読みながら音声も提示したり，音声を聞きながらテキストを読む)やチャンクで区切られた英語の音声・テキスト提示等である。例えば，先に挙げた Suzuki(1999)[23]による音声とテキストの同時提示による速読・リスニング力同時向上以外にも，意味処理単位としてのチャンク毎にポーズを入れることで聴解度が増したり(Kohno, 1981[17])，チャンク毎の斜線の方が単語毎の斜線よりも読解度を高めるという報告(Kadota, 1982[14])がある。

そこで本研究では，サイトトランスレーション(センスグループで区切ってのチャンク読みを翻訳に取り入れたもの)や最近急速に普及し始めた DVD 機器(具体的には音声や字幕を L1/L2 自由に組み合わせることのできる DVD 映画)をリーディングやリスニングの授業の一部に取り込むことで，どのようにターゲットスキルの向上に効果がでるのかのみらず，2 スキル間に相乗効果がでるかを調べることにした。

2．L1/L2 音声・キャプションを用いた先行研究

音声とキャプション(字幕)を用いた研究は，DVD が普及する以前よりビデオを用い，L2 学習環境で行われいたが，そのほとんどはどのような L1/L2 の音声・字幕の組み合わせが学習者の聴解度アップ(内容理解度)につながるかに関してのものである(*e.g.,* Garza, 1991[7]; Markham, 1999[20]; Hirose and Kamei, 1993[11]; Chung, 1999[3]; Nugent, 1982[21]; 藤田・伊藤, 1990[6]; Borras and Lafayette, 1994[2]; Koskinen et al, 1996[18]; Holobow, Lambert, and Sayegh, 1984[12]; Yoshida, Uematsu, Yoshida, and Takeuchi, 1998[28])。しかしながらこれらの研究結果は，音声か字幕で母語提示があれば学習者はそれを頼りにできるので，果たして L2 を媒体としての内容理解であったのかどうか疑問が残る。これに対して Danan(1992)[5]は初・中級フランス語を学習中のアメリカ人学生を被験者として調査し，リバースモード(L1 音声と L2 字幕の組合せ)やバイモーダル(音声・字幕ともに L2)の方がスタンダードモード(L1 字幕と L2 音声の組合せ)よりも内容理解に適している，即ち母語の介在のあるスタンダードモードよりも L2 で音声・字幕ともに提示されるバイモーダルの方が適しているとの結果を得た。

このような聴解度に関する先行研究に対して，日本人 EFL 上級・中級学習者対象に，DVD 映画を継続的に教室で用いることでリスニング力にどのような影響が起こるのかを田浦(2002)[25]，田浦・田浦(2001)[26]，Taura(2002)[24]は調査し，次のような結果を報告している。上級者は，(1)スタンダード提示後にバイモーダル提示を受け同じ DVD 映画を 2 度見るセッションを 4 ヵ月継続することで比較的短かい英文の聞き取り力の向上を見せ，(2)2 度ともバイモーダル提示にすると比較的長い文章の聞き取り力の向上が見られた。この 2 グループの比較により，提示差に起因する英語リスニングスキルの質の違いが生じる可能性が示唆された。次に中級者に対しては，(1)バイモーダル後スタンダードモードを提示したグループとバイモーダル後リバースモードを提示したグループを比較した結果，両グループともにリスニングの力の向上が見られたが，グループ間に差はなかった，(2)使用する DVD 映画ソフトを変えることでリスニング力の向上の有無が観察された，(3)提示モード順を逆にすることで効果に差がでた(例えばバイモーダル→スタンダードではリスニング力が向上したが，その逆では向上しなかった)，(4)L1/L2 字幕の処理は映像理解の低下を招かないことが報告されている。

田浦(2002)[25]は，1 回の実験に基づいて内容理解度を探った先行研究のデザインを踏襲し，同じ DVD 映画の 1 セグメントを 2 度見せる方式を用いたが，必ず 1 度はバイモーダルモードを含めた。この理由として，田浦(2002: 107)[25]は，2 度とも日本語で音声か字幕が提示されるとこの情報ばかりに注意を払い，結果的に英語学習につながらないことを挙げている。つまりバイモーダルモードでは音声か字幕で必ず英語に注意を払うが，スタンダードモードでは日

本語字幕，リバースモードでは日本語音声にのみ情報源を求める被験者がでてくるとの危惧があったからである。DVD 映画を長期にわたり用いてリスニング力の向上を観察する研究自体が殆どなく，田浦の一連の研究（田浦・田浦 2001[26]；田浦 2002[25]；Taura 2002[24]）の研究はその先鞭を付けたという意味で意義はあるが，スタンダードモードでの日本語字幕やリバースモードでの日本語音声はあくまで補助的なものであり，フォーカスは必ず英語音声や字幕に置くことを被験者に事前に徹底することで，結果の解釈により信頼性がでてくるものと考えられる。この際に，提示方法の組合せがたくさんある中で，上級者対象には 2 度ともバイモーダルモード提示か，スタンダード後バイモーダル提示の 2 ケースしか検証されておらず，中級者に対しても半数以上の組合せが検証されていないので，リスニング力向上を目的とした DVD 映画利用の効果を論じるには未検証の部分から実験データを収集する必要がある。

次に，日本人英語上級学習者は「バイモーダルの際には，音声よりも文字を頼りにする傾向がある」とアンケート結果を田浦（2002: 107）[25]は分析しているが，これもバイモーダル時やリバースモード時には被験者に L2 字幕にフォーカスを置かせる指示を出すことで，DVD 映画を用いての速読トレーニングに関する効果を調べることが期待できる。

3．研究目的

日本人中級 EFL 学習者を対象として，半期（15 週）間通常の訳読授業に，サイトトランスレーション，紙媒体による速読，DVD 映画を利用した速読やリスニングトレーニングを取り入れることで，ターゲットスキルの向上やそれ以外のスキルへの転移が起こるかどうかを調べる。

実験方法と結果

1．被験者

対象者は某国立大学医学部・看護学科に 2000 ～ 2002 年度に入学した 1 回生（後期）150 人で，入学年度と，DVD 視聴セッションを受けた場合にはそのフォーカスにより，2000 年グループ，2001 字幕グループ, 2001 音声グループ, 2002 字幕グループ，2002 音声グループの 5 群に分けられた。看護学科生 1 回生には英語が 2 科目必修として課せられていて，1 科目（通年）は従来の訳読方式で科学トピックに関する題材を訳読するもので一切速読やリスニング等は行われなかった。他の 1 科目は看護英語（通年）で，前期 15 週間を費やして，医療現場で役立つ会話を主に授業が進められた。本研究が行われた 1 年次後期の看護英語では，13 週間かけて，看護トピックに関するテキストを扱ったが（第 1 週と第 15 週目は事前・事後テストを行った），その際サイトトランスレーション以外に，グループによって速読か DVD 映画を用いたセッションが週 1 回の授業時に 20 分ほど取り入れられた（2000 年グループのみ紙媒体の速度トレーニング，それ以外のグループは DVD 映画を用い，英語音声フォーカスグループは「音声グループ」，英語字幕フォーカスグループは「字幕グループ」とした）。

被験者は概ね，JACET 英語基礎聴解力標準テスト Form A（4 パートからなり，それぞれ 10 点満点で合計 40 点。詳細は田浦 2002, p 104 参照）で約 50%，センター入試（200 点満点）の英語で約 60% をあげていた。2000 年度から 2002 年度の 3 年間に入学した被験者グループ間に，セッション前のリスニング力に関して有意差はなく（**表 1**），均一のグループであると考えることができた。医学部・医学科の学生が JACET 70% 以上，センター入試 80% 以上の得点を挙げており日本人 EFL 学習者としては上級者であると考えられることより，本研究の被験者は日本人 EFL 中級学習者とした。

2．実験 1 ：サイトトランスレーションと紙媒体の速度トレーニング

2000 度入学の看護学科の学生 30 名を対象に，入学直後と前期終了後に JACET リスニングテストを実施したが有意差はなかった。この 30 名を対象に後期は，センスグループに切って英語の語順通りに日本語に訳すサイトトランスレーションを予習に課し，授業中にはサイトラの確認以外に，速読トレーニングを課す授業（市販の速度用問題集数冊からプリント教材を作成した）を 13 週行った。

先ず速読力が伸びたかどうかを調べるのに，1 分間に読めた語数に正解率を掛け合わせた読解効率（＝語数／時間×正解数／設問数）を計算した（読解効率が高ければより速くより正答率が高いことがわかる）。事前・事後テストとして用いたのは，語数と Flesch の readability の公式においてほ

表 1　実験 1 ～ 3 の被験者事前リスニングテスト得点比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
2000 1stPre	30	23.2333	5.25674	0.9597	0.9453	0.4531
2000 2ndPre	30	23.4000	6.85616	1.2518		
2001 CapPre	31	22.5833	7.16827	1.4632		
2001 SoundPre	29	22.3611	8.08933	1.3482		
2002 CapPre	30	19.9333	7.36222	1.3442		
2002 SoundPre	30	22.4333	6.87165	1.2546		

SD: standard deviation, SEM: standard error mean
2000 1stPre ： 2000 **年度入学者の入学直後，**2000 2ndPre ： 2000 **年度入学者の後期授業開始前，**
2001 CapPre ： 2001 **年度入学者で英語字幕フォーカスで** DVD **映画を視聴した学生の後期授業開始前，**
2001 SoundPre **：同年入学者で英語音声フォーカスグループのセッション前，**
2002 CapPre**，**2002 SoundPre **：入学年度が** 2002 **年度の学生の** JACET **リスニングテストの得点。**
Cap **は字幕** Caption **の略，**Sound **は英語音声を示す。**

ぼ等質と思われる読解材料である “Intermediate Faster Reading”(成美堂)の unit 7 と 8 であった(unit 7 は 297 語, Flesch Reading Ease 67.3 , Flesch–Kincaid Grade 7.2 であり, 一方 Unit 8 は 303 語, Flesch Reading Ease 64.9, Flesch–Kincaid Grade 8.3)。事前事後の読解効率を *t*–test で比較した結果が**表 2** であり, 速読トレーニングにより読解効率が向上したことがわかる。

次にリスニング力への転移があったかどうかを調べるために, JACET リスニングテストの得点を分散分析(有意レベル 5%)で比較した結果及び, 多重比較の結果は以下の通りである(**表 3, 4**)。13 週間にわたるセッション終了時には, リスニングトレーニングが皆無であるにもかかわらず, JACET リスニングテスト得点の向上が見られた。

以上の結果より, 2000 年度入学看護学科グループ 30 名に関して, サイトトランスレーションと速読トレーニングを毎時取り入れることで 13 週間後には, 読解効率が有意に向上したばかりか, リスニング力への正の転移が見られた。

3. 実験 2 ：サイトトランスレーションと日本語モードを含む DVD 視聴

2001 年度入学看護学科の学生 60 名は, 実験 1 の学生と同じ授業を受けたが(同じ教官に, 同じ教科書で), 唯一異なるのは, 後期の看護英語の際に, 速度指導の代わりに約 20 分間 DVD 映画を見るセッションを設けた点である(サイトトランスレーションは実験 1〜3 を通して行われた)。

DVD 映画視聴は, 先行研究(木村・宮本, 1997[16]; Hirose and Kamei, 1993[11]; Taura, 2002[24])と同じ手順を踏襲し,「第 1 回目提示→内容理解選択式→第 2 回目提示→答案確認」の順で行われた。被験者の集中力を鑑み 1 回の DVD 映画鑑賞は 10 分以内とした。この為各 DVD 映画は 13 回に分けることができ, 週 1 回の授業ペースですべて見終えることができた。内容理解選択式テストはすべて筆者が作成し, パイロットスタディーの誤答率より不適切であると判断された問題は, よりふさわしい問題と差し替えられた。

対象者はランダムに 2 群に分けられ, DVD 映画“Mr Holland’s Opus”を約 10 分に区切られたセグメントを毎授業時 2 度ずつ見たが, グループにより異なる DVD 映画提示を受けた。第 1 グループは, 最初に見る際, 日本語音声と英語字幕の組み合わせからなるリバースモード提示を受け, 2 度目の視聴時には, 音声・字幕ともに英語の組合せであるバイモーダル提示を受けた。このグループは提示方法にかかわらず常に英語字幕にフォーカスを置くように指示を受けていた。一方第 2 グループは, スタンダード提示(日本語字幕と英語音声)後にバイモーダル提示を受け, 常に英語音声にフォーカスを置く指示を受けていた。

この 2 群に関して**表 5** からわかる通り, 後期授業開始前

表 2　読解効率の比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
pre-test	30	37.4267	19.0303	3.4744	4.686	0.0346
post-test	30	48.3724	19.8092	3.6785		

SD: standard deviation, SEM: standard error of the mean, pre-test: **入学直後**, post-test: **後期終了時**

表 3　2002 年度入学学生の入学直後・前期終了時・後期終了時のリスニング力比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
pre-test	30	23.2333	5.25674	0.9597	3.4118	0.0375
mid-test	30	23.4000	6.85616	1.2518		
post-test	30	26.8000	5.67754	1.0366		

pre-test: **入学直後**, mid-test: **前期終了時**, post-test: **後期終了時**

表 4　多重比較

Level	post-test	mid-test	pre-test
pre-test	0.50355	–2.89645	–3.06312
mid-test	0.33688	–3.06312	–2.89645
post-test	–3.06312	0.33688	0.50355

正の値が有意差を示している。

表 5　2001 年度入学学生 2 グループ間の事前リスニング力の比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Sound Focus	29	22.379	8.92994	1.6582	0.0047	0.9457
Caption Focus	31	22.516	6.42843	1.1546		

表 6　英語音声フォーカス群の事前・事後リスニング力比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Sound Pre	29	22.379	8.92994	1.6582	2.984	0.0896
Sound Post	29	25.931	6.54616	1.2156		

表 7　英語字幕フォーカス群の事前・事後リスニング力比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Post	31	25.4194	1.1026	1.0481	3.4665	0.0675
Caption Pre	31	22.5161	1.1026	1.1546		

に JACET リスニングテストの得点に差はなく（*t*–test, 5% level），セッション前のリスニング力は同等であると判断できた。

次に 13 週前後のリスニング力を比較してみると，英語音声フォーカス群にも字幕群にもグループ内での事後の向上が見られず（**表 6，7**），また 13 週間後グループ間に差も出なかった（**表 8**）。

一方，読解効率に関して，事前に 2 グループ間に差はなく（**表 9**），リスニング力のみならず，英語読解力に関しても均一であったことがわかる。

英語音声にフォーカスを置いて DVD を見たグループが読解効率が事後向上した（**表 10**）一方で，英語字幕フォーカスグループに関しては，読解効率に向上は見られなかった（**表 11**）。

以上の結果をまとめると，(1)両グループともにリスニング力の向上は事後に認められなかった，(2)DVD 視聴時に英語字幕にフォーカスを置き，かなりのスピードで読み進む必要のあるグループで読解効率に向上が見られず，逆に音声フォーカスグループに向上が見られた。つまり，トレーニング対象スキルには一切向上が見られず，事後に統計的に向上を確認できたのは唯一音声フォーカスグループの読解効率のみであった。

実験 1 と 2 の JACET リスニング得点・読解効率の事前・事後結果をまとめたものが**表 12** である。

これからわかることは，実験 2 の音声フォーカスグループはあと少しこのセッションを続けることで事後の JACET リスリングテストで事前に比べて有意な点を挙げる可能性が高いが，字幕フォーカスグループについてはリスニング・リーディング力ともに向上する可能性が低いということである。

スキル転移という観点から見ると，リスニング力向上を対象としてトレーニングをすることで，有意差の出るレベル近くまで伸びると，読解力にスキル転移が正の方向にもたらされる，つまり，統計的に有意な向上がターゲットスキルで確認できる前に既に転移先のスキルに認められたと解釈できる。その一方で，実験 2 の字幕フォーカス群の受けた DVD 提示では読解効率向上にはつながらず，向上していない読解力はリスニングに転移しようがなかったと考えられる。

しかしながら，この議論を進める前に，この音声フォーカスグループから得られた興味深いデータを**表 13** に示す。これは，毎 DVD 映画視聴時に課された内容真偽問題（T/F 式で 10 問）の正答数（内容理解度）に関して，13 回の平均値をグループ間で比較したものであり，音声フォーカスグループ（Sound）が字幕フォーカスグループ（Caption）を上回っていたことを示している。

ここで考慮に入れなければいけないのは，実験 2 では，すべての情報が英語で提示されたのではなく，第 1 回目 DVD 視聴時には英語字幕フォーカス群は日本語音声が，英語音声フォーカス群には日本語字幕が同時に提示されたという点，すなわち内容理解問題を解く際に日本語情報が関連していないかという問題である。

表 8　リスニング力事後のグループ間比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Sound Focus	29	25.9310	6.54616	1.2156	0.1024	0.7501
Caption Focus	31	25.4194	5.83538	1.0481		

表 9　読解効率の事前グループ間比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption 1	31	63.2365	25.9996	4.6697	0.4086	0.5252
Sound 1	29	59.4706	18.7883	3.4889		

表 10　英語音声フォーカス群の読解効率事前・事後比

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Sound pre-test	29	59.4706	18.7883	3.4889	12.0228	0.001
Sound post-test	29	76.8670	19.4161	3.6055		

表 11　英語字幕フォーカス群の読解効率事前・事後比

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption pre-test	31	63.237	25.9996	4.6697	1.3849	0.2439
Caption post-test	31	70.270	20.77	3.7304		

表 12　リスニング・リーディング力事後結果一覧

	JACET 得点アップ	読解効率アップ
実験 1 群	3.4 *	10.9 *
音声フォーカス群	3.5（$p = 0.06$）	17.4 **
字幕フォーカス群	2.9（$p = 0.75$）	7.07（$p = 0.24$）

* $p < 0.05$, ** $p < 0.01$

表 13　DVD 正答率のグループ間比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption	31	7.94194	0.929794	0.16700	16.3594	0.0002
Sound	29	8.73103	0.505048	0.09379		

フォーカスに関する指示のない状況でスタンダードモード・リバースモードでDVDを視聴する際，日本人中級EFL学習者はどの情報に最も注意を向けて内容理解に努めたかに関するアンケート調査結果を，田浦・田浦(2001: 107)[26]は報告しているが，これによると，リバースモードでは86%の学生が日本語音声(14%は英語音声)に，スタンダードモードでは83%が日本語字幕(17%が英語音声)に注意を最も払っていた。つまり指示がなければこのレベルの学生はどうしても日本語情報を頼りに内容理解をする傾向があるのがわかる。これは，実験2のようにフォーカスを予め指示されていても，必ずしも被験者全員がDVD第1回視聴時に日本語の音声や字幕にまったく注意を払っていなかったとは言いきれない可能性を示唆している。

これが正しい(つまり，字幕フォーカス群は第1回DVD提示時に英語音声にフォーカスを置きながら日本語字幕を追い，音声フォーカス群は英語字幕にフォーカスを置きながら日本語音声にも耳を傾けていた)と仮定すると，英語音声と日本語字幕処理を同時にする方が，英語字幕と日本語音声処理を同時にするよりも容易であり，それが原因で言語以外の映像情報により多くの注意を払い，結果的に**表13**で示されている英語音声フォーカスグループの高い正解率へとつながったと解釈できる。これは，日本人EFL中級学習者にとって日本語の音声が提示されているときの方が，日本語字幕を提示されるよりも第2言語での活動に従事する余裕が生まれるとしたYoshida *et al* (1998)[28]の結果と相反するものである。リスニングトレーニングをあまり受けていない日本人EFL学習者にとって，英語音声のみを頼りに内容理解をすることは容易でなく，どうしてもある程度日本語字幕を頼りにするが，日本語の字幕は比較的容易に読めるので映像まで十分注意を払えたのが一因かもしれない。一方で，英語字幕にフォーカスを置いていた被験者は，日本語音声はさほど努力をせずとも理解できるので，内容理解問題はある程度解けるが，速く流れる英語字幕を必ずしもすべて処理できておらず(読み残しがあるまま次の新しい字幕が出てくる状態)，映像にまで注意が回らないので，映像をヒントに解かないといけないような問題は解けなかったのかもしれない。

このようにフォーカスを事前に指示していても，日本語の介在が可能な実験方法を取ったために，英語をそれほど得意としていない中級レベルの被験者がまったく日本語情報に注意を払わなかったとは言いきれず，解釈が非常に困難になってしまったことは否めない。そこで，実験3ではそのような可能性を排除するために，DVD提示時に一切日本語での情報をなくした方法を取ることにした。

4．実験3：サイトトランスレーションと英語モードのみのDVD映画視聴

実験2同様，紙媒体での速読に代えてDVD映画視聴を付加したが，本実験ではDVD提示時に一切日本語を排除した。2002年度入学の看護学生60人を2群にランダムに分けた。第1グループはDVD視聴時に英語音声と映像のみの提示を2度とも受け，英語音声からすべての情報を得る指示を受け，第2グループは提示2度ともバイモーダルで英語字幕フォーカスであった。

表14　事前グループ間のJACET得点比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Focus	30	19.9333	7.36222	1.3442	1.8487	0.1792
Sound Focus	30	22.4333	6.87165	1.2546		

表15　事後のJACET得点比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Post	30	23.3667	7.76146	1.4170	1.3048	0.258
Sound Post	30	25.5000	6.66307	1.2165		

表16　英語音声フォーカスグループのJACET事前・事後比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Sound Pre	30	22.4333	6.87165	1.2546		
Sound Post	30	25.5000	6.66307	1.2165	3.0795	0.0846

表17　字幕フォーカスグループのJACET事前・事後比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Pre	30	19.9333	7.36222	1.3442		
Caption Post	30	23.3667	7.76146	1.4170	3.0901	0.084

表18　事前読解効率のグループ間比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Pre	30	65.0415	23.577	4.3781	0.0031	0.9556
Sound Pre	30	65.4090	26.788	4.8908		

表19　事後読解効率のグループ間比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Post	30	70.7734	23.646	4.3910	0.0054	0.9419
Sound Post	30	70.2857	27.297	4.9837		

事前にJACETによるリスニング力を計測したが，2グループ間に差はなく(**表** 14)，また13週後にもなかった(**表** 15)。

次にグループ内での事前・事後比較を行ったが有意差は見いだせなかった(**表** 16，17)。つまり，DVD映画提示差にかかわらずリスニング力の向上は両グループともなかった。

次に，実験2の読解材料を用いて読解効率を見ると，事前・事後ともに2グループ間に差はなかった(**表** 18，19)。

グループ内の事前・事後比較でも差はなく(**表** 20，21)，DVD映画提示方法にかかわらず読解効率に向上は観察できなかった。

13回にわたりDVD映画視聴セッションを行った際に，内容理解問題を10題ずつ正誤方式で出したが，そのグループ平均正答数には有意差がなく，両グループともに同じレベル(82%以上)の内容理解度を示していた(**表** 22)。

まとめると，2度のDVD映画提示から一切日本語を排除し，L2音声と映像提示を2度受け英語音声にフォーカスをしようが，バイモーダル提示を2度受けて英語字幕にフォーカスをしていようが，13週間後にリスニングも読解効率にも何ら向上が見られなかった。実験1・2の結果と比べたのが**表** 23である。

有意差は出なかったが，JACETリスニングテストの得点は音声フォーカス群で3.07点，字幕フォーカス群で3.4点の向上があり，かなり有意レベルに近い伸びを示していた。一方読解効率については，それぞれのグループで4.8, 5.7ポイントの向上しかなく，これは有意差の出た実験1の10.9や実験2(音声グループ)の17.4に比べてかなり低いものであった。

次に，事後アンケートで各グループに英語リスニング力と速読に関して，13週間前に比べての伸びを自己評価してもらったが，その結果が**表** 24である(「非常によく伸びた」から「まったく伸びなかった」までの5段階で評価する形式)。このアンケート結果より，被験者は直接トレーニングの対象となったスキル(音声フォーカスグループならリスニング力，字幕フォーカスグループなら速読力)について事後伸びたと感じていることがわかる。

表 23，24の結果を重ね合わせてわかるのは，次の2点である：(1)英語音声と映像提示を2度受け，英語音声しか情報源がなかったグループでは，ほぼ7割の被験者がリスニング力が向上したと感じ，事後テストでも有意に近い向上を示したが，読解力にはまったく転移しなかった，(2)バイモーダル提示を2度受け，常に英語字幕にフォーカスを置いたグループでは，事後にほぼ半数が自分の速読力は伸びたと感じていたにもかかわらず，読解効率にまったく伸びは観察できなかった。しかし，このグループのリスニング力は音声フォーカスグループと同じ位(有意レベルに近いくらい)の伸びが見られた。読解効率に伸びが認められなかったので，リーディング力が転移したとは考えられないので，リスニングの伸びは，DVD視聴時におそらく英語音声にも多少は耳を傾けていたのが一因かもしれないが，このデータからだけではっきりしたことはわからない。

表 20　音声フォーカスグループの読解効率　事前・事後比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Sound Pre	30	65.4090	26.7882	4.8908		
Sound Post	30	70.2857	27.2969	4.9837	0.4878	0.4877

表 21　字幕フォーカスグループの読解効率　事前・事後比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption Pre	29	65.0415	23.5769	4.3781		
Caption Post	29	70.7734	23.6463	4.3910	0.8545	0.3593

表 22　正誤問題正解数比較

Level	*n*	Mean	SD	SEM	F Ratio	*P*
Caption	29	8.20690	0.45429	0.08436	2.1529	0.1478
Sound	30	8.37667	0.43445	0.07932		

表 23　JACET 聞き取りテスト・読解効率の事後の得点アップ（率）

	JACET 得点アップ	読解効率アップ
実験 1 群	3.4 *	10.9 *
実験 2		
音声フォーカス群	3.5（$p = 0.06$）	17.4 **
字幕フォーカス群	2.9（$p = 0.75$）	7.1（$p = 0.24$）
実験 3		
音声フォーカス群	3.1（$p = 0.08$）	4.9（$p = 0.49$）
字幕フォーカス群	3.4（$p = 0.08$）	5.7（$p = 0.36$）

* $p < 0.05$, ** $p < 0.01$

表 24　リスニング力と読解力の事後自己評価

	英語音声フォーカス群	英語字幕フォーカス群
リスニング力	6.7% + 63.3%	0% + 26.7%
速読力	3.4% + 27.6%	3.4% + 44.8%

＋の前の数値は「非常に伸びた」，後ろは「よく伸びた」

総合考察

以上の実験結果をまとめると，(1)実験 1 では，通常授業の訳読にサイトトランスレーションを取り入れかつ速読トレーニングを週 20 分導入することで，読解効率が上がり，リスニング力向上につながりスキル転移もみられた，(2)実験 2 では，速読に代えて DVD 視聴を 20 分行ったが，DVD 英語音声フォーカスグループに読解効率向上が認められただけで，ターゲットスキルの向上(音声群のリスニングと字幕群の読解効率)は確認できなかった。ただ，音声群のリスニング力の向上については有意差に近いレベルが認められた。DVD 映画内容理解度では音声群(日本語字幕)のほうが字幕群(日本語音声)よりも高いので，実験 2 の結果には，望まざる変数としての日本語の影響が考えられる，(3)実験 3 では DVD 映画視聴から一切の日本語提示を排除し，L2 音声と映像のみのセッションを 2 度受け音声フォーカスしたグループと，2 度ともバイモーダルで英語字幕にフォーカスをしたグループを設けたが，2 群ともターゲットスキルの向上もスキル転移も観察できなかった。ただし，アンケート調査ではターゲットスキルが向上したと半数以上の被験者が感じ，両グループともにリスニング力に関しては事後テストで統計的に有意レベルに近い得点を挙げていた。

本研究の主題であるスキル転移に関しては，日本人中級 EFL 学習者対象に(1)通常授業に訳読サイトトランスレーションと速読訓練を加えることで 13 週間後，読解効率が上がり，これがリスニング力向上につながった，(2)DVD 映画をスタンダードモード(英語音声・日本語字幕)後にバイモーダル提示し，常に音声にフォーカスを置くトレーニングをすることで，ほぼ有意差に近いレベルまでリスニングが向上し，これがスキル転移を誘い読解効率が向上した，(3)DVD 映画視聴時に一切の日本語提示を排除すると，ターゲットスキルに向上がなく，転移もなかった。

3 実験の結果からすると，中級レベルの学習者対象にリーディング力を付けて，リスニング力への転移を期待するのであれば，サイトトランスレーションと DVD 映画の組合せよりもサイトトランスレーションと速読トレーニングを取り入れた方が効果的であると判明した。

DVD 映画を視聴した実験 2 ・ 3 の被験者からは事後アンケートで，リスニングや速読教材としての DVD 映画視聴を肯定する意見が多く見かけられ，英語速読・リスニング力を高める活動として動機付けの役目は十分に果たしていたようである。しかしスキルアップという点では，スタンダードモード後バイモーダル提示を行うことで読解効率に向上が見られた以外，成果を上げることができなかった。

この原因として DVD 映画視聴が，日本人中級 EFL 学習者対象のリスニングや速読のトレーニングに相応しい教材でない事が考えられるが，特に今回用いられた DVD 映画 “Mr. Holland’s Opus”の教材としての適切さを検討する必要がある。実験 2 で日本語情報が与えられた場合に，リスニング力が統計的有意レベルに近い向上を見せ，リーディング力への転移も見られたが，全情報を英語のみから得る必要がある実験 3 では全くスキル向上がなかったことより，この DVD 映画が被験者の英語力を越えているのかもしれない。これを支持する結果が筆者達の行った次の 2 実験から得られている。

第 1 に，田浦他(2003)[27]が“You’ve Got M@il”を用いて上級者と中級者対象にさまざまな字幕と音声の組合せで(6 グループ対象に 6 通り(Bi/Bi <C>, Bi/Std <S>, Bi/Re <C>, Std/S <S>, S/S <S>, C/Bi <C>)13 週間にわたり DVD 映画視聴をした後の JACET リスニングテストはすべて，事前に比べて向上を示していた。本研究と同じ読解材料を用いて計測した読解効率も全てのグループについて向上が観察された。

第 2 に“Mr. Holland’s Opus”を他の被験者対象に実施した結果を詳しく紹介する。すべて，国立大学に在学中の英語非専攻 1・2 回生で，13 週間にわたる DVD 視聴前後に JACET テストを実施した。中級レベル対象に(1)バイモーダル後リバースモードで英語字幕フォーカス,(2)バイモーダル後スタンダードモードで英語音声フォーカス,(3)バイモーダル後英語音声と映像のみで英語音声フォーカス,(4)英語音声と映像のみ後 バイモーダルで英語音声フォーカスの 4 実験を行った。その結果，(2)のバイモーダル後スタンダードモードで英語音声フォーカスをしたグループのみ事後のリスニング力に向上がみられた(**表 25**)。

上級者に対しては，バイモーダル後英語音声と映像提示と，その逆の英語音声と映像提示後バイモーダルの 2 つの異なる提示法を行った。英語音声・映像提示時には英語音声に，バイモーダル提示時には英語字幕にフォーカスを置くよう指示が出されたが，結果は両グループともに事後の JACET テストに向上は見られなかった。

要するに，本研究の被験者と同じ中級者レベルの被験者対象でも“You’ve Got M@il”では全てのグループでターゲットスキルとしてのリスニング力と読解効率が向上し，かつスキル転移も見られた。その一方で，“Mr. Holland’s Opus”では，日本語を排除した提示をすると上級者対象でも一切リスニング力が向上せず，中級グループで向上を示したの

表 25　バイモーダル後スタンダードモード(英語音声フォーカス)

Level	*n*	Mean	SD	SEM	F Ratio	*P*
JACET Pre	40	24.125	6.537	1.0335		
JACET Post	40	27.150	6.266	0.9907	4.4645	0.0378

は内容理解時に日本語が介在可能なバイモーダル後スタンダード提示群のみであった。これらの実験および本研究での結果を総合すると，DVD 映画“Mr. Holland’s Opus”視聴をリスニングや速読スキルアップにつなげるためには，(1)日本語字幕による助けが必要である，(2)一切日本語情報がないと上級者でも内容理解を行いスキルアップやスキル転移につなげることができないほどレベルの高い DVD 映画であるとほぼ断定できそうである。

このような結果を踏まえて今後の課題を考えると，DVD 映画を利用するのであれば，スキルアップにつながる DVD 映画の選択が重要で，さもなければ英語学習環境であってもすべてを英語情報で与えるのではなく，日本語情報をどのような媒体で提示するのが効果的であるのか探る必要があろう。対象被験者の英語レベルに合致し，ターゲットスキルの向上に寄与できる教材としての DVD 映画を用いて初めて，スキル転移に関して適切なデータ収集が揃うこととなるため，残念ながら本研究では十分なデータが揃ったとは言えない。しかし，教材用として相応しい DVD 映画選択の必要性と，少なくとも“You’ve Got M@il”はこのレベルの被験者に適切であり，“Mr. Holland’s Opus”は日本語情報がない提示ではスキルアップにつながらないことが判明したことは大きな収穫である。

また，本研究では被験者として看護学生のみを対象としたが，今回の結果(サイトトランスレーションと速読練習による読解効率の向上とリスニングへに転移，英語音声に日本語字幕を同時提示によるわずかなリスニングの伸びと読解効率への転移)を一般化するには，看護学以外の分野を専攻する日本人中級 EFL 学習者対象に実験をする必要がある。そこで初めて，リスニングと読解の転移現象からみたそれぞれの認知プロセスの解明を進めることができる。

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コミュニケーションから見た国内看護事情の改善の必要性

Needs Analysis of Nurse-to-International-Patient Communication in Japan

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We are living in a global age when it is more important than ever to have a barrier-free society and to communicate cross-culturally. As the number of international workers and students increases in Japan, medical practitioners and hospital staff need to communicate in foreign languages in order to provide adequate care. The aim of this article is to clarify the status quo and explore how to improve the situation. First, we asked nurses to answer questionnaires about languages and about the English expressions needed in the various medical situations at five hospitals in Aichi Prefecture. We found specific situations in which English and other foreign languages are needed. We also totaled up the necessary English expressions most frequently reported so that we can teach them to student nurses. Second, we examined 21 English textbooks for student nurses. Most nursing schools were found to teach English for Specific Purpose (ESP) but, because of curriculum restraints, the English education is not sufficient. Very few good ESP textbooks are available for student nurses and the contents and technical terms in those textbooks differ widely according to the authors' experiences. In conclusion, to improve communication at hospitals, we need to consider arranging for interpreters, provide nurses with ample opportunities to learn foreign languages, and make nursing guidebooks in foreign languages. In addition, it is also necessary to provide ESP textbooks for student nurses that adequately address their needs. Results of the present study may provide guidelines for the development of learning materials for student nurses.

Key Words: communication, frequently-used expressions, hospital, international patient, student nurses, textbook

はじめに

近年日本の社会において就労者や留学生を含む外国人が増加しており，それに伴い，看護の現場で働く人々がコミュニケーションの手段としての外国語を使う必要が増していると思われる。私たちは国際社会の一員として「言葉のバリアフリー」を目指すべき時代に生きている。

本研究では，コミュニケーションから見た国内の看護事情について，看護の現場と看護英語教育の場の両方の現状を調査・分析し，その現状の改善方法について述べる。

まず，看護の現場で実際に必要とされる言語や英語表現について，愛知県の５つの病院において医療現場の看護師にアンケート調査を行なった。その結果，看護現場では外国語および英語の必要性が非常に高いということが明らかになった。また，実際に英語が必要だと感じた時の英語表現については，記述式で回答を依頼し，その頻度の集計を行った。頻度の高いものほど医療現場での必要性が高いと考えられ，短時間に効率よく効果的な英語教育を行なうためにこの集計資料は役に立つと思われる。

次に，看護英語教育の現状を分析した。多くの看護大学や看護専門学校では，看護に特化した「医療・看護英語」教育がなされているものの，過密な教育課程の中で英語教育にかける時間は十分ではない。また看護英語教科書の数は少なく，その中で扱う内容や専門用語にはばらつきがある。

以上に述べた現状の問題点を改善する方法を提案したい。看護の現場では，何らかの形で通訳を配置すること，効率

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的な院内語学研修の整備，外国語の看護ガイドブックやパンフレットの作成などが考えられる。看護英語教育の現場においては，医療現場で必要な英語表現を盛り込んだ教科書の開発が望まれる。

1．看護の現場で必要とされる言語についての調査

1.1　目的

看護の現場における必要とされる言語や言語表現の調査を行い，日本の看護事情の改善に役立てたいと考えた。

1.2　調査対象と方法

調査に同意が得られた愛知県内の 5 つの病院において，医療現場の看護師(保健師・助産師・准看護師も含む。以下，看護師とする)を対象にアンケート調査を行った。調査期間は 2003 年 10 月～ 11 月であり，有効回答数は 900 であった。(ただし，各病院の事情により，サンプリング上の偏りがあると思われる。)

1.3　調査項目

調査項目は，①看護職についてからの経験年数，②専門分野における学歴，③医療現場での外国語の必要性，④必要だった言語の種類，⑤医療現場での英語の必要性，⑥医療現場での手話の必要性，⑦手話の学習経験，⑧外国語が必要だと感じた場面とその内容，⑨カルテや専門分野の文献を読むときの英語の必要性，⑩カルテや専門分野の文献について英語で読みたい内容，⑪自由記述　である。項目⑧⑩⑪が記述式で，他の項目は選択式である。

1.4　調査結果

5 病院のアンケート結果を単純集計，クロス集計などを行い，比較・分析をした。(ここでは手話についての報告は省く。)

設問 1　看護職についてからの経験年数

5 病院中 4 病院(A 病院を除く)は急性期病院であり，グラフで 5 病院全体の集計では，0 ～ 5 年と答えた看護師が全体の約 50% を占める(**図 1－1**)。全国規模の調査[1)]と比べる

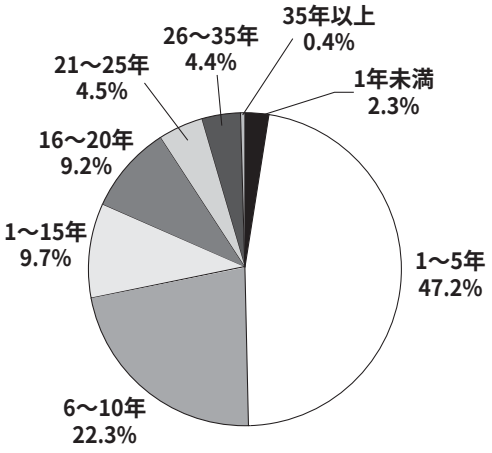

図 1－1　経験年数

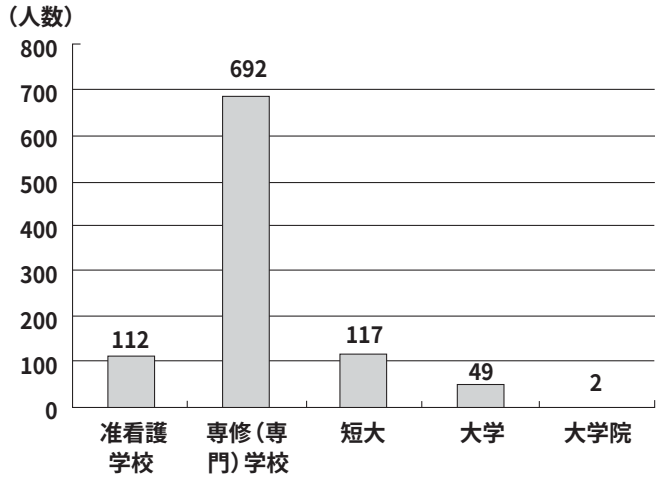

図 1－2　専門分野における学歴

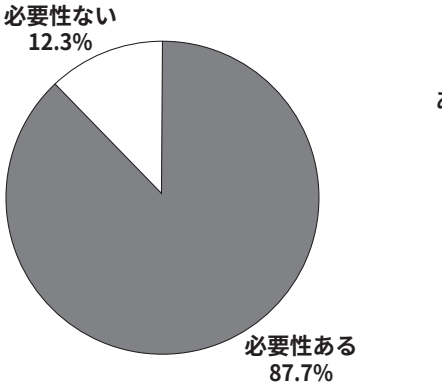

図 2－1　今までの外国語の必要性

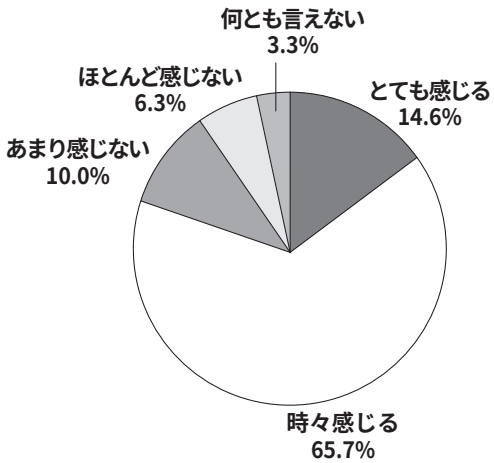

図 2－2　現在の外国語の必要性

と，経験年数の少ない看護師が多い傾向がある。急性期病院では，仕事が比較的忙しく，看護師の入れ替わりが多いと思われる。

設問 2　専門分野における学歴について

今回の調査(2003 年)では，有効回答数 900 のうち，少なくとも専門学校と短大で 3 年間の看護教育を受けた看護師が合わせて 809 人で大半を占めている(**図 1－2**)。今後もしばらくは病院の看護師の 8 割前後は，看護専門学校や短大の卒業者が占めると思われる。大学卒の看護師はまだ少ないが，看護大学の立ち上げが続いており，今後 4 年生教育を受けた看護師が少しずつ増加していくと思われる。

設問 3－1　**今までに**医療現場で**外国語**の必要性を感じた経験がありますか。

どの病院においても「必要性があった」と大半の看護師が答えている。5 病院の合計の集計結果では，87.7% の看護師が必要性を感じた経験をもっている(**図 2－1**)。

設問 3－2　**現在**，医療現場で**外国語**の必要性を感じますか。

病院規模の大小にかかわらず，多くの看護師が必要だと答えている。5 病院の合計では，「とても感じる」と答えた看護師が 14.6% で，「時々感じる」が 65.7% となっている(**図 2－2**)。必要性の程度の差はあるが，全体で約 80% の看護師が外国語の必要性を感じている。

設問 4　何語が必要でしたか。

必要な外国語については，5 病院全体で多い順に英語 49.6%，ポルトガル語 34.2%，中国語 7.1%，スペイン語 4.9%，韓国語 2.0% の順になっている(**図 3－1**)。ポルトガル語が多いのは，調査した病院の地域性が関係している。

病院ごとに必要な言語の割合を見てみると，有効回答数の 85% を占める T 病院と K 病院において，英語の次にポルトガル語が突出している(**図 3－2**)。これらの 2 病院は愛知県豊田市と刈谷市に位置している。この地域はトヨタ系の会社が多く存在し，日系ブラジル人とその家族が多い。

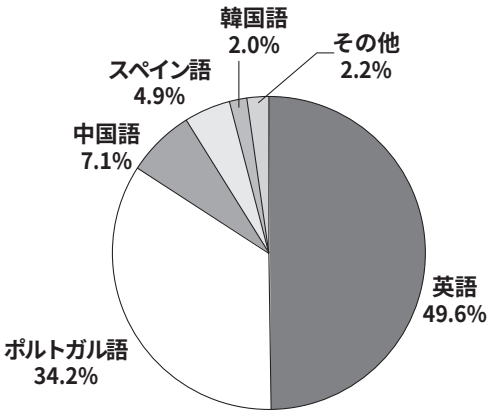

図 3－1　必要な外国語

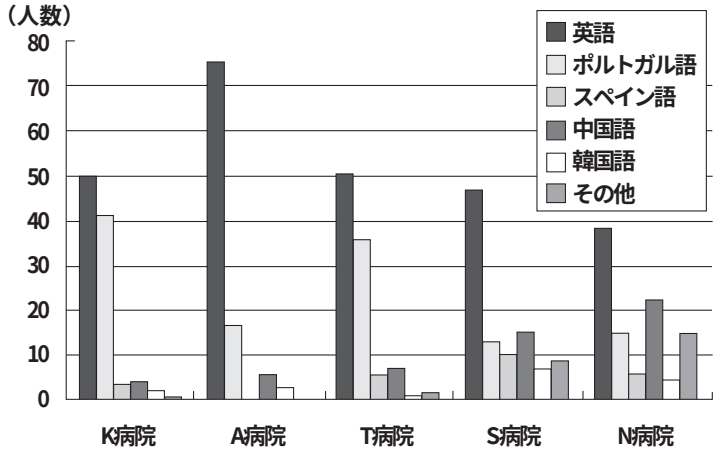

図 3－2　病院別による必要な外国語

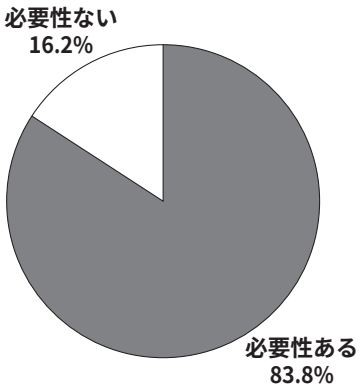

図 4－1　今までの英語の必要性

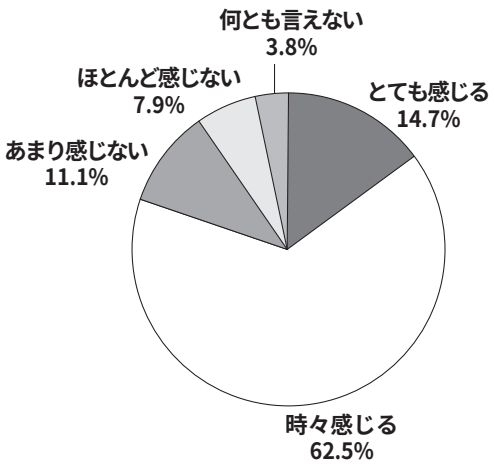

図 4－2　現在の英語の必要性

設問 5－1　今までに医療現場で**英語**の必要性を感じた経験がありますか。

外国語の中でも英語に限って聞いたところ，5 病院とも「必要性を感じた」と答えた看護師の数が圧倒的に多く，全体の 83.8% を占める（**図 4－1**）。

設問 5－2　現在，医療現場で**英語**の必要性を感じますか。

どの病院も「必要性を感じている」と答えた看護師の数が非常に多い。5 病院の合計では，「とても感じる」と答えた看護師が 14.7%，「時々感じる」が 62.5% である（**図 4－2**）。合わせて，全体の 75% 以上の看護師が，医療現場での英語の必要性を感じている。

設問 9　カルテや専門分野の文献を読むときの**英語**の必要性

現在はカルテが英語で書かれることが多く，どの病院においても，カルテや専門分野の文献を読むときの英語の必要性を感じる看護師は非常に多い。5 病院全体で，76% を占める。

設問 10　カルテのどこが読みたいか・どんな文献が読みたいか。

カルテについて看護師が読みたいのは，医師の記録・記述，検査結果，治療方針，症状・診断名などであった。文献で読みたいものは，看護関係の文献・論文，専門分野の最新情報，他国の看護についての情報などであった。

1.5　英語が必要だと感じた場面における英語表現の頻度集計

設問 8 において，英語が必要だと感じた場面における表現を自由記述式で記入を依頼した。9 場面を設定し，それぞれどんな時にどんな内容のことが言いたいか，あるいは言いたかったかを記入してもらった。

それぞれの場面において必要な英語表現の頻度集計を行った（**図 5**）。頻度の集計結果から，現場の看護師が使いたいと思う場面は，多い順に（数字は記入者数）「症状を聞くとき（457）」「治療について説明するとき（234）」「患者に指示を与えたいとき（231）」「看護について説明するとき（173）」「患者と初回に会うとき（159）」「患者に精神的援助を行いたいとき（121）」「生活習慣を聞くとき（74）」「病気や外傷の説明をするとき（67）」となっている。「その他（97）」の場面では，入院・退院のときの説明，手続き・書類・会計などの説明などの英語表現が必要であった。頻度の高い表現ほど看護現場での必要性が高いと考えられる（**表 1**）。

1.6　アンケートの設問 11 ・自由記述から読み取れること

外国語が医療現場で必要な場合，日々の忙しい勤務の中で語学学習を続けることは容易ではなく，通訳の配置を望む声が存在する。また，外国人患者のために外国語の看護ガイドブックやパンフレットが必要だという意見がある。在日外国人は，保険・医療のニーズがあっても語学をはじめ異文化コミュニケーションの点で適切は対応を受けられないことが多く問題化している。[2)]

1.7　アンケートについての今後の課題

アンケート**設問 8** の「必要な英語表現」については，具体的に実際に必要だと思われる英語表現について現場の看護師のニーズを調べることができた。しかし，9 個の場面分けが適切であったかを検討する必要がある。完全な自由記述の設問は分類や分析が非常に複雑な作業となるため，あ

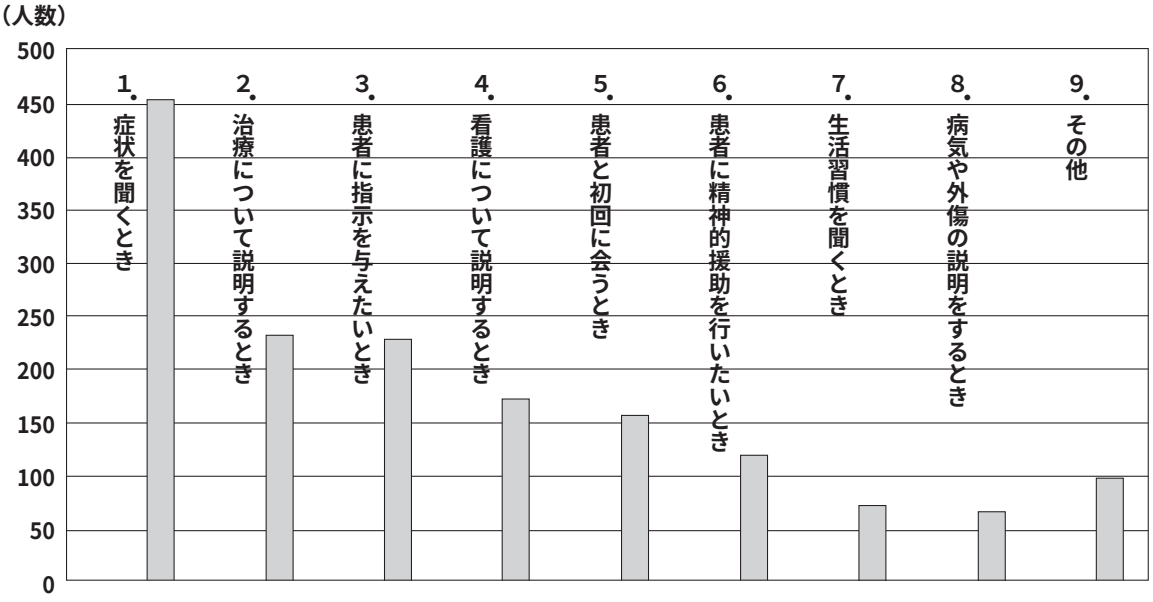

図 5　医療現場で必要な英語表現の頻度

る程度の選択式と記述式を混ぜた問い方がよいと思われる。

以上のアンケート調査の結果から，看護の現場ではさまざまな言語が必要とされ，また，英語についてもさまざまな英語表現が必要とされていることがわかった。このような現場で必要とされる英語表現の頻度集計は，今後の看護英語教育，または現場での英語研修に役立てることができると思われる。

2．看護英語教育の現状

2.1　看護に特化した「医療・看護英語」教育

看護の分野の英語教育については，今まであまり調査研究がされてこなかった。4 年生看護系学部・学科を対象に行った全国調査によると，看護に特化した英語教育について，「医療･看護英語」が 84.2% の看護大学で取り入れられている。[3] そして，過密な時間割と限られた時間割の中で看護学生に必要な英語とは，専門科目に直結した英語，看護英語である。[4]

看護専門学校・短大を対象とした調査はされていないが，これらの学校で英語を担当する教師は，一般教養科目の英語とは区別して，「医療・看護」に関する英語の教科書を使用している場合が多いと思われる。現在大半の医療現場の看護師が看護専門学校・短大卒であることを考えると，今後の調査が必要である。

2.2　看護系学校の過密な教育課程

看護教育を受ける学生たちは，過密な教育課程の中で，専門である看護学の学習により多くの時間を割いて学習しており，英語学習にかける時間を十分確保することは困難である。特に 3 年間の看護教育の後看護師になることを目標とする学校では，英語の授業数は各学校に任せられており，非常に少ない。

2.3　看護英語教科書の調査結果

2.3.1　看護英語教科書の種類

看護系大学や看護専門学校などで看護に特化した英語を教えることになった場合，多くの教員は，教科書の種類の少なさに気づく。サンプルを取り寄せてみると，非常に多くの専門用語や表現を取り入れた 200 ページほどの教科書から，非常に基本的な会話表現にのみ焦点をあてた数十ページほどの教科書までである。現在，医療系大学生のために日本で用意されているテキストは一部優れたものが存在するとはいえその数は非常に少なく，整備されていない。[5]

2.3.2　教科書の内容のばらつき

看護に特化した英語教科書の中から会話を中心とした内容の教科書 21 冊を抽出し，①会話の相手，②会話の内容について調査した。

教科書の中で誰と誰の会話を取り上げたかについてのグラフ(**図 6**)によると，教科書によって取り上げ方が非常に異

表 1　看護現場で必要な英語表現の頻度

1．症状（457）	2．治療（234）	3．患者への指示（231）	5．患者と初回に会う時（159）	7．生活習慣（74）
● 痛みの場所と症状（124） ● いつからどんな症状か（74） ● アナムネーゼ聴取（18） ● 腹痛・吐き気・便について（16） ● 気分・調子（13） ● 今日はどうしたか（13） ● 排泄の有無（12） ● 疼痛の有無（11）	● 検査・処置・治療についての説明（88） （検査）採血・レントゲン・血糖検査・皮内テスト・胃カメラ・内視鏡・検査中の痛み （処置）点滴・注射・呼吸器の設定 （治療）今後の治療・検査予定 ● 薬の効果や副作用の説明（20） ● 手術（手術前・中・後の説明）（16）	● 次回来てもらいたい時の説明（18） ●「安静にしてください」（18） ● 検査の手順（14） ● 検査中の指示（12） ● 食事・水分・塩分の採りかた（11） ● 薬の飲み方（10） **4．看護についての説明（173）** ● 検温（13） ● 症状に対する看護の説明（11） ● 自宅での看護方法・注意点（10）	● 病院オリエンテーション・システム，病棟案内（22） ● 自己紹介（18） ● 挨拶（16） **6．患者への精神的援助をしたい時（121）** ● 励ましの声かけ（14） ● 不安はないか（12） ●「何かしてほしいことはありますか。」（7）	● 生活習慣について（15） ● 食事摂取状況（3） **8．病気や外傷の説明（67）** ● 症状への対応策・注意事項（8） ● 病状説明・治癒過程（5） **9．その他（97）** ● 入院生活の注意点・説明（13） ● 手続き・書類の説明（8） ● 退院指導（7）

各場面で頻度の高いものだけ記述。（　）：頻度

なっている。全体としては看護師と患者の間の会話を多く扱っている教科書が多い傾向がある。教科書によっては，医師と患者，看護師同士，医師同士，友人同士の会話などさまざまな場合を扱っている。これは，教科書執筆者の看護英語教育についての考え方や経験の違いによると思われる。

会話の内容についてのグラフ(**図 7**)によると，多くの教科書が，患者が病院を訪れる場面から始まり，診察・検査・治療などを経て，薬・退院・会計などの場面までの流れに沿っている。アンケート結果で頻度が高かった，症状・診察，治療・処置についての内容が全体の 25% 以上を占める教科書は 8 冊であった。しかし，どの場面を重要視するかについての考え方は，教科書執筆者によって大きく異なると思われる。

2.3.3　専門用語の取り扱いについてのばらつき

病院内の科の名前，病名，症状，検査など，医療現場で看護師が必要とする単語は，どの教科書も扱ってはいるが，その数と選択のしかたは教科書執筆者によって大きく異な

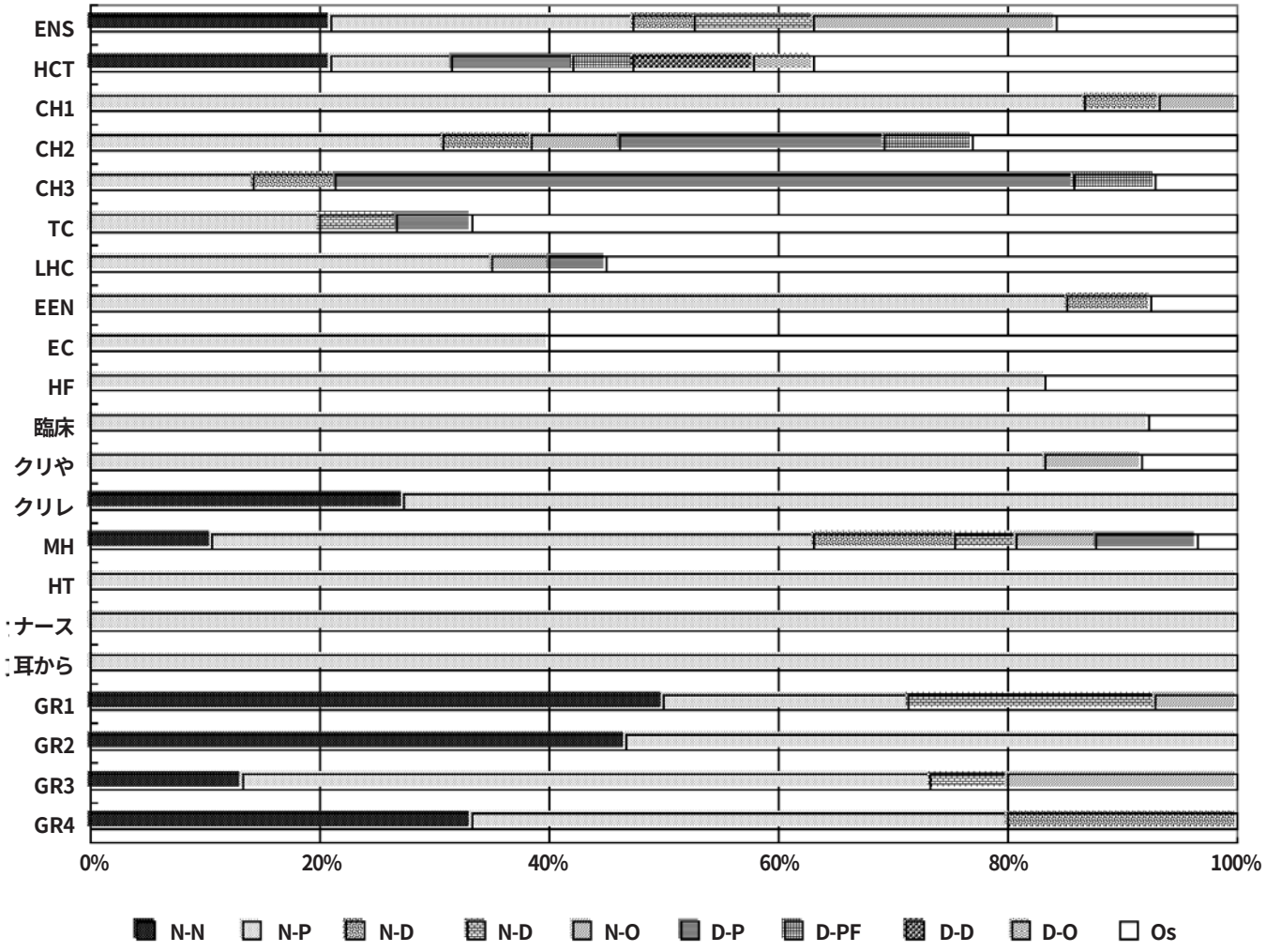

図 6　会話の相手

N: **看護師**，P: **患者**，PF: **患者の家族**，D: **医師**，O: **その他の人**

注：教科書名は，

ENS: *English for Nursing Students*
HCT: *Health Care Today*
CH1: *English for Care and Hospitality I*
CH2: *English for Care and Hospitality II*
CH3: *English for Care and Hospitality III*
TC: *Take Care*
LHC: *Life and Health Care*
EEN: *Essential English for Nurses*
EC: *English Conversation for Nurses and Medical Secretaries*
HF: *How Are You Feeling Today?*
臨床: **臨床看護英語**
クリや：クリスティーンのやさしい看護英会話
クリレ：クリスティーンのレベルアップ看護英会話
MH: *English for Manners and Hospitality*
HT: *Health Talk*
ナース: **ナースの心を伝える英会話**
耳から：耳から学ぶ楽しいナース英語
GR1: *Graded Reading and Conversation Series for Nurses, Grade 1*; GR2: *Grade 2*; GR3: *Grade 3*; GR4: *Grade 4*

っている。看護領域の英語教科書における語彙については，専門用語の選択に筆者によるばらつきが見られ，コミュニカティブな観点からの改良の必要性が指摘されている。[6)]

3．現状を改善する方法

3.1　看護の現場で

コミュニケーションから見た看護現場の分析から，現状改善のために以下の 3 点が考えられる。

①医療通訳の必要性

通訳が必要な場合は，病院による通訳配置のシステム化か，ボランティアを派遣する組織作り，あるいは，民間か国による医療通訳の認定制度の導入などが考えられる。

ボランティアによる通訳は，深刻な病気や手術の場合の責任問題や守秘義務などの点で難しい問題を抱えている。英語力と医療の知識の両方を兼ね備えた通訳の育成が今後必要である。

②効率的な院内研修の整備

調査した病院の院内英語研修について，何も行っていない病院，英会話サークルのような形をとっている病院，TOEIC を課している病院がある。多くの病院では実際にどのような形で行われているか，どのような院内研修が現場の看護師に望まれているのか，どのような院内研修が効率的かつ効果的なのかの調査が必要である。

③外国語の看護ガイドブックやパンフレット作成

アンケートでは，英語だけでなくさまざまな言語が必要とされている実態が浮かび上がった。学校教育で一般に行われていない言語を習得するのは容易ではない。急病にかかったり急にけがをした時に，通訳を頼むこともできず言葉を理解する病院スタッフもいない時，看護ガイドブックやパンフレットを使って指で指し示しながらコミュニケーションを進めることもできる。現場で必要ないくつかの言語のガイドブックやパンフレットを病院に備えておく必要がある。

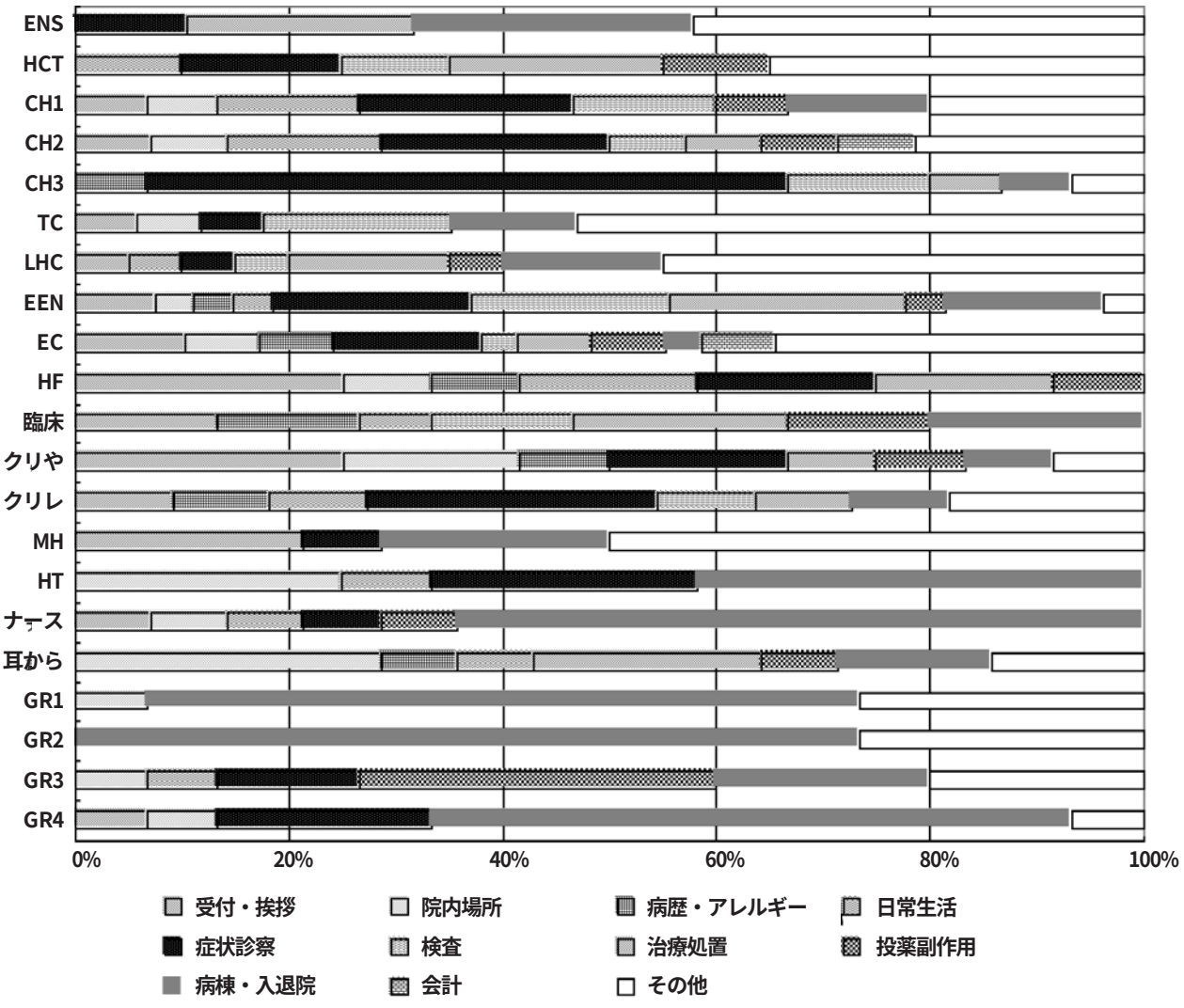

図 7　会話の内容

3.2 看護英語教育の現場で

現場で必要とされる英語表現の頻度集計については，今後の看護英語教育，また看護英語教科書の開発に役立つ可能性がある。誰との会話を学ぶべきか，どのような英語表現が必要とされているか，どの専門用語が必要でどう教えたらいいのかなどを考慮した看護英語教科書の開発が望まれる。ESP 教授法や教材においては，教師からの客観的ニーズの視点と学習者からの主観的ニーズの視点の違いに気づき，考慮すべきである。[7)]

4. まとめ

本研究では，コミュニケーションの視点から，看護の現場で必要とされている言語や表現をアンケート調査し，看護英語教育について考察した。グローバル化する日本社会において，看護の現場と看護教育の両方の現状にはさまざまな問題やニーズがあり，現状を改善しニーズを実現していくことが重要だと思われる。頻度集計をした現場で必要な英語表現については，看護英語教科書の開発に役立てたい。

〈謝辞〉

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平成 14 年度中京大学特定研究助成費　課題番号 221104「国際化時代に対応する英語教育システムの研究とそのIT 化の研究」研究代表者　神田和幸

平成 14 年度～ 17 年度　文部科学省科学研究費補助金基盤研究(A)(1) 課題番号 14208017「コーパスと統計的手法を用いた手話解析とその手話教育への応用の研究」研究代表者　神田和幸

平成 14 年度～ 16 年度　文部科学省科学研究費補助金萌芽研究　課題番号 14651098「手話の言語機能としての評価法の研究」研究代表者　神田和幸

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投稿申請書

Consent of Submission

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。

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Continuing Professional Education

Collocational Deviation Involving *possibility/probability* in English Abstracts by Japanese Medical Researchers

J Med Eng Edu (2004) 5(1): 29-40

I. Choose the one answer that, according to this article in the Journal, is commonly used in mainstream academic writing of researchers who are native speakers of English.
Circle A or B. 例 (A.) B.

1. A. In patients with McArdle's disease, oral sucrose **may probably** reduce the risk of muscle injury.

   B. In patients with McArdle's disease, oral sucrose **may possibly** reduce the risk of muscle injury.

2. A. Results of this study suggest **the high possibility** that ingesting sucrose 30-to-40 minutes before exercise reduces the risk of muscle injury in patients with McArdle's disease.

   B. Results of this study suggest **the interesting possibility** that ingesting sucrose 30-to-40 minutes before exercise reduces the risk of muscle injury in patients with McArdle's disease.

3. A. **One possibility** is that ....

   B. **There is a possibility** that ....

4. A. This **raises the possibility** that ....

   B. This **increases the possibility** that ....

5. A. This **increases the possibility** that ....

   B. This **suggests the possibility** that ....

6. A. To ensure **a high probability** of bilateral correction, ...

   B. To ensure **a high possibility** of bilateral correction, ...

II. Write <u>True</u> or <u>False</u> on the line.

_____ 1. "Let's discuss about bird influenza" is standard English.

_____ 2. "Let's discuss bird influenza" is standard English.

_____ 3. In Japan, researchers tend to describe the characteristic of the possibility, e.g., the unusual possibility, the exciting possibility.

_____ 4. In Japan, researchers tend to rank or intensify the extent of the possibility, e.g., the high possibility, the strong possibility.

_____ 5. "A high probability" is standard English, but "a high possibility" is strange.

Where to Get the Answers

Answers may be seen at the bottom of page 67.

Objectives

Continuing Professional Education is a new feature of the *Journal of Medical English Education*, beginning with Vol. 5, No. 1. The program is designed for the enjoyment of teachers of English for medical purposes and for healthcare professionals who would like to challenge themselves on purposeful, current English usage. The primary objective is enjoyment. The second objective is to highlight the key points of at least one of the papers appearing in English in the Journal, thus illuminating a pathway for active readers to get more out of the Journal. The third objective is to offer even a small bit of continuing professional education for any teachers who may at times grow weary of the simple levels of English they have to use repeatedly for undergraduate students from week to week.

In future issues of the Journal, the Continuing Professional Education corner may take a different approach, such as question-and-answer, or situational English problems. The Editors invite your feedback.

日本医学英語教育学会
理事・評議員

（任期 2004 年 8 月～ 2007 年 7 月）

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日本医学英語教育学会

Japan Society for Medical English Education

入会のご案内

●発足主旨

医学研究・医療技術開発の急速な国際性が進む今日，医学研究者・医師には，英文医学論文の読解力のみならず英語での研究発表能力や学会での自由な討論能力までが求められるようになってきています。卒前教育や卒後大学院教育でこれだけの英語能力を修得させるには，医学部英語教員と英語に堪能な医学専門教員との協力を前提とした新しいモデルカリキュラムと効果的な教育技法や教材の開発，そしてその絶えざる改善が必要と考えられます。

これだけの大事業を達成するためには全国的規模での研究・検討が不可欠と考え，1998 年 7 月，本会は日本医学英語教育研究会として発足し，2001 年より日本医学英語教育学会と改称するに至りました。本会の発足主旨にご賛同いただき，ご入会いただければ幸いです。

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   平成 17 年度年会費：一般￥7,000，学生￥1,000

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Answers to Continuing Professional Education (Page 64)

I. 1-B; 2-B; 3-A; 4-A; 5-B; 6-A.

II. 1. False; 2. True; 3. False; 4. True; 5. True.

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