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巻頭言
医学英語教育の行方

医学教育は，社会情勢により大きく影響される。第二次世界大戦終了直後，米国の教育制度に準じてインターン制度が導入されたが，従来の組織や処遇などの齟齬が表面化し，日本の高等教育史に大きく影響する「大学紛争」の発端となる大きな問題に発展した。その後半世紀を過ぎ，ふたたび医師の過重労働，医局制度が問題となり，さらにプライマリ・ケア，救急診療などの医師の基本的診療能力への期待など様々な社会要因から新医師研修制度が導入された。しかし同時に発生した地域医療あるいは特定の診療科の医師不足問題が大きな社会問題となり，成果・アウトカムが明らかになる前に新医師研修制度は数年で見直された。近年のこれらの情勢は卒前教育にも影響を与え，多くの医科大学で平成20年・21年度には入学定員が増加した。文部科学省が諮問した「医学教育カリキュラム検討会」がまとめ，平成21年5月1日に公開された「臨床研修制度の見直し等を踏まえた医学教育の改善について」は，社会が求める医師の在り方を卒前教育にどう反映させるかを提言しているように見える。

医学英語教育は日本あるいは英語で医学を教育しない国独特の医学教育である。途上国を含め，自国語の医学教育教材あるいは医学用語（ボキャブラリー）を持たない国では，英語での教育が一般的である。豊富な自国語の教育資源（教材）を持ち，日常生活と医療で外国語を必要としない日本で，英語ならびに医学英語教育がいかに困難であるかは，国レベルの英語教育政策，および本学会の活動を通しても明らかである。

カリキュラムで十分な医学英語教育を行う時間を確保している医科大学は少ないと考えられる。カリキュラムの全国調査は2年ごとに全国医学部長病院長会議が白書として報告しているが，医学英語は調査項目になっていないので情報が無い。調査項目になっていないこと自体が現状を表していると言える。先に述べた提言にも医師の英語能力への言及はなく，「社会が求める医師の在り方」からも見放された感がある。しかし，自虐的になってはいけない。先進医療に携わる医師，研究者，国外に活躍の場を求める医療者で，医学を英語で理解し，論じ，コミュニケートする必要性を否定するものはいないであろう。研修医・学生でも「必要であるのは分かっている」と答えるはずである。本学会の医学英語検定試験への応募状況もそれを反映していると考える。人が学ぶ機会は，計画されたカリキュラム（Formal curriculum）だけではなく，計画外に学ぶカリキュラム（Informal curriculum），そして計画もされず学ぼうともしな

いで習得されてしまうカリキュラム(Hidden curriculum)があるとされる(Hafferty FW, Franks R. *Acad Med* 1998;**73**:403.)。英語に堪能な日本の医療者はinformal curriculumとhidden curriculumで学んでいると思われる。これにformal curriculumが加われば良いアウトカムが期待できる。

医学英語のformal curriculumとは何か。ここまで述べたように医学英語教育のシーズもニーズも高いが，教育環境としては厳しい時間的制約があるなかで工夫しなくてはならない。制約の中で工夫するには，重要度を考えなくてはならない。重要度は，教育で何を達成しようとするかで決定される。教育時間が少ないのは医学英語だけというわけではない。近年の医学教育では，限られた教育期間で達成する「アウトカム」が論じられている。アウトカムは教育終了時に学習者が達成しているべき測定可能な具体的能力である。高等教育では，しばしば教育者が独自に決めた教育目標に対して教育計画を立てるが，医学教育は社会的責任の重い人材を育成する教育であり，教育者の「教えたい」という思いで教育する部分だけでなく，社会に貢献する医療人として備えるべき力として共通する教育もある。共通する「測定評価可能な」アウトカムを示せれば，日本の医学英語教育のコア・カリキュラムとなり，教育の質が向上するはずである。そして医学英語教育の行方も定まると考える。

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[Original Article]

English Textbook Preference among Japanese Medical Students:
Textbook Content and Student Motivation

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Student motivation and student needs are important factors in language learning, and instructors must take these into consideration both when planning and when selecting textbooks. Japanese medical students have been shown to want their English instruction to be tailored for their perceived future needs. With this in mind, a class of 51 medical freshmen at Akita University, Japan, who were using three different textbooks in their required English course were asked to rate their textbooks in order to see (1) whether or not they preferred the one medical-oriented book they were using, and (2) whether or not more motivated students showed a stronger tendency to favor that textbook. They rated their textbooks twice, once anonymously and once with their identities revealed. While the answer to question (1) clearly appeared to be positive, the answer to question (2)—although apparently positive as well—was not proven to be so with complete confidence in this study. In addition to indicating a need for further research on this topic, this paper concludes that even core English courses at Japanese universities should be tailored for medical students' specific needs. *J Med Eng Educ (2009) 8(2): 73–79*

Key words: medical English, textbook preference, English for specific purposes, student motivation

1. Introduction

It is not surprising that student motivation is considered to be one of the most important factors in foreign language education, or that it might even be the single most important one.[1–3] Motivation plays a critical role in learning in a second language as well.[4] However, student motivation does not exist independently of other educational factors. For example, class design has been shown to affect student motivation.[5] Closely tied to individual motivation is the issue of student need. It is imperative to accurately ascertain the needs of students before designing and implementing an English for academic purposes (EAP) or English for specific purposes (ESP) course,[5–8] but learning about needs is relatively easy compared to the latter task. Around the world, for example, there is much confusion about exactly how ESP should be implemented for medical and nursing students, depending on their particular needs,[7,9] and what they should be taught.[10–12] Part of the problem is an apparent divide between textbook writers and publishers and the people who actually use them in the classroom. There is also wide disagreement on what a "good" textbook is.[11,13–16] ESP textbooks are in fact often shelved and used as models for in-house materials. As John Swales succinctly put it nearly 30 years ago, "ESP textbooks have either been over-bought or under-used."[17]

This study is concerned with English for medical students in Japan, and especially with the relationship between student motivation and instructional materials. Considering the importance of motivation in language learning, and the current focus on the related factor of student need, Japanese medical students in Japan have been shown to want Medical English in their required English classes,[7,18] and to enjoy studying a variety of topics *in* English.[19,20] As of 2006, there were 79 medical schools in Japan, with a total of about 46,800 students.[21] All require their students to take English courses, with many of them offering ESP. With so many students in

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need of specific medical English education in the country, it is imperative that the right kind of courses be offered, which means that the right kind of materials must be used. The present study relies on data from a class of medical freshmen at a Japanese university to test the hypotheses that (1) they will generally prefer a medical-oriented English textbook to non-medical English textbooks, and that (2) those who are more highly motivated to study English will be more likely to favor a medical-oriented textbook than their less-motivated peers.

2. Research Methods, the Course, and Instructional Materials

This study is based on data obtained from a class of 51 Japanese first-year medical students at Akita University. There were 37 men in the class and 14 women.

2.1. Research Methods

Twice during the fall 2008 academic term (early October 2008 – mid-February 2009), I asked each student to rate the three textbooks we had used during that term—in fact, the entire academic year—from most to least favorite. I asked them to do this once in the middle of November on the day of a quiz (N=47) and then again on the day of the final exam (N=51). The first time I asked them to give their answers anonymously, by writing them on their teacher/course evaluation forms, merely out of curiosity. However, I disregarded their responses, intending to tally them after the term had ended. The second time, though, I wanted to know their identities in order to correlate their responses with their final numerical scores for the term, so I asked them to rate their textbooks on their final exam answer sheets. I asked them to be honest in reporting their opinions, for it might have become apparent to some that I liked one textbook in particular. I also explained that I might use the data for an academic study and write it up for publication, that their individual identities would not be revealed, and that answering was voluntary.

2.2. The Course

Medical students at Akita University spend their freshman year primarily at the main campus—home to the colleges of Education and Human Studies, and of Engineering and Resource Science—where they must pass a variety of basic courses. Among these, they are required to take two terms (one year) of freshman English: English for Academic Purposes (EAP) I (spring term) and II (fall term). Currently, the university implements a standard EAP course for all freshmen, the course having been planned by the English teaching faculty of the College of Education and Human Studies. The goals of the course as stated on the syllabus are rather vague ("to help students develop basic language use ability in academic contexts") but specifically students are supposed to understand long passages, learn various expressions for academic use, summarize texts, use English in groups, learn about a variety of fields, and write a short essay. In essence, each freshman must take this course unless he or she produces a sufficient TOEFL or TOEIC score, which a few medical students usually do. Every April, a placement test is administered to all freshmen who must take EAP and then they are grouped into classes by level —some basic classes, numerous intermediate classes, and a few advanced classes. The roughly 110 medical students are divided from the beginning into two classes, Med A and Med B, before the placement exam. They are then tested, after which a handful of the highest-scoring students are removed from Med A and Med B and placed in an advanced class with other high-scoring students of the College of Education. Therefore, there are usually about 50 students in Med A and Med B throughout the academic year. Despite the separation of students into different classes, all use the same standard materials and take the same mid-term and final exams, on the same days, with the exams for the medical students being slightly more challenging in their design. There is a standard weekly schedule, but teachers are free to change the order in which they cover the materials, as long as they do cover everything by the exam dates. There are no quizzes on the schedule, but teachers may implement quizzes or assign homework. Since Med A, Med B and the advanced classes move at a faster pace than other classes, teachers of these are encouraged to cover additional material, but such material will not appear on the mid-term or final exams. Med A and Med B students spend the entire academic year in the same class, with a different instructor each term. As the only member of the medical school faculty who teaches EAP, I always teach Med A (EAP I) in the spring and Med B (EAP II) in the fall – three hours per week for 15 weeks, or 30 meetings each term.

2.3 Textbooks

In the 2008–2009 academic year, which ran from early April, 2008, to mid-February, 2009, there were three textbooks used for Med A and Med B. They were: (1) Weav-

ing it Together: Connecting Reading and Writing, Second Edition, Book 3 (hereafter, WIT),[22] (2) Science for Inquiring Minds (hereafter, SIM),[23] and (3) Thinking with William Osler (hereafter, TWO).[24] WIT is a reading/writing textbook, with 16 chapters, each with a long essay on a certain topic, vocabulary and general comprehension questions, and a writing section. The writing sections progress from teaching how to write a paragraph and then a short essay in the earlier chapters to how to write comparison/contrast, demonstrational, or persuasive essays in later chapters. Medical students can generally cover a chapter in two class meetings, but lower-level classes require more time. It is a good writing book, with clear explanations, but it is somewhat simplistic for the medical students, with only the writing sections having any real value for them. SIM is quite different. Each of the 14 chapters presents the verbatim script of a roughly seven-minute video production which offers a scientific explanation for some phenomenon or situation, such as the design of tall buildings, how people can survive lightning strikes, or the preventative nature of fluoride. Each chapter also has a set of vocabulary which the students are expected to learn, and some simple comprehension questions at the end. The videos are hard to follow without the scripts, and even with the scripts they are challenging because of the many common and natural expressions used. Students seem to enjoy the information and its presentation, but since the book provides only scripts with minimal explanation, it falls upon the teacher to interpret the text and expressions. Little constructive thought is required on the part of the students —a feature of the book that pleases some of them. TWO, which has 15 chapters, is specifically designed for Japanese medical students. Each chapter centers on a conversation that might reasonably take place in a medical setting or that at least relates to the medical care profession. There are vocabulary and questions for comprehension, as well as a number of exercises that cover the themes in the conversations or related topics. Some research on the part of the teacher is required to guide the students in many of the exercises, some of which are rather challenging. I chose TWO myself for Med A and Med B to use in tandem with the other two books, which were selected by the members of the English teaching faculty of the College of Education. I chose TWO based on my examination of a copy I received from the publisher, just when I was looking for something extra for the medical freshmen, because I felt that the standard EAP course was too simple for them without any other material, and because I felt that medical-oriented material would be better. Finally, all EAP classes also do some "Group Work" activities—conversations written by a member of the English-teaching faculty. These are designed around certain conversation goals, such as making a suggestion or asking for advice.

2.4. Implementation of the Course

The plan for the 2008–2009 academic year required teachers to cover several book chapters and some group work assignments before each exam. As explained above, Med A and Med B differed from all other classes in that they studied chapters from TWO in addition to the required materials, but they also differed slightly from one another during the second term because the teacher of Med A and I used TWO differently (Table 1).

With the medical students, I usually hurry through the first (reading) part of WIT chapters and progress to the writing section as quickly as possible, because the reading sections are easy for them and because writing is more important to me. I then cover the writing section carefully and ask them to write essays, explained in greater detail in 2.5 below. With SIM, I cover one chapter with medical students in about three class meetings, showing and explaining the video in sections. Few students, if any, have problems with the material. I can easily cover the group work assignments in one class period, having them read after me once and then letting them practice the conversations together. I do not have them perform in front of their peers because it takes up too

Table 1. The EAP Schedule for the 2008–2009 Academic Year, with TWO Chapters used for Med A and Med B.

Spring (EAP I)	Fall (EAP II)
WIT Chapters 1 and 2	WIT Chapter 8
SIM Chapter 1	SIM Chapter 5
Group Work no. 1	Group Work nos. 3 and 4
Med A and Med B: TWO Chapters 1–3	*Med A: TWO Chapters 7–10*
	Med B: TWO Chapters 7 and 10
(mid-term exam)	(mid-term exam)
WIT Chapters 3 and 7	WIT Chapter 13
SIM Chapter 4	SIM Chapter 10
Group Work no. 2	Group Work nos. 5 and 6
Med A and Med B: TWO Chapters 4–6	*Med A: TWO Chapters 11 and 12*
	Med B: TWO Chapters 9 and 12
(final exam)	(final exam)

much class time. As for TWO, I like to do chapters whenever there is a natural break in the schedule, such as between completing a chapter of one book and starting a chapter of a different book. I have the students listen to the TWO chapter conversation CD and then read the text carefully, with my explanations, and then have them practice with me before asking them to do the skit together. Again, I usually do not have them perform for each other for lack of time and also because doing so tends to ruin the pace of the class. However, I sometimes play chapter conversations on the CD at a later date for reinforcement. I don't give quizzes over the textbook—preferring to let the students who truly want to learn benefit from it—but I am always sure to check attendance on each day when I use TWO, just to make sure that those who come for that lesson get credit for doing so. Of course, since the course exams are standardized, TWO material does not appear on them. In addition to using TWO with the medical students, early in each term I distribute to each a photocopied packet of anatomical drawings with labels in English and Japanese, and tell them to always bring these to class. Whenever I have any extra time at the end of class I review the terms on the drawings with them, having them repeat the English terms after me, and explain briefly the etymology or usage of these terms, and give them more common alternative terms as well.

2.5. Grading System and Assignments

The grading system for EAP I and II is as follows: mid-term exam = 25%, final exam = 25%, attendance and participation = 20%, homework, etc. = 30%. I do not check attendance every time, but I do perhaps two-thirds of the time. The final category here (homework, etc.) is the area within which each teacher can customize his or her class. In the fall 2008 term (EAP II for Med B) I covered chapters 7, 9, 10, and 12 of TWO as shown in Table 1. I gave one small homework assignment on one chapter of TWO early in the term. I also gave a quiz over each of the two chapters of WIT that we covered that term. The grades on these three assignments were averaged together to make for 10% of their final grade, or one-third of the "homework, etc." category. The other 20% was split evenly between their two essay assignments. I asked all students to write two essays of about 300 words each. The first was in answer to the questions, "Why did you decide to enter medical school and why did you choose this university?" They were free to answer both parts of this question or only one part as they pleased. For the second essay, in accordance with one of the chapters of WIT, they had to write a persuasive essay on a topic of their choice. Although I like TWO very much and try to use it as often as possible, I consider writing to be central to the class, and I allocate much classroom time to explaining how to write an essay properly. The knowledge the students gain, therefore, from WIT is activated by actually writing essays. It is not enough for them to simply memorize the materials for exams.

3. Results

As detailed in 2.1 above, I asked the students to rate their textbooks on two occasions, once anonymously and once with their identities revealed. Because individual motivation could not be ascertained from anonymous answers, and because all 51 students were present and gave responses the second time I asked for their thoughts regarding the textbooks, data from the second time was used as the primary data for this study. As a measurement of motivation, I used the students' final numerical grades in the course (EAP II), with higher scores assumed to indicate greater motivation. The relationship between grades and motivation is, of course, problematic. There are indications that this may vary dramatically between individual students.[25,26] However, at least one study[27] has shown that college students with higher grades were more motivated to complete more assignments outside of class. As for my own experience, I can say with confidence that medical students who seek me out for help in improving their writing ability—not relating to class assignments—are consistently at the higher end of the grading scale in class. First, considering overall textbook preference, only 5 students chose WIT as their favorite book, while 21 selected SIM and 25 indicated that TWO was best. Although men far outnumbered women in this class (37 to 14), there appeared to be little difference in their responses as sorted by sex, other than a slight tendency for the women to prefer SIM as compared with TWO, and a stronger negative disposition toward WIT among them as well (Table 2). However, the sample size and low proportion of women make it difficult to draw conclusions regarding sex.

The average final numerical score for the class was extremely high (85.49), with a standard deviation of 4.92, which means that they clustered in a very narrow range. Indeed, the highest score was 94.3 and the lowest was 75. This resulted mainly from the high marks on the mid-term and final exams (averages of 84.70 and 88.69,

respectively), which together count for 50% of their final scores, although I graded their essays rather strictly, assigning very few A's. In order to determine whether or not higher scores correlated with choosing TWO as their favorite book, I sorted the response data into 12 categories, covering the entire range of scores (Figure 1).

Although there appeared to be a slight indication that students with higher final numerical scores favored TWO, the data were not strong enough to show a clear association. Averaging the final scores for students who chose WIT, SIM, and TWO as their favorite textbooks produced results of 84.23, 85.05, and 85.80, respectively, which may allude to a slightly greater tendency for students with higher final scores to prefer TWO, but this result also cannot be considered supportive of hypothesis (2). Finally, data from the first time I asked the students to rate their textbooks (anonymously) were tabulated for comparison with the data from the second time. Although I had expected the two data sets to match fairly closely, surprisingly they did not (Table 3). The number of votes for SIM as most liked book increased by 14, while TWO lost seven: a discrepancy that cannot simply be explained by the difference in the number of student responses.

4. Discussion and Conclusions

I began this research with two questions: (1) Do the medical students prefer TWO (a medical-oriented textbook) to the other two textbooks? (2) Are more highly-motivated students more likely to prefer TWO to the other two textbooks? I asked students to rate their textbooks twice, once anonymously and once with their names attached. Being able to identify them was necessary in order to consider motivation, measured by final numerical scores, as a factor in their responses. I hypothesized that: (1) overall, they would prefer TWO to the other textbooks, and that (2) those with higher final scores in EAP II would be more likely to choose TWO as their favorite textbook. My hypotheses were based on previous findings about the importance of student needs in course planning,[5–8] on a desire among Japanese medical students to have Medical English be a part of their English courses,[7,18] and also on evidence that they tend to enjoy studying various topics *in* English.[19,20] My hypotheses were also based on past verbal comments from students indicating that they liked TWO over their other books, and also on suggestions from especially motivated students that I use more medical-oriented material, such as that which might help them prepare for the dreaded anatomy course that dominates their second year of medical school.

TWO appears to be the favored textbook overall, with SIM coming in second and WIT third. Even considering the shift in responses from the first time and the second

Table 2. Student Responses as Sorted by Sex.

	(1) WIT	(2) SIM	(3) TWO
Male (*N*=37)	5	13	19
Female (*N*=14)	0	8	6

Table 3. Student Responses from the First Time they Rated their Textbooks (Anonymously) and the Second Time (not Anonymously).

	(1) WIT	(2) SIM	(3) TWO
First Time (*N*=47)	8	7	32
Second Time (*N*=51)	5	21	25

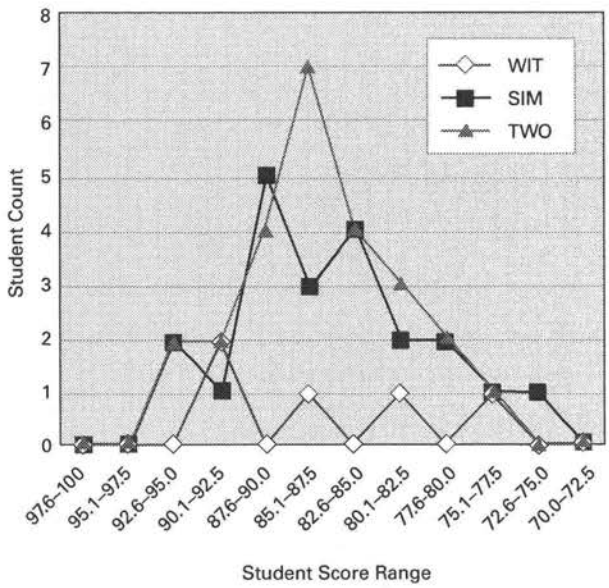

Figure 1. Student Opinions of Textbooks Sorted by Final Numerical Score.

time the students rated their books, it appears safe to say that hypothesis (1) is correct. On the other hand, proving or disproving hypothesis (2) is more difficult. While it does appear that students with higher final numerical scores might have a greater tendency to favor TWO, no strong conclusions on this can be drawn from the data. Although this particular study was intended to be a purely quantitative one, I have discussed TWO with medical students on a number of occasions. All those I have spoken with about it said that they liked having a medical-oriented textbook in EAP I and II, especially because there is only one, 15-week, health-related English course offered at the university's main campus. If they had more opportunities to take such ESP courses during their six years at the university, they might appreciate my use of TWO in EAP I and II less.

The incongruity between the two sets of data (anonymously reported and not) is perplexing. It should have been evident to at least some students that I generally prefer TWO to SIM. Therefore, I had suspected any mismatch between the data sets to go the other way—to lean in favor of TWO rather than SIM. In other words, I had thought that if any students were to respond differently the second time as compared to the first that they would indicate a preference for TWO, hoping that I would then be more lenient in my final grading. Possible reasons for the incongruity might include the difference in sample size, the fact that I covered only four chapters of TWO for EAP II, that they were not tested over TWO, or my way of handing TWO as compared with their teacher for EAP I (the spring term), who did give them quizzes over the chapters covered in class. It might, therefore, be better for the students to be tested on the TWO chapters. One student who favored TWO when answering anonymously wrote that students might benefit more from the book if they had to study it more carefully for quizzes. Indeed, in such a situation, the material's value to them both in the present and in the future might become more evident, and their feelings about the textbook might be improved. On this note, I should mention that I did test medical students over TWO when I first began using it in class in the spring of 2007, but the quizzes I made turned out to be too difficult, with dismal scores. I saw no point in giving easy quizzes, so in order to avoid turning the students off to the material I stopped testing them over it. Perhaps another try at testing them over TWO is warranted. Lastly, it is also possible that a number of students liked my handling of SIM as compared to their previous teacher and thereby came to favor it over TWO, thus taking "votes" away from TWO.

In conclusion, medical students at Akita University have been shown here to prefer, overall, a medical-oriented textbook over non-medical textbooks in their required core freshman English course, which lends some support for the implementation of ESP for Japanese medical students over EAP. However, the study was unable to clearly determine whether or not more motivated students will necessarily prefer such textbooks over their less-motivated peers, although a slight correlation between motivation as measured by overall scores and preference for a medical-oriented English textbook may exist, and deserves greater study. That only 51 students at one university were sampled, and that they were not asked to explain the reasoning behind their choices, are major limitations, diminishing the universal applicability of the findings. A second measure of student motivation in addition to their final scores could be used, and it is possible that a greater sample size or data from a class without such extreme score clustering would produce different results, and also that using TWO in a different way (such as testing students over the material) might yield a different outcome. Nevertheless, the findings suggest that Japanese medical students will appreciate having their core English courses tailored for their immediate and perceived future needs at least to some degree. Since medical-oriented ESP will probably interest them more than standardized EAP containing no medical or health-related components, using at least one such textbook for medical students enrolled in these courses seems advisable, although doing so may not always be possible, as there are many structures in place that limit English instruction in Japanese medical programs.[12,28]

Finally, several questions have been left inadequately answered. Although a trend of favoring a medical-oriented English textbook over others appears evident among the medical students of the university, exactly why they favor it is unclear. Conducting a qualitative study, or one that incorporates such methods, therefore appears prudent. In addition, it seems a good idea to further explore the correlation between scores and textbook preference, since hypothesis (2) was left unproven. The relationship between motivation and grades also deserves greater consideration, as concrete research on this appears lacking in general. These matters will be explored in a future study.

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References

1. Brown RA. 2004. Motivation for learning English among Japanese university students. *Jōhō Kenkyū (Bunkyō Daigaku Jōhō Gakubu)*(「情報研究」—文教大学情報学部)**31**: 1–12.
2. Fuertes-Olivera PA and Gomez-Martinez S. 2004. Empirical assessment of some learning factors affecting Spanish students of business English. *English for Specific Purposes* **23**: 163–180.
3. Huerta T, Ibanez I and Kaulen A. 1986. Balancing institutional and motivational factors in ESP syllabus design. *English for Specific Purposes* **5**(2): 189–195.
4. Miller L. 2002. Towards a model for lecturing in a second language. *Journal of English for Academic Purposes* **1**: 145–162.
5. Tajino A, James R and Kijima K. 2005. Beyond needs analysis: Soft systems methodology for meaningful collaboration in EAP course design. *Journal of English for Academic Purposes* **4**: 27–42.
6. Ramani E, Chacko T, Singh SJ and Glendinning EH. 1988. An ethnographic approach to syllabus design: A case study of the Indian Institute of Science, Bangalore. *English for Specific Purposes* **7**: 81–90.
7. Riley LD. 2005. Preliminary steps toward medical English materials development: Student skills preferences. *The Journal of Liberal Arts and Sciences* (Toyama Medical and Pharmaceutical University) **33**: 203–209.
8. Wood A and Head M. 2004. 'Just what the doctor ordered': The application of problem-based learning to EAP. *English for Specific Purposes* **23**: 3–17.
9. Mazdayasna G and Tahririan MH. 2008. Developing a profile of the ESP needs of Iranian students: The case of students of nursing and midwifery. *Journal of English for Academic Purposes* **7**: 277–289.
10. Takakubo F. 2007. What English vocabulary should be taught to nursing students? *Journal of Medical English Education* **6**(2): 157–163.
11. Kennedy NL. 2002. Systematic English textbooks for introductory students of medicine in Japan. *Journal of Medical English Education* **3**(1): 33–37.
12. Gerling RM. 2004. Integrating the English classes with the medical curriculum. *Journal of Medical English Education* **5**(1): 21–24.
13. Allwright R. 1982. What do we want teaching materials for? *ELT Journal* **36**: 5–18.
14. Harwood N. 2005. What do we want EAP teaching materials for? *Journal of English for Academic Purposes* **4**: 149–161.
15. Swales J. 1995. The role of the textbook in EAP writing research. *English for Specific Purposes* **14**(1): 3–18.
16. Swales J. 2009. When there is no perfect text: Approaches to the EAP practitioner's dilemma. *Journal of English for Academic Purposes* **8**(1): 5–13.
17. Swales J. 1980. ESP: The textbook problem. *The ESP Journal* **1**(1): 11–23.
18. Glick C, Holst M and Tomei J. 1998. English communication skills for Japanese medical students: A course description. *Journal of Higher Learning and Lifelong Learning* (Hokkaido University) **4**: 40–44.
19. Ashida R and Barron JP. 2008. Problem-based learning in medical ethics to instigate critical thinking. *Journal of Medical English Education* **7**(1): 30–35.
20. Nakamura R and Ashida R. 2004. Importance of humanistic studies for future health care professionals. *Journal of Medical English Education* **5**(1): 25–32.
21. Kozu T. 2006. Medical education in Japan. *Academic Medicine* **81**(12): 1069–1075.
22. Broukal M. 2004. *Weaving it together: Connecting reading and writing, second edition, book 3.* Boston: Heinle/Thompson.
23. Someya M and Ferrasci F. 2004. Science for inquiring minds. Tokyo: Seibidō.
24. Nakamura R and Nakamura B. 2007. Thinking with William Osler. Tokyo: Eihōsha.
25. Lang JM. 2004. Failing to motivate. *The Chronicle of Higher Education* Nov. 29. <http://chronicle.com/jobs/news/2004/11/2004112901c.htm>.
26. Barnwell P. 2008. Could standard grading practices be counterproductive? *Education Week* 27, June 30 <http://www.edweek.org/ew/articles/2008/06/30/43barnwell-com_web.h27.html>.
27. Moore R. 2005. Who does extra-credit work in introductory science courses? *Journal of College Science Teaching* **34**(7): 12.
28. Hardy T. 2007. Thinking anthropology to learn English in health care situations for nursing students. *Journal of Medical English Education* **6**(2): 131–138.

[Original Article]

Understanding "Empathy"—A Medical Humanities Course for Fourth-Year Medical Students

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A medical humanities course was designed for fourth-year medical students. The course content introduced the medical humanities as an interdisciplinary study and demonstrated how literature is used as a resource for deeper understanding of concepts that are central to clinical medicine. The objective of the course was to discover the students' experience of gaining deeper understanding of "empathy" through selected works of literature. This qualitative study explored the extent to which students understood the potential meanings of the term "empathy." As "empathy" is an abstract concept, and a quality that is widely recognized as important for clinicians to possess, it was believed that students' medical training would be enriched by an interdisciplinary course that focused on literary perspectives of the term. A qualitative questionnaire was given to students at the end of the course. The two questions on the survey asked for open-ended responses directed toward the students' level of understanding and appreciation of the literature, and the extent to which the literature affected their ideas about "empathy," especially in the context of clinical medicine. Students' comments suggested that interdisciplinary study is an effective but seldom used method of elevating comprehension of concepts central to clinical practice and that there is both an interest in, and need for, more courses of this nature.

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Key words: Medical Humanities, Empathy, Literature, Clinical Practice, Interdisciplinary Study

1. Introduction

The German roots of "empathy" are grounded in Immanuel Kant's philosophy of aesthetics and the influence his ideas had on German empirical psychology. The history of the English term "empathy" dates back to the early twentieth century. Edward Bradford Tichener, an American psychologist, coined the English word based on German philosopher Robert Vischer's term, Einfühlung, meaning "in-feeling." Empathy was characterized as a psychological process by which individuals projected their feelings into animate or inanimate objects. A dark overcast sky is foreboding, for instance, or cherry blossoms are joyous. In current usage, "empathy" has acquired a significantly altered meaning. An empathic moment is no longer thought of as a projection of one's own feelings, but rather the experience of participating in the feelings of another. Moreover, this shared experience no longer pertains to inanimate objects, but occurs almost exclusively between human beings.

Medical humanities education in American medical schools has seen rapid growth, especially in the last thirty years.[1] With its growth, "empathy" has become a ubiquitous term in the field of clinical medicine. It is celebrated as a skill that greatly improves patient rapport by enhancing the communication abilities of the physician.[2] In the mission statement of *Medical Humanities*, Felice Aull writes that empathy is one of the skills "essential for humane medical care."[3] Despite its recognition as a concept central to clinical practice, however, it remains abstract and difficult to define. There is little consensus on the meaning of "empathy," to what extent humans are able to learn or experience empathy, and the nuances that distinguish empathy from sympathy.

Though I have only briefly touched on the etymology of "empathy" here, my intent is to demonstrate the complexity of its history, making it a challenging concept to

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understand, even for native English speakers. Therefore, this study was conducted to learn something about Japanese medical students' understanding of the term. A concurrent goal was to discover whether, and to what extent, the students' understanding of empathy could be enhanced through the study of English literature.

2. Methods

Ninety-six students took the course. The class met once a week for three hours over a four week period. Although the individual class duration was long, this time was essential to work through the challenging literature with the students. Each of the literary works was read aloud to the students and characters and events were explained. Interpretations of meaning were provided in lecture format which involved comparing and contrasting the works to achieve a better understanding of the various perspectives of empathy. The lectures were broken into intervals lasting roughly fifteen minutes, between which students were given time to discuss content with their peers in small groups of three or four. The lectures were delivered only in English but in peer discussions students were permitted to use either English or Japanese. Students used the discussion periods enthusiastically, speaking in a mixture of both languages to exchange questions and insights.

A questionnaire was prepared for the end of the course. The two open-ended questions were designed to elicit information on students' awareness of "empathy" before and after they had taken the course. Additional aim of the questions was to evaluate the extent to which the lectures and peer consultations were effective in enabling the students to reach a workable understanding of the literature, an essential step in reaching the goal to broaden students' understanding of "empathy."

3. Materials

The search for the prose and poetry to be used in the course was not limited to those works in the traditional literary canon. A guiding principle in the selection of the works was that literature which connected to the lives of the students would be most effective.[4] Therefore, the search for the literature was pointed toward those works that had literary value as well as relevance to students' interests. The emergency room, for example, is an important setting in both of the longer fiction pieces. Other considerations were that the works were all written by contemporary authors in contemporary English, and that each of the works was of a comfortable length for students to read.

The reading list for the course included both fiction and non-fiction. The first two works discussed below, a poem and an excerpt from an essay, both use empathy as their subject. They present arguments as to what empathy means and the extent to which it is possible for us to have an empathic experience. The latter two works, a short story and a poem, are not overtly about empathy but were interpreted based on the former works to enhance comprehension of the ideas about empathy presented therein.

3.1. "Save the Word" by Thom Gunn

A professor, the speaker in Gunn's poem, berates his student for using the word "empathy" in an essay.[5] The professor patronizingly tells the student that "empathy" is a word that is used only by freshmen, presumably because they are too naive or ignorant to realize they do not fully understand the implications of the word. The speaker rhetorically questions the student about his/her ability to feel empathy:

> Think you can
> syphon yourself
> into another human
> as, in the movie,
> the lively boy-ghosts
> pour themselves
> down the ear-holes
> of pompous older men?

For the speaker, empathy is a myth, an impossibility. Empathy suggests that we have the ability to enter into another person's physical, emotional or intellectual being, to experience his/her feelings first-hand. While this may be accomplished by fictitious "boy-ghosts" it is clearly, in the speaker's opinion, outside the realm of possibility for those of us in the "real" world, whatever our occupation or discipline may be.

Gunn's poem boldly implies that empathy is impossible for ordinary mortals. The professor warns his student to eschew empathy, as "Only / Jesus could do it and he / probably didn't exist." Empathy, then, he argues is only possible for the son of a deity, or for fictitious "boy ghosts" in movies. His contention is that empathy is a concept that exists only in the world of fiction. It is best forgotten by all except the fictitious or omniscient.

As an alternative to empathy, the professor encourages his student to "Try 'sympathy'." Sympathetic feel-

ings, he argues, may encourage acts of grace and compassion. Unlike empathy, sympathy does not necessitate osmotically entering another human, but can, nevertheless, lead us to "slip a pillow under the head/of the arrested man."

Whether we agree with the speaker's opinion or not, Gunn's poem offers an interpretation of the abstract concept of "empathy." Moreover, that interpretation has important implications relevant to medicine. The poem extends a strong opinion about what we are and are not, as humans, capable of achieving when we attempt to understand another person's "isolated self." It is a poetic rumination on a word which is commonly accepted as a critical quality for doctors to possess, but which may also be commonly misunderstood.

3.2. "Through the Looking Glass" by Gillie Bolton

Gillie Bolton, in her essay, "Through the Looking Glass," states that each of us has a unique personality and perspective from which we evaluate the world and therefore we can never fully understand each other.[6] Specifically, in the field of medicine, she argues that "With the best, most empathic, will in the world no practitioner can understand a patient or colleague's point of view." In this sense, she is in complete agreement with the speaker in Gunn's poem. The physician, like everyone else, is trapped within his or her own reality, unable to experience that of the patient.

Bolton, however, adds a twist to that idea. She suggests that blurring the distinction between reality and fiction might be a practical method of simulating empathy. She instructs her students to imagine and write about the characters of their patients: What they do, think, feel and say, where they go and with whom. In this sense, the student's role becomes not unlike that of the omniscient narrator in fiction. The omniscient narrator can see into the lives of certain characters in a story. She argues that though the students' imaginations will invariably create fiction about the patients' lives, the resulting fiction "draws upon deep experience and memory of human interaction." In other words, the fiction that is created is based on real observation and real knowledge of a patient; it results from honest impressions. Having this "reality" as its foundation, the imagination is set loose to "virtually" empathize with the patient.

3.3. "Ace" by Joyce Carol Oates

Joyce Carol Oates' short story, "Ace," is told by a woman who acts as the perfect model for Bolton's type of virtual empathic ability. She is both a character in the short story and the omniscient narrator.[7]

Ace, in his early twenties, is the leader of a "gang" that hangs out in a neighborhood park on summer nights. The story is based on a single event: a random drive-by shooting in which the bullet grazes Ace's forehead. The police and ambulance arrive, Ace is taken to the hospital, his superficial wound is treated with eight stitches, he is released, and the next evening he is back in the park again.

The narrator in "Ace" lives in the same neighborhood as Ace. She shares the same park. She can, therefore, literally see Ace when he hangs out in the park. She knows him or at least knows who he is, his style, habits and physical characteristics.

After the shooting, when Ace is then taken away in an ambulance, leaving the park and the narrator's literal field of view, she continues to "watch" Ace with her omniscient eye. Her omniscience allows her to "syphon" herself into Ace. She gains access to his hidden thoughts and feelings. She becomes a model of perfect empathy. The narrator knows that Ace is "crazy with fear" when the ambulance takes him away. When he enters the hospital the narrator "sees" that Ace is "stiff and shivering with fear" and that he feels ashamed of his "big gut exposed quivering there in the light for everybody to see–." While the doctor routinely closes the small wound on Ace's forehead with only eight stitches, the narrator tells us that the panicking Ace feels "Death is creeping up his feet.""

Reading "Ace" through the lens of Bolton's theory, we explain the narrator's omniscience, her knowledge of Ace's unknowable emotions, as a process of her imagination. She imagines Ace based on her observations of him as a boy from her neighborhood. She believes that Ace does not pose a dangerous threat to the other boys or the other residents of the neighborhood. Overall, her impression of Ace creates a picture of a boy in a man's body who is more innocuous or comical than he is menacing:

> Ace is the leader, a big boy in his twenties with a mean baby face, pouty mouth, and cheeks so red they look fresh slapped, sly little steely eyes curling up at the corners like he's laughing or getting ready to laugh.

The narrator has an opinion of Ace and her image of him in the emergency room is influenced by this opinion. There is consistency between her literal and omniscient

viewpoints of Ace. She knows he is not a hardened, dangerous criminal. Instead, she perceives him as a boy inside a man's body, and therefore "sees" his hospital experience as replete with panic and desperation rather than, say, anger and bravado.

In reading the narrator's account of Ace's hospital experience as a figment that is based on her knowledge, experience and memories of him as a boy who lives in her neighborhood, her omniscience is de-mystified. It is through the process of focusing her imagination on Ace that she becomes the omniscient narrator of his life. Her empathy for him, therefore, is not akin to a supernatural objective examination of his soul. Instead, it more closely resembles a subjective process of imagining how Ace might behave in a given situation based on her own feelings about him.

3.4. "Letter" by Raymond Carver

In Carver's poem, an old woman suffers a heart attack and dies in the emergency room. She is obese and disturbingly unhygienic.[8] She is ashamed and apologetic of her horrible condition. Before she dies she tells the attending doctor that when she was young she was cast out from her family because she travelled to Paris to be an exotic dancer at the Folies Bergere.

The doctor, Ruth, tells her friend, a writer, the story of the old woman. The writer's reaction to the story about the patient strongly echoes Gillie Bolton's claim that a writer can cross the threshold into another person's life.[6] He imagines the character of the young woman arriving in France for the first time. In his mind she is "beautiful, poised, determined to make it." He vividly pictures her costume and agility while performing at the Folies Bergere. He sees her "feathers/and net stockings...her arms linked with/the arms of other young women." He sees her "kick over her head and hop at the same time." The writer never meets Ruth's patient, yet he "understands" the poise and determination she carried with her more than sixty years before her death.

The writer plans to compose a story about the woman. He will create her thoughts, actions and feelings based on the information he knows about her. In doing so he will become the omniscient narrator of her life. Omniscience, however, can again be de-mystified by thinking of it as a process of the imagination. In his process of imagining the woman's experience, he focuses his thoughts on her and explores his ideas about her identity. In such a process, the resulting story may be fictitious. The important point, according to Bolton, however, is that he brings what he understands and thinks about the woman into the forefront of his mind.[6]

4. Questionnaire

A qualitative questionnaire was given to all ninety-six students at the end of the course. It was composed of the following two questions:

1) *Which reading did you find most interesting in this class? Why?*
2) *Did your understanding of "empathy" change in this class? Please explain.*

Below, I present a selection of comments written by the students in response to the two questions. I arrange the comments into three groups based on the goals of the questionnaire.

4.1. Student Comments (Group 1)

The first set of student comments pertains to the query whether or not students were familiar with the word "empathy" and to what extent they understood the concept it represents. The comments reveal that students did have knowledge of the word "empathy" prior to taking the course. They had read about "empathy" in their texts and had been taught of its importance in other classes. At the same time, their comments suggest that students, while understanding that "empathy" is important in medicine, did not possess a developed understanding of its meaning.

"When we study how to interview for the patient, they, our teachers, say 'empathy and listening' are important. But they don't teach us what 'empathy' is. Now I understand what it is like through these readings, and that it can be nurtured and reinforced by prolonged contact with people around me."

"I've heard the word, empathy, all along, and I've thought that I've known what it is. But in taking this class and reading some poems and novels, I understand the meaning of the word 'empathy,' but I do not understand what it is."

"Until now, I didn't understand the real meaning of 'empathy.' But now, I can understand the meaning of it. 'Empathy' is nearly equal 'imagination', and people can understand 'identity.' I think 'empathy' isn't a god's technique. It is important technique for all people. I don't forget about it."

"I think that empathy is so essential. I have never thought about difference between sympathy and empathy. Like a writer, I want to enter into another person's feeling, identity, character, memory and with using my imagination, from now on."

"I have known the importance of 'empathy' in medical care because our texts always said so, but I have never thought about the real meaning of empathy. This English class gives me the chance of understanding of 'empathy.'"

"My understanding of empathy was very vague before this class. I'm pleased for getting the chance to think about empathy. It's important for us to think seriously about it."

4.2. Student Comments (Group 2)

The second set of student comments pertains to the query whether or not, and to what extent, students found the study of literature helpful in deepening their understanding of "empathy." The comments reveal that students did find the study of literature helpful as a means of understanding "empathy." Students were able to comment intelligibly about the readings, demonstrating understanding of the works, which suggests that the literature studied was not beyond their capacity. They also expressed appreciation at having had the opportunity to learn through literature even though, for many, this was a new approach. Finally, these students expressed success at having arrived at a deeper understanding of "empathy" through close reading of literary works.

"'Letter.' We are medical students, of course, but we never think of metaphysic ideas or person's feelings in ordinary medical class. What a shame!! This poem is a good example of what imagination and empathy are. Very sensitive and hard to grab, but anyone has them and training is needed. I found it through this poem."

"I'm most interested in 'Letter.' At first, it's so difficult to read so I didn't understand. With teacher's explanation, I could do main meaning. However writer don't know the old woman directly, he can enter himself into her with imagination and a part of story heard from Ruth. I thought some way of empathy, and it is important to imagine."

"'Save the Word' because we are taught that doctor's must be empathy with patients. In the literature, empathy is impossible for us to try. Only Jesus can do it. I am impressed that idea."

"Comparison of the word 'empathy' in poem of Thom Gunn and Gillie Bolton. I have never dwelled on the definition of particular word, so that was a new experience for me."

"I'm interested in Thom Gunn's 'Save the Word' and 'Ace.' It's because the former poem is very simple but suggests a new idea. Before I met this poem, I can't distinguish between empathy and sympathy. The poem gives me a clue to solution. But poems are very abstract. So I think the latter short story 'Ace' makes my mind embodiment."

"I have studied psychology for 6 years through academic course. But 'empathy education' through poem is one thing I've never experienced. It's very interesting and I have a lot of fun."

4.3. Student Comments (Group 3)

The final set of student comments demonstrates that the interdisciplinary approach of this course was not helpful to all students who participated. The most powerful comments in this vein were, "I couldn't understand English and story so, no interesting," and "Ace. Other stories is difficult for me. Other stories is abstract and I didn't understand it." These two were the only comments in which students explicitly stated they could not understand the literature. However there were four other students who did not respond to the second question. There were another six students who did not respond to either question. There was also a small number of students who, while writing that their understanding of empathy did change, failed to explain how or why this occurred. These comments took the form of, for example, "Yes, I understood" or simply, "A little."

5. Conclusion

Among the ninety-six students in the class, English language skill varied significantly, as was evident in the questionnaire responses. It is possible that the open-ended questions may have intimidated some students, thereby limiting the depth of feedback they could provide. In future studies, therefore, a questionnaire that also includes closed-ended questions may provide all students equal opportunity in voicing their opinions. A pre-course questionnaire should also be considered as a means of gathering further data on students' awareness of "empathy" and their expectations from an interdisci-

plinary course utilizing English literature.

The results of this study confirm, however, that given a careful selection process of literary works and a well-defined theme, interdisciplinary study in the medical humanities is an effective approach to offering fourth-year Japanese medical students a widened perspective of concepts that are central to clinical practice. Student comments confirmed that though "empathy" is a ubiquitous term and many students were familiar with it, their understanding of it had not been challenged. In their comments on the questionnaire students expressed appreciation at having had the opportunity to dwell on an important term like "empathy." Comments also suggested that most students were able to understand the challenging literature and that they felt they had acquired newfound meaning of "empathy" through the various class readings. In the best cases students recognized that literature is not merely a source for entertainment, but a resource for developing the skill of interpretation and the faculty of imagination. There is both interest in and need for more medical humanity courses that employ the methods of interdisciplinary study to better understand concepts central to clinical practice.

References

1. Miyamasu F. 2008. Introducing the Medical Humanities to Japanese Medical Students through the English-for-Medical-Purposes Class. *Journal of Medical English Education* **7**(2): 104–110.
2. Bickley LS. 2007. *Bates' Guide to Physical Examination.* Philadelphia: Lippincott Williams & Wilkins, p.38.
3. Aull F. Medical Humanities Homepage. New York City, NY: New York University School of Medicine; 1994. <http://med-hum.med.nyu.edu/index.html> (accessed February 20, 2009).
4. Lazar G. 1993. *Literature and Language Teaching.* Cambridge: Cambridge University Press, p.3.
5. Gunn T. 2000. *Boss Cupid.* New York: Farrar, Straus and Giroux, p.71.
6. Bolton G. 2004. Through the looking glass. *Medical Humanities* **30**: 91–92.
7. Oates JC. 1988. *The Assignation.* New Jersey: The Ecco Press, p.70.
8. Carver R. 1989. *A New Path To The Waterfall.* New York: Atlantic Monthly Press, p.73.

[Original Article]

Nursing Researchers' Experiences with and Attitudes towards Native Checks and English Abstracts

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Background and Objective. Japanese nursing journals often require native checks for English abstracts accompanying submitted Japanese articles. However, researchers may have difficulty locating a suitable native checker. Moreover, the efficacy of native checks has not been empirically confirmed. This study investigated nursing researchers' experiences with and attitudes towards native checks and English abstract writing.

Methods. A Japanese questionnaire focusing on native check and abstract writing experiences was distributed to 24 nursing faculty at a Japanese university. To clarify and expand upon questionnaire findings, semi-structured interviews in Japanese with 5 respondents were conducted.

Results. Sixteen faculty responded to the questionnaire. Responses indicated that nursing faculty are having native checks done, either by an English teaching colleague or through a professional translation/editorial service. Faculty were generally satisfied with the results, though they expressed a low opinion of their own English writing ability. Interviews revealed a variety of approaches towards English abstract writing as well as English writing goals. Most stated that user-friendly university-based writing support is needed.

Conclusion. This paper suggests the necessity of further research into the English writing practices and needs of Japanese researchers across faculties, as well as a need for university-based writing support systems that allow for effective communication between researchers and checkers.

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Key words: native check, English abstract, nursing researchers, writing support

1. Introduction

Non-native English speaker researchers writing articles in their native language must often produce English abstracts to accompany these articles. However, writing an English abstract is no easy task, even for native English speakers.[1] The abstract is a short but vitally important text. Through electronic databases, English abstracts enable articles to transcend printed journals and gain international recognition.[2] Indeed, the abstract may be the only part of an article that is actually read.[3] It therefore behooves researchers aspiring for recognition (and citation) to write abstracts well. Researchers lacking confidence in their English skills may write first in their own language and then consult a translation service. However, such services are typically expensive.[4,5] Researchers may also have doubts about the linguistic and substantive accuracy of translations made.[6]

Alternatively, researchers may produce an English abstract on their own and then ask a native English speaker for editorial assistance. Many journals require such native checks.[7,8] For researchers in non-English speaking countries, however, finding native speaker help can be a challenge, and many must settle for help from a native speaker colleague, usually an English teacher. However, these teachers typically lack the researchers' disciplinary knowledge, and may be unfamiliar with writing conventions in the researchers' fields.[9] The advice

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they offer may thus be based on a superficial understanding of scientific genres, as can occur in English for specific purposes (ESP) teaching contexts.[10] In some cases this advice may do more harm than good.[6]

Other factors may work against the efficacy of a native check. Native checkers who have been living in a foreign country for many years may suffer from attrition of their English skills, causing them to miss errors in non-native speakers' writing.[11] Busy schedules may also prevent checkers from communicating directly with authors in the event that questions arise; such consultation is considered a necessity in ensuring editorial accuracy.[12,13] Thus, when a checker cannot understand a writer's intended meaning in a particular sentence, for instance, the checker must struggle alone, making corrections with uncertainty.[4] This can make editorial work time-consuming and exhausting. The checker may only be able to make simple lexico-grammatical changes, such as in article and preposition use, leaving a paper with deep flaws in content and wording.[14] It has even been asserted that a native polishing may cause journals to waste time on superficially well-presented but scientifically weak submissions.[15]

How do Japanese researchers feel about native checks and producing English abstracts? This topic has been largely uninvestigated, but research has explored how non-native speaker researchers feel about having to write and publish in English. This need can cause even highly proficient English users to feel depressed about their abilities, and unfairly disadvantaged.[6,16] Other research suggests a complex reality, with some non-native speaker researchers holding negative as well as positive attitudes towards this situation.[17] Some researchers hold a functional view of English academic writing, and simply do it.[18,19] Others remain productive while asserting that non-native researchers have a right to certain "linguistic peculiarities," and that attempting to make non-native writing conform to North American or British English standards is ethically unsound.[20]

The authors, a native speaking English teacher and Japanese nursing instructor, were curious about whether Japanese nursing faculty are having native checks done on English abstracts accompanying Japanese articles, and if so, who did them. We also wanted to learn the attitudes of nursing faculty towards native checks and English abstract writing, as well as their own writing abilities. To this end, a questionnaire was distributed to nursing faculty at a Japanese university, supplemented by interviews to clarify and expand upon findings. It was hoped that this study would identify whether there is a perceived need for English writing support at university, and generate ideas for effective support.

2. Methods

2.1 Questionnaire

A questionnaire was drafted in English and then translated into Japanese by the authors. The questionnaire was piloted with two nursing faculty, revised, and then given to the same two pilot participants in what would be the questionnaire's final form. To achieve informed consent, a cover sheet was designed, explaining the questionnaire's purpose and assuring confidentiality. Respondents were not asked to write their names. However, respondents were asked to fill in their rank (e.g. associate professor), last degree attained, and years of experience as a nursing researcher.

This questionnaire was placed in the mailboxes of 24 nursing faculty (all women) at a university in Japan in August 2008. A collection box was placed in the main office of the nursing building, and responses were received during a one-month period.

2.2 Follow-up interviews

At the end of the questionnaire, participants were notified that follow-up interviews, in Japanese, would be conducted. Interested respondents were requested to write down their names. An interview protocol, consisting of six questions in Japanese, was prepared (see Appendix 1).

3. Results

3.1 Questionnaire

Sixteen faculty responded to the questionnaire (including the two pilot participants). More than half of all respondents were research associates (*jokyou*, the most junior-level faculty), numbering 9. One assistant professor (*koushi*), 3 associate professors (*jun-kyouju*), and 3 professors (*kyouju*) also replied (Table 1).

Table 1. Questionnaire respondents.

Rank	
Research associate	9 (56.3)
Assistant professor	1 (6.3)
Associate professor	3 (18.8)
Professor	3 (18.8)
Research experience (mean)	5 years 10.9 months

N=16.

Over half of all respondents (10) have submitted English abstracts to journals or when applying to give conference presentations. One respondent, who selected "other" for this question about English abstract writing experience, wrote that she had produced an English abstract that was submitted by a professor. Of these 10 respondents, 9 replied that they had had a native check done on an English abstract in the past, and 6 of these were required to do so by a journal editor or reviewer (Table 2).

In checking the occupation of the checker or checkers, "University English teacher" and "Translation/editing service" were selected most (5 and 6 checks, respectively). None of these checkers were "Nursing Professionals" or "Other kinds of English teachers." Those who selected "other" for this question explained by writing "university faculty member," "research exchange student," and "a health and welfare faculty member who received a PhD abroad."

Respondents were also asked to describe the occupation of the native checker most recently employed, and again "University English teacher" (3) and "Translation/editing service" (5) were checked. One "other" included the above-mentioned faculty member who received a PhD abroad.

Most respondents agreed or somewhat agreed that the checker possessed Japanese reading ability, but over half felt that the checker largely lacked nursing knowledge. All respondents indicated that the checker possessed some knowledge of academic writing, and all were at least somewhat satisfied with the checking received.

All 16 respondents answered questions concerning faculty's attitudes towards native checkers and English abstract writing (Table 3). In describing what they perceive to be ideal qualities in a native checker, the majority (81%) either agreed or somewhat agreed that "being a native speaker" is important. Japanese reading ability was also perceived to be at least somewhat important (almost 90%), as was knowledge of nursing and academic writing (94% and 100%, respectively).

The majority also perceived English abstracts accom-

Table 2. Respondents' experiences with English abstracts.

Have you ever submitted an English abstract? (*N*=16)					
Yes	9 (56.3)				
No	6 (37.5)				
Other	1 (6.3)				
Have you ever requested a native check? (*N*=10)					
Yes	9 (90.0)				
No	1 (10.0)				
Other	0 (—)				
Native check required by editor/reviewer? (*N*=9)					
Yes	6 (66.7)				
No	3 (33.3)				
Occupation of native checker?* (*N*=9)					
Nursing professional	0 (—)				
University English teacher	5 (55.6)				
Other kind of English teacher	0 (—)				
Translation/editing service	6 (66.7)				
Other	3 (33.3)				
Occupation of native checker employed most recently? (*N*=9)					
Nursing professional	0 (—)				
University English teacher	3 (33.3)				
Other kind of English teacher	0 (—)				
Translation/editing service	5 (55.6)				
Other	1 (11.1)				
The checker employed most recently:	4**	3	2	1	0
could read Japanese.	4 (44.4)	3 (33.3)	1 (11.1)	0 (—)	1 (11.1)
possessed nursing knowledge.	1 (11.1)	2 (12.5)	4 (44.4)	1 (11.1)	2 (22.2)
possessed academic writing knowledge.	3 (33.3)	5 (55.6)	0 (—)	0 (—)	1 (11.1)
Were you satisfied with the checking done?	3 (33.3)	6 (66.7)	0 (—)	0 (—)	0 (—)

Note. Values are numbers (percentages).

* Respondents could select more than one category.

** 4 = Agree; 3 = Somewhat agree; 2 = Somewhat disagree; 1 = Disagree; 0 = I don't know.

panying Japanese articles to be at least somewhat important (94%), and that journals should require native checks for these abstracts (88%). All respondents either somewhat disagreed or disagreed with the statement, "I am capable of writing an English abstract," and most (94%) at least somewhat agreed that university-based English writing support is needed.

3.2 Interviews

The five participants who consented to be interviewed, during a three-month period, included two research associates, one associate professor, and two professors. Their years of nursing research experience ranged from 3 months to 15 years, and the number of English abstracts they had produced ranged from 2 to more than 10. Table 4 displays the profiles of the interviewed researchers (R1, R2, R3, R4, and R5).

Both authors were present during all interviews, conducted in Japanese in a semi-structured format.[21] Written informed consent was acquired before each interview, which lasted 30 to 60 minutes. All questions from the interview protocol were asked to all participants, and questions were also asked about interviewees' responses to the questionnaire, for clarification and expansion. Validity and researcher bias were checked in at least one additional meeting with all interviewees; interviewees checked transcripts of their interviews and parts of an early draft of this paper that pertained to them.

Although experiences with English abstract writing varied, all replied that if asked by a journal editor or reviewer to have a native check done on an abstract, they would do so, either by consulting a native English speaker or a translation/editorial service that guarantees native checks. Of the five interviewees, only R4 was certain that an English abstract she had produced could be viewed on an on-line database (*Ichuushi*, a database accessed almost exclusively by Japanese researchers). Only R5 has studied English academic writing formally, at a university in an English-speaking country. None of the interviewees have studied Japanese academic writing formally, though as a graduate student R2 engaged in informal, periodic meetings with fellow graduate students, to discuss current research projects and comment on each others' writing. Individual interview sessions are summarized below.

Table 3. Respondents' attitudes towards native checkers and English abstracts.

What qualities are important in a native checker?	4*	3	2	1
Being a native English speaker	8 (50.0)	5 (31.3)	3 (18.8)	0 (—)
Japanese reading ability	6 (37.5)	8 (50.0)	2 (12.5)	0 (—)
Possession of nursing knowledge	7 (43.8)	8 (50.0)	1 (6.3)	0 (—)
Possession of academic writing knowledge	12 (75.0)	4 (25.0)	0 (—)	0 (—)
Do you agree/disagree with the following statements?	**4***	**3**	**2**	**1**
English abstracts accompanying Japanese articles are important.	7 (43.8)	8 (50.0)	1 (6.3)	0 (—)
Japanese journals should require native checks for English abstracts accompanying Japanese articles.	5 (31.3)	9 (56.3)	2 (12.5)	0 (—)
"I am capable of writing an English abstract."	0 (—)	0 (—)	7 (43.8)	9 (56.3)
Japanese universities should provide support for researchers with English academic writing.	12 (75.0)	3 (18.8)	1 (6.3)	0 (—)

N=16.

Note. Values are numbers (percentages).

* 4 = Agree; 3 = Somewhat agree; 2 = Somewhat disagree; 1 = Disagree.

Table 4. Interviewees' profiles.

Researcher	Rank	Years' experience	No. of abstracts prepared
R1	Professor	15	About 10
R2	Research associate	3	Less than 10
R3	Associate professor	7	3
R4	Professor	12	More than 10
R5	Research associate	3 months	2

3.2.1 R1

When asked about her method of preparing English abstracts, R1, a professor, replied that recently she wrote an abstract in Japanese, and then contacted a translation service that guarantees a native speaker will check each abstract. Presently there are no English teaching colleagues around her who can check her abstracts. In the past she would write in Japanese and then, using a dictionary and reference books, make an English translation herself, which she would then have checked by an English teaching colleague. These colleagues included native English speakers and non-native speakers, as well as Japanese faculty. Completing English abstracts at that time involved corresponding with checkers several times for each abstract.

She owns several writing manuals in Japanese on academic writing in the nursing field. She finds academic writing in English to be extremely stressful; expressing statistical findings in English is particularly difficult. Unlike Japanese, she said, where expressions are fixed, English academic writing employs multiple ways of making the same expressions, and she is often not sure which to choose. She has also found that writing produced by translation/editorial services sometimes conflicts with advice offered by reviewers, and for this reason she marked on the questionnaire that she was only "somewhat satisfied" with the checking she has received.

When asked about why she agreed that English abstracts accompanying Japanese articles are important, she qualified this response by stating that she "wants them to be important." She believes that English abstracts are a crucial means of enabling Japanese researchers to make their research known to the world. However, this can only occur if English abstracts accompanying Japanese articles are included in on-line databases, which largely is not happening. In a sense, then, she feels that these abstracts are meaningless. She only reads these English abstracts occasionally, to learn new expressions. However, she has noted that some of these abstracts have been produced by translation software. In one, *ichijiteki* (temporary) had been translated as "one o'clock."

She feels that systematic university-based writing support, such as exists at Tokyo Medical University, is necessary, as there is a limit to what a researcher can accomplish through individual effort alone. Such a support system should help researchers with abstract writing as well as in comprehending and responding to correspondence from reviewers and editors. Most important, she said, would be to make this writing support systematic, so that English teachers do not become overburdened with editing requests that are not a formal part of their work. She does not feel that nursing knowledge is necessary for native checkers. Knowledge of how to write abstracts, as well as some Japanese reading ability, is, she stated, more important.

3.2.2 R2

For all of the English abstracts that R2, a research associate, has submitted thus far, native checks have been required. She has worked with both translation/editorial services that guarantee native checks and English teachers, including a Japanese university instructor who possesses near native English ability. She was once asked by a journal to have a native check done on an abstract that had already been checked by a native speaker, and for this reason she was only "somewhat satisfied" with the checking she received. (However, she resubmitted this abstract without having another native check done or revising it in any way, and the journal accepted it without further comment. Such an experience, she stated, is not unusual.)

When writing an English abstract she first writes in Japanese, and then translates it into English. One difficulty in writing English abstracts, she feels, is that English abstracts and Japanese abstracts have different structures. After translating an abstract she makes adjustments while referring to one of the several reference books she has read. After that, she has an English teacher check the abstract. Also, she has found that Japanese papers require a statement about the value of a study to the field of nursing, whereas in English the paper should instead show how it is of value to the journal's readership. One reference book advised writers not to write Japanese that would be difficult to translate into English (e.g. missing subjects). This is advice that she follows. She said that learning English writing, where subjects and objects must be clearly expressed, will help Japanese researchers to write better articles in Japanese.

She believes that university-based English academic writing support is necessary. Like R1, she stated that there is a limit to what one researcher can do alone, and hopes for support in the form of courses and seminars about writing abstracts and papers, as well as support in which researchers can easily communicate with English checkers. "Easy to use" writing support is more important to her than knowledge of nursing in checkers.

She evaluates her own ability to write English

abstracts as poor, but does not dislike writing in English. In the future, she hopes to be able to write not only English abstracts but full-length articles, something that she once did as a graduate student with, she said, much effort and support.

3.2.3 R3

R3, an associate professor, stated that if asked to have an English abstract checked by a native speaker, she would ask a colleague proficient in English to do so, or ask an English teacher (as, like R2, she has done with one of the authors of this paper). She stated that some journals will help by directing writers to a particular checker who has some knowledge of the researchers' field. She pointed out that, in her case, knowledge of public health in a native checker is as relevant as clinical nursing knowledge, as her field is public health. She said that a lack of health care knowledge in the native checker can be overcome through time, as the checker learns about the language and conventions of the nursing field through editing many abstracts.

She stated that she first composes a Japanese abstract and then translates it herself with the assistance of reference books, published papers serving as models, and slight use of translation software. She writes set phrases, such as "The purpose of this study is to..." and then fills in information relevant to her study. This kind of patching together of abstracts is easily done, she feels, when writing up quantitative research, but more difficult with qualitative—the paradigm that she prefers. Overall, she finds writing English abstracts to be extremely difficult, requiring extensive knowledge of English grammar, a hurdle that is difficult to clear.

Like all of the interviewees, she evaluated her English writing skills as low, and stated that she is struggling to improve her English writing skills. Nursing faculty, as well as undergraduate and graduate students, need formalized English writing support, she stated. However, unlike R1 and R2, who envision a system of personalized support helping researchers advance through the publication process, she described a need for periodic writing seminars and classes. She has heard that at a certain university regular meetings are being held, in which participants can practice English conversation and self-introductions. Though such meetings do not relate directly to English writing, she stated that in time the meetings may move in that direction.

3.2.4 R4

R4, a professor, began her interview by describing a native check system established at a university where she had previously worked. At that university, a native speaker was hired specifically to edit abstracts prepared by Japanese faculty. This native speaker did not have a background in health care or the sciences, nor did he seem to have been hired in an official or tenured capacity. He came to the university to meet researchers to edit and discuss their abstracts or papers, and each researcher was required to pay a small fee for each editing job, no matter the length of the paper. Because this person was unable to communicate well in Japanese, a secretary with English proficiency joined in the editing sessions to facilitate communication. Overall, R4 had a positive impression of this service.

Like most other interviewees, R4 begins with a Japanese abstract and then produces a translation in English, referring to a dictionary, reference books, and published models. After writing it she often asks a person she knows who is skilled in English to check it. She has never called upon a translation/editorial service. Though she uses reference books and models, overall she feels that she mainly "writes in her own way," and sometimes what sounded good to her was revised when checked by a native speaker. English abstract writing is very difficult, she feels. She finds it particularly difficult to translate words and expressions related to culture and people's daily lives, including ideas, objects, and practices that do not exist in English speaking cultures, such as Japanese funeral customs.

She strongly believes that a university-based writing support system, like the one at her previous university, is necessary. Effective support, she stated, should include checks by native English speakers (of either American or British English) as well as help with the submission process and assistance with abstracts in other languages, such as German or French. In this regard, foreign students (*ryuugakusei*) at university can be brought in to provide assistance. Such a support network should be available across faculties, and researchers can be required to pay a small fee for the editorial work. For nursing abstracts and papers, she stated that nursing knowledge in a native checker is an ideal, but not a necessity. Lack of knowledge can be overcome if a system is established whereby researchers can easily communicate with checkers about their writing.

R4 stated that she does not enjoy writing in English, but hopes to become better at expressing herself in Eng-

lish writing. She has no particular writing goals, but hopes her younger colleagues work hard and eventually publish papers in international journals to establish research relationships abroad, for the good of the field.

3.2.5 R5

A newly hired research associate, R5 stands apart from the other interviewees in several respects. She is the most proficient in English, and has studied abroad for an extended period in an English-speaking country, where she also received instruction in English academic writing. Her second meeting, to verify her interview transcript and summary, was conducted almost entirely in English.

When writing English abstracts she first plans what she wants to say in Japanese, and then writes in English—making her the only interviewee to write English abstracts without first producing a complete Japanese abstract. She finds writing English abstracts difficult. She spoke of having difficulty in article and adjective usage, and like R3, she feels that grammar is a serious obstacle. However, R5 is unique in her writing goal: she hopes to be able to express herself clearly in English, "like a native speaker." Once a reviewer stated that she seemed to be unclear as to how to use "which," and she was grateful for having this pointed out. She wants to be able to use transition words effectively to connect sentences in a natural manner. Selecting appropriate vocabulary and technical words is also challenging. However, she said that she enjoys English writing, more than speaking. She said that her research reading centers on articles in English, and she almost never reads articles in Japanese.

In the past she has hired the services of a translation/editorial company, and was satisfied with the results. When asked whether she felt university-based writing support was needed, she first replied that it was not. Success in writing should depend on an individual's effort. However, she added that universities should try to raise researchers' motivation to write in English—and motivation to improve her English is something, she stated, that she does not lack. Later in the interview, she changed her tone by stating that an easy-access, university-based native checking system would be convenient.

4. Discussion

Questionnaire and interview results suggest that nursing faculty, at least at one university, either are producing English abstracts or are concerned that they will eventually have to do so. They are writing these abstracts on their own as well as employing translation services. They are on occasion having native speakers check their English abstracts. Overall, they are satisfied with the work done by native checkers and translation services, and believe that native checks are necessary. In general, they feel that nursing knowledge is helpful in a native checker but not essential. Japanese ability appears to be more important, as well as nursing researchers' ability to communicate with checkers about their writing. Most believe that some form of university-based English writing support network for nursing researchers is necessary.

The low number of responses to the questionnaire from professors (3), who likely have the most experience with English abstract writing, was surprising. Possibly these professors were busier than junior faculty, and simply had less time to fill in the questionnaire. However, we suspect that the low number of responses from professors indicates that English abstract writing is a sensitive topic. If these professors are not producing English abstracts themselves, but are employing translation or other services, they may hesitate to make this known. The response from one research associate that she has produced an abstract for a professor's paper may be noteworthy here.

On the other hand, the high number of responses from junior faculty (9), with little or no English abstract writing experiences, suggests that junior faculty are interested in English academic writing. Japanese universities tend to place more weight on English publications than Japanese publications in evaluating research achievements, and it stands to reason that junior faculty may see English writing as a means of boosting promotion prospects. Further investigations, however, are needed for confirmation.

This study had limitations. The sample size was too small to allow for statistical analysis, and participants were not randomly selected. Generalizations thus cannot be drawn from the results. Moreover, the fact that we were known to most nursing faculty, and that one of the authors had acted as native checker to three faculty members (including R2 and R3) may have influenced results. It had been hoped that allowing the respondents' identities to remain anonymous would compensate for this shortcoming, but the fact that we were familiar to nursing faculty must be acknowledged.

Despite these limitations, we believe that our study has provided a snapshot of how several nursing

researchers at one university approach and view native checks and English abstract writing. Calls have been made for qualitative investigations into the writing practices of non-native speaker researchers.[16] Moreover, much research into the writing practices of non-native researchers has centered on the "hard" sciences, such as medicine and physics, while "softer" sciences, such as nursing, have been largely overlooked.

Each discipline has unique characteristics and discourse practices, and further studies, involving multiple institutions and faculties, are warranted. Academic publication is a highly complex activity, and categories such as "non-native speaker" oversimplify matters by lumping diverse groups of people into monolithic categories.[22] Interview results suggest a complex reality even within the discipline of nursing in Japan, as different researchers hold varying writing practices, goals, and attitudes towards English writing.

5. Implications

Although the quality of work done by native checkers has, to the authors' awareness, not been substantially investigated, much research in the applied linguistics field has centered on teacher feedback on students' writing. Results show that teachers make mistakes, and students sometimes cannot understand comments and corrections.[23,24] The possibility for errors and misunderstandings may increase when a native speaker is editing a text that follows the conventions of a foreign discipline, about a topic that the checker may not understand. Feedback has been said to be most effective when it is interactive.[25] In order for native checks to be effective, interaction between checker and researcher is crucial.

Along these lines, four of the five interviewees stated that the ability to communicate easily with a native checker is important. Thus, a lack of nursing knowledge in the native checker was not considered a serious shortcoming. Through discussions between the checker and researcher, researchers' individual needs can be addressed, points that the checker may not understand can be clarified, and problems resulting from editorial changes that the researcher may not understand or agree with can be remedied.

We believe our study suggests a need for systematic, university-based writing support for nursing researchers, and that such support would be welcomed at other faculties as well. The essential characteristic of such support, if it is to be effective, is user-friendliness, and it should facilitate interaction between Japanese researchers and native English speakers. Expert peers with facility in English as well as exchange students could also become involved in such support. Some universities have begun incorporating such writing support, but a majority of universities have not yet done so.

As educators, we believe that the greatest benefit of such support is that it will promote learning. As one of the interviewees suggested, English teachers lacking a researcher's disciplinary knowledge can gradually become familiarized with the syntax and writing conventions of this discipline through repeated editing experiences and interaction with the researchers. Japanese researchers writing in English can also learn to become better writers, and, in another interviewee's words, become enabled to reach beyond Japan and establish connections abroad, for their own good and the good of their fields.

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References

1. Winker MA. 1999. A need for concrete improvement in abstract quality. *JAMA* **281**(12): 1129–1130.
2. *Publication Manual of the American Psychological Association.* 2002. 5th edn. Washington D.C: APA.
3. Kurmis AP. 2003. Contributing to research: the basic elements of a scientific manuscript. *Radiography* **9**(4): 277–282.
4. Flowerdew J. 1999. Writing for scholarly publication in English: the case of Hong Kong. *Journal of Second Language Writing* **8**(2): 123–145.
5. Salager-Meyer F. 2008. Scientific publishing in developing countries: challenges for the future. *English for Academic Purposes* **7**(2): 121–132.
6. Swales J. 1990. *Genre analysis: English in academic and research settings.* Cambridge: Cambridge University Press.
7. Li Y and Flowerdew J. 2007. Shaping Chinese novice scientists' manuscripts for publication. *Journal of Second Language Writing* **16**(2): 100–117.
8. Willey I and Tanimoto K. 2009. An inquiry into the "native check" and visibility of English abstracts accompanying Japanese nursing articles. *Nursing Journal of Kagawa University* **13**: 33–42.
9. Burrough-Boenisch J. 2003. Shapers of published NNS research articles. *Journal of Second Language Writing* **12**(3): 223–243.
10. Spack R. 1988. Initiating ESL students into the academic dis-

course community: how far should we go? *TESOL Quarterly* **22**(9): 29–52.

11. Porte G. 1999. Where to draw the red line: error toleration of native and non-native EFL faculty. *Foreign Language Annals* **32**(4): 426–434.
12. McNab SM. 1988. On-the-spot revision of science papers written in English as a second language. *European Science Editing* **35**: 10–11.
13. Ventola E and Mauranen A. Non-native writing and native revising of scientific articles. In: E Ventola (ed). 1991. *Functional and Systemic Linguistics: Approaches and Uses.* Berlin: Mouton de Gruyter. pp 457–492.
14. Shashok K. 2001. Author's editors: facilitators of science information transfer. *Learned Publishing* **14**: 113–121.
15. Shashok K. 1992. Educating international authors. *European Science Editing* **45**: 5–7.
16. Flowerdew J. 2000. Discourse community, legitimate peripheral participation, and the nonnative-English-speaking scholar. *TESOL Quarterly* **34**(1): 127–150.
17. Tardy C. 2004. The role of English in scientific communication: lingua franca or Tyrannosaurus rex? *English for Academic Purposes* **3**(3): 247–269.
18. Gosden H. 1996. Verbal reports of Japanese novices' research writing practices in English. *English for Academic Purposes* **5**(2): 109–128.
19. Okamura A. 2006. Two types of strategies used by Japanese scientists, when writing research articles in English. *System* **34**(1): 68–79.
20. Ammon U. Editor's preface. In: U Ammon (ed). 2001. *The Dominance of English as a Language of Science.* Berlin: Mouton de Gruyter. pp iv–x.
21. Hyland K. 2000. *Disciplinary discourses: social interactions in academic writing.* London: Longman.
22. Casanave CP. 2008. The stigmatizing effect of Goffman's stigma label: a response to John Flowerdew. *English for Academic Purposes* **7**(4): 264–267.
23. Zamel V. 1985. Responding to student writing. *TESOL Quarterly* **19**(1): 79–101.
24. Hyland F. 1998. The impact of teacher written feedback on individual writers. *Journal of Second Language Writing* **7**(3): 255–286.
25. Hyland K. 1990. Providing productive feedback. *ELT Journal* **44**(4): 279–285.

Appendix 1: Interview protocol (English back-translation)

1. If you are asked by a journal or a reviewer to have a native check done on your English abstract, what would you do?
2. Can you confirm that an English abstract that you have submitted is posted on an online database?
3. How do you usually prepare an English abstract? (For example, do you write in Japanese first and then translate it to English? Write first in English?)
4. Describe how you have learned English academic writing.
5. Describe what you feel are difficult aspects of English academic writing, particularly in regard to English abstracts.
6. How many English abstracts have you prepared in the past?

[Original Article]

Molecular Biology of the Cell を利用した医科大学における英語教育の試み

Teaching English with the Aid of *Molecular Biology of the Cell* at a Medical University

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Background and Objective. Although the curriculum of English can be considered to be a continuum from general to specific purposes, there is a large gap between English for General Purposes (EGP) and English for Medical Purposes (EMP). This paper presents an attempt to bridge this gap at Hamamatsu University School of Medicine in Academic Year 2008 and make pedagogical and curricular suggestions to English education at departments of medicine.

Methods. The authors taught a first-year English course using the first two chapters of the textbook *Molecular Biology of the Cell.* In pairs or small groups, the students read the text, conducted research, and presented the results using handouts, and if possible, computer slides. The authors promoted vertical and horizontal coordination with biology and chemistry courses students took at senior high schools and taking concurrently at university, and with medical courses they will take in future academic years.

Results. The students succeeded in activating their schema and enhancing their reading skills. Group work provided them with effective means to develop basic academic skills critical for learning EMP and pursing medical research.

Conclusion. This paper illustrates and confirms that bridging the gap between EGP and EMP is beneficial to medical students. With some negative feedback to this programme in mind, the authors suggest that it is necessary to set up the aims and the method of courses firmly based on the university's educational goals and a needs analysis of the students. *J Med Eng Educ (2009) 8(2): 95–103*

Key words: *Molecular Biology of the Cell*, English for General Purposes, English for Medical Purposes, curriculum coordination

1. 序論

医学英語(English for Medical Purposes (EMP))をはじめとするEnglish for Specific Purposes (ESP)は，学習者の特定のニーズに合致し，特定の分野において使用される言語を題材とするという点でEnglish for General Purposes (EGP)とは大きく異なる。[1,2] そのため，EGPからのスムーズな移行が必要であり，Dudley-Evans and St Johnは，英語教育のカリキュラムを，よりgeneral(一般的)なタイプからspecific(特定)なタイプへの連続体と捕らえている。[2] しかしながら，EMPにおいては，すでにある程度の医学の知識を獲得している学習者に焦点を合わせているものが大半を占めており，EGPからの移行を視野に入れたものは見当たらない。一般的な医学科のカリキュラムを見てみると，一般教育科目を中心に履修している1年次生に関しては，医学の専門教育科目をほとんど履修しておらず，EMPを導入するには大きなギャップがある。一方，EMPの学習を本格的に始める前にEGPとしての英語運用能力を伸ばしておく絶好

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の時期である。また，医学と関連の深い生物学，化学などの基礎的な知識は高等学校で学習しており，さらに，大学の一般教育科目でこれらの分野を平行して履修しているという点に注目すべきである。したがって，学習者が持つスキーマ(背景知識)を活性化させ，それにより英語運用能力を高めること，そして，より専門的なEMPに橋渡しを行うことは，医学科における初年次教育において重要な意味を持つと思われる。[3]

文部科学省が取りまとめた「大学における教育内容等の改革状況について」によると，英語による授業(日本語を併用するものおよび英語教育を主たる目的とするものは含まない)を学部段階において実施した大学の数は，平成18(2006)年度の26％から平成19(2007)年度の27％へ，研究科段階ではそれぞれ27％から30％へと，「着実に増加」しており，大学の国際化への必要性はますます高まっている。[4] 英語で専門教育科目を履修するためには高度な運用能力が要求されるが，その土台を培う場が用意されなければならない。

本稿の目的は，平成20(2008)年度に浜松医科大学で行われた*Molecular Biology of the Cell*を利用した試みを報告し，医科大学における英語教育のあり方について示唆を与えることである。浜松医科大学医学科の英語カリキュラムでは，1年次に3つの必修科目，すなわち，「英語IA」(通年，リーディング・ライティング)，「英語IB」(通年，リーディング)，「英会話I」(後期，リスニング・スピーキング)が配置されている。2年次に必修の「英会話II」(前期，リスニング・スピーキング)が配置されている他は，2～4年次に選択科目がそれぞれ1つずつ開講されている。大まかに言って，1・2年次においては，EMPを意識したEGP，3・4年次においては，EMPを扱っている。本稿で紹介する授業は，1年次に開講されている「英語IB」の中で行われ，分子細胞生物学の基礎的な事項を学習すること，英語で書かれた文献の内容を正しく読み取り，グループで発表することを目標とした。高等学校および大学の一般教育科目で履修している生物学や化学との連携，また，2年次以降に履修する医学の専門教育科目との連携が特徴である。以下にその実践を報告する。

2. 方法

2.1 教材

Molecular Biology of the Cell〔細胞の分子生物学〕は，分子生物学，細胞生物学、医学等の専門教育科目で使用されている定評のある大部のテキストであり，本授業開始直前に第5版が出版された(略称MBoC5)。[5] 5つのパートと25章から成り，後半に進むにしたがって，がん，幹細胞など，高度な内容となっている。本授業においては，導入パートの第1章(Cell and Genomes〔細胞とゲノム〕)と第2章(Cell Chemistry and Biosynthesis〔細胞の化学と生合成〕)を扱った。これら2章は，2.3で後述するように，生物学(浜松医科大学では「生物科学」)や化学(同じく「物質科学」)で学習する内容と重なるところが多い。各章はセクションとサブセクションに分かれており，内容を的確に表すタイトルがつけられているため，リーディングの過程でスキミング(すくい読み)を行って大意をつかむのに大変便利である。巻末の用語集は，キーワードが網羅されているだけでなく，術語の定義に必要な表現を学ぶことができる。テキストの英語は，科学的な文章によくあるように，極めて明快に書かれていて読みやすい。日本語版に関しては，第4版までが出版されている。[6] 本授業で使用したペーパー版に付属しているDVDには，本文中の図のデータ，関連する動画，21～25章のテキストが収録されており，プレゼンテーションにも利用できる。

セクションの冒頭で述べたように，本書は専門教育科目のテキストであり，一般教育科目の「英語」を対象としたものではない。次のサブセクションでは，本書を使用して1年次対象にどのような授業を行ったのかを詳述する。

2.2 指導の実際

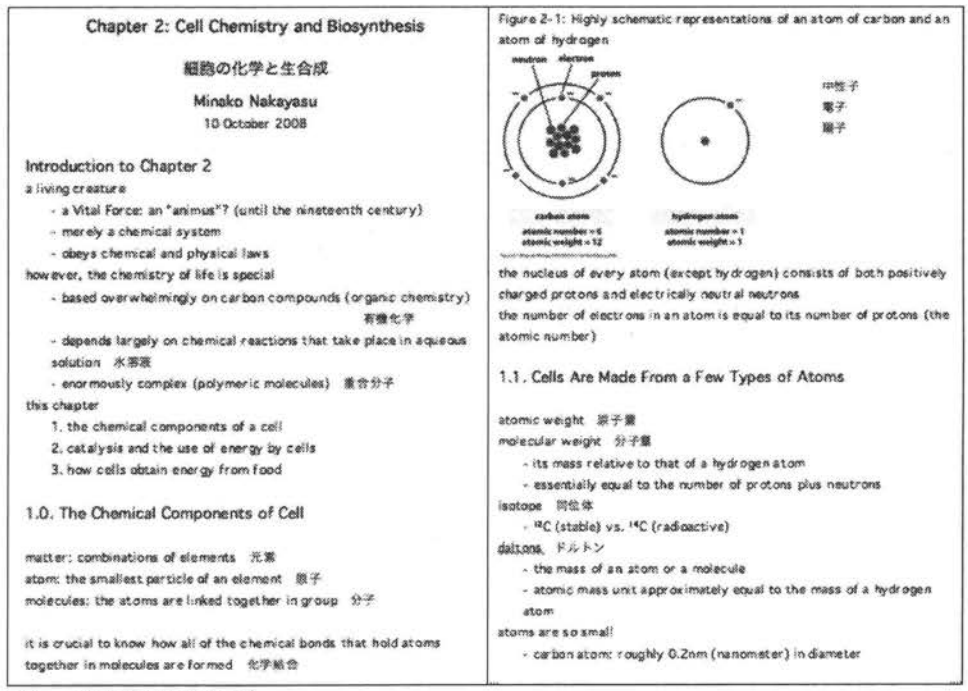
2.2.1 授業のアウトライン

「英語IB」を履修する学生94名を1クラス23～24名の4クラスに分け，2名の英語教員(遠藤，中安)が2クラスずつを担当した。前期と後期で教員が交代するので，通年では両方の教員から教わることになる。1回の授業は，学生の発表とそれに関する質疑応答，教員による解説などから成る。第1章(44ページ)を前期に，第2章(60ページ)を後期に学習した。ペアもしくは3名の小グループを作り，各グループで担当のサブセクションに関するリーディングとリサーチを行った。本文においてボールド体とイタリック体で示されるキーワードを中心に，各グループが選んだ内容について，インターネットや2.2.3で後述する文献を使用して調査した。専門用語については，日本語の用語の確認も行った。その結果をハンドアウトにまとめ，可能ならばPowerPoint/Keynoteを利用して発表した。図1に教員がモデル発表を行った際のハンドアウトの例を挙げておく。

1回の発表で2サブセクション，1回の授業で2～3グループ，各グループが1学期に2回ずつ発表すれば，1学期で各章の学習を終えることができる。グループのメンバーはくじを利用して入れ替えた。ハンドアウト等作成，発表，質疑応答の際に使用する言語は，英語または日本語とした。これらの活動により，(1)リーディングのスキルを高める，(2)専門用語を英語で学習する，(3)科学的な文章の読み方や書き方を学習する，(4)要約してハンドアウトにまとめる方法を学習する，(5)口頭発表の仕方を学習する，(6)グループで協力してリサーチを行う，といった成果が期待できる。後期に関しては，テキストとは関連しないeラーニングのシステムを導入したが，本稿の目的とは外れるため，ここでは立ち入らないこととする。

2.2.2 診断的評価

学生のレディネスを知るため，簡単な診断的評価(事前評価)を行い，第1章および第2章の内容と関連の深い科目の履修状況を調査した。高等学校において「化学」はほぼ全員が履修しており(97.2％)，一方「生物」は43.7％に留まった。英語で「生物」，「化学」を履修した者(帰国子女)は2名であった。形成的評価(事中評価))および総括的評価（事後評価)については，本セクションの後半とセクション3で紹介する。



Chapter 2: Cell Chemistry and Biosynthesis

細胞の化学と生合成

Minako Nakayasu

10 October 2008

Introduction to Chapter 2

a living creature
- a Vital Force: an "animus"? (until the nineteenth century)
- merely a chemical system
- obeys chemical and physical laws

however, the chemistry of life is special
- based overwhelmingly on carbon compounds (organic chemistry) 有機化学
- depends largely on chemical reactions that take place in aqueous solution 水溶液
- enormously complex (polymeric molecules) 重合分子

this chapter
1. the chemical components of a cell
2. catalysis and the use of energy by cells
3. how cells obtain energy from food

1.0. The Chemical Components of Cell

matter: combinations of elements 元素
atom: the smallest particle of an element 原子
molecules: the atoms are linked together in group 分子

it is crucial to know how all of the chemical bonds that hold atoms together in molecules are formed 化学結合

Figure 2-1: Highly schematic representations of an atom of carbon and an atom of hydrogen

the nucleus of every atom (except hydrogen) consists of both positively charged protons and electrically neutral neutrons
the number of electrons in an atom is equal to its number of protons (the atomic number)

1.1. Cells Are Made From a Few Types of Atoms

atomic weight 原子量
molecular weight 分子量
- its mass relative to that of a hydrogen atom
- essentially equal to the number of protons plus neutrons

isotope 同位体
- ^{12}C (stable) vs. ^{14}C (radioactive)

daltons ドルトン
- the mass of an atom or a molecule
- atomic mass unit approximately equal to the mass of a hydrogen atom

atoms are so small
- carbon atom: roughly 0.2nm (nanometer) in diameter

図1　ハンドアウトの例

2.2.3 教材研究

教材が扱う分野とは専門が全く異なる英語教員が授業を行う際に，大きな問題になるのが教材研究と参考文献である。まず，上で述べたように，1/2強の学生が高等学校で「生物」を履修していなかった状況を踏まえ，1年次に平行して開講されている「生物科学」で推薦されている文献と同じもの(『フォトサイエンス生物図録』，『Essential細胞生物学』等)を参照するように勧めた。[7,8]　さらに，ほぼ全員が高等学校で「化学」を履修しており，同じく1年次に開講されている「物質科学」でさらに高度な内容を学習していることから，この科目で使用されている文献(『ハート基礎有機化学』等)との関連性を指摘しておいた。[9]　担当教員は，高等学校で使用されている「生物」，「化学」の教科書の他，『コア講義分子生物学』，『生化学辞典』等の文献，インターネットサイトを利用して教材研究を行った。[10,11]

2.2.4 指導の工夫

次に，英語教員がそれぞれのクラスで行った取り組みについていくつか紹介したい。ここでは，前期授業終了時に行った形成的評価の結果を踏まえて行った工夫についても説明する。

(1) **キーワード**：各グループが担当したサブセクションからキーワードを選定し，ハンドアウトにまとめて配布した。学生が定義を紹介し，発音の練習を行った。用語集に掲載されている特に重要なキーワードは，試験に出題した。

(2) **マルチメディア，インターネットサイトを利用した言語活動**：DVDやサイトを使用し，聞き取ったり読み取ったりした内容を英語で書いたり，口頭で報告したりさせた。例えば，『見てわかるDNAのしくみ』にはDVDが付属しており，第1章と同様の内容を動画で見ることができる。[12]

(3) **ゲーム**：分子生物学の復習を兼ねたゲームで学生の情意フィルターを下げ，学習を促進した。[13]　学生から「内容が難しい」，逆に「授業形式が単調」という意見があったため，ゲームを取り入れることにより授業を活性化させた。例えば，snakes and ladders(すごろく)に *Molecular Biology of the Cell* の内容に関する問題を入れ込んだものを作成した。

(4) **オーラル・インタラクション**：授業では英語を使用するのが基本であるが，さらに前回の授業の復習を口頭で行った。半数強の学生がリスニング(51.4％)，スピーキング(55.6％)のスキルを伸ばしたいと答えていたため，英問英答による復習を取り入れた。**表1**にオーラル・インタラクションの例を掲げる。

表1　オーラル・インタラクションの例

Instructor:	The simplest sugars are monosaccharides. They are linked together to form a disaccharide by what kind of process?
Student:	Condensation reaction.
Instructor:	Good. In this process, a molecule of water is expelled as the bond is formed. Sugars function in the production and storage of energy, and can be used to make mechanical support.

(5) **表現**：学生の「科学的文章での英語の表現方法についてふれてほしい」との要望に応え，重要な表現を選定して意味や使用法を解説，試験に取り入れた。

2.2.5 試験

成績評価は，筆記試験，発表，出席状況，授業への貢献およびeラーニングの学習状況を総合して行われた。前期末と後期末の筆記試験では，テキストを提示して内容を説明させる問題，関連するテキストの部分を提示して他の文献の内容を要約させる問題，用語集のクローズテスト(前期は *Essential Cell Biology* の用語集，後期は *Molecular Biology of the Cell* の用語集から出題)，重要な表現をテキストに埋め込む問題を出題した。[8] 表2は試験問題の例である。

表2 試験問題の例

(1) テキストの内容を説明させる問題

Coupled reaction について、ここで使用されている analogy を用いて説明せよ。

The Formation of an Activated Carrier Is Coupled to an Energetically Favorable Reaction（テキスト 79 ～ 80 ページ，省略）

(2) 関連するテキストの部分を提示して他の文献の内容を要約させる問題

教材からの抜粋を参考にして，あとに掲げる文章(問題文)を和文で 200 ～ 300 字に要約せよ。

Modern Eucaryotic Cell Evolved from a Symbiosis（テキスト 27 ～ 30 ページ，省略）

Endosymbiosis—the Origin of Domain Eukarya
(〈http://www.fossilmuseum.net/Evolution/Endosymbiosis.htm〉からの引用，問題文省略)

(3) 用語集のクローズテスト(リストから語を選択する)

anticodon—Sequence of three nucleotides in a transfer RNA molecule that is ( ) to the three-nucleotide codon on a messenger RNA molecule; the anticodon is matched to a specific amino acid covalently attached to the transfer RNA molecule.

(4) 重要な表現をテキストに埋め込む問題(リストから表現を選択する)

However, photosynthesis must have preceded respiration on the Earth, since ( ) that billions of years of photosynthesis were required before O2 had been released in sufficient quantity to create an atmosphere rich in this gas.

2.3 縦と横の連携

医学科1年次における実践を軸に，EGP から EMP への移行を目指すのが本研究の目的である。そのためにはカリキュラムにおける縦と横の連携が欠かせない。

まず縦の連携から説明してみたい。2.2.2 で指摘したように，多くの学生は高等学校で「生物」，「化学」の知識をすでに得ている。分子細胞生物学と関連するこれらの知識をスキーマ(背景知識)として活性化させ，リーディングの効率を上げることが可能となった。英語教員は，高等学校「生物」，「化学」で学ぶ知識を考慮に入れて授業を行った。後期には医学教員(椙村)がミニレクチャーを行い，今後の研究の心構えや関連する文献などについて説明，2年次以降のカリキュラムに繋げた。平成20(2008)年度の「英語IB」の授業を踏まえて，平成21(2009)年度以降には専門教育科目で医学教員(椙村)が *Molecular Biology of the Cell* 後半部分を利用した授業を行う予定である。基礎的なスキルと知識をすでに1年次で獲得しているため，より高度な内容を学習するための EMP への移行はスムーズに行われることが期待できる。2年次(平成21(2009)年度)の「基礎・社会医学(病理学)」では，第20章(Cancer)を利用してプレースメントテストを行い，Pathologic Basis of Disease を併用して学習する。[14] 3年次(平成22(2010)年度)の「基礎・社会医学(病理学)」では，第7章(Control and Gene Expression)，第16章(The Cytoskeleton)，第17章(The Cell Cycle)，第18章(Apoptosis)，第19章(Cell Junctions, Cell Adhesion, and the Extracellular Matrix)を扱い，Molecular Biology of the Gene を併用する。[15]

横の連携については，2.2.3 で述べたように，1年次に「生物科学」，「物質科学」を平行して履修しており，加えて，高等学校の理科と数学からの橋渡しを目指した「自然科学入門」を1年次前期に，「生物学実験」，「化学実験」を1年次後期に履修している。英語教員は，本授業とこれらの科目との関連性を指摘し，参考文献を参照するように勧めた。3で後述するように，前期末(形成的評価)には 66.2 %，後期末(総括的評価)では 61.9 %の学生が「他の授業との関連があった」と答えている。英語教員は，生物学，化学の内容，専門用語や特有の英語表現について担当教員からの協力を得た。

以上の縦と横の連携から，本授業の内容を，カリキュラムに配置された他の科目と有機的に結びつけることが可能となった。

3. 結果と考察

本授業では，前期末に形成的評価を行い，後期末に後期の授業および1年間の総括として総括的評価を行った。学生に対するアンケートの形式をとり，項目は学生の自己評価および授業評価からなる。回答の方法に関しては，該当する項目を選択するものと，自由に記述するものを用意した。2.2.4 で述べたように，形成的評価の結果は後期の授業に反映させた。本セクションでは，形成的評価と総括的評価の結果を比較しながら検討したい。

3.1 項目を選択するタイプの評価

はじめに，授業で行ったさまざまな活動を挙げ，「ためになった」，「有意義であった」と感じたものを無制限にチェックさせた。表3において，数字はその活動を選んだ学生の割合(%)であり，形成的評価は前期の授業，総括的評価は後期の授業に関して学生が選択したものである。

「自分でテキストの内容を勉強したこと」を選んだ学生の割合が最も高く，形成的評価では 46.5 %，総括的評価ではさらに増加して 58.3 %となっている。序論で述べたように，

本科目の目標は「分子細胞生物学の基礎的な事項を学習すること，英語で書かれた文献の内容を正しく読み取り，グループで発表すること」であり，この目標を達成すべく懸命に取り組んでいる様子がうかがえる。次に注目すべきは，グループワークに関する項目を選んだ学生が増加している点である。「グループで研究し，発表したこと」は29.6％から37.5％へ，「他のグループの発表を聞いたこと」は26.8％から45.8％へと，それぞれ増加している。「発表を聞く」という活動は個人的で消極的な活動ではなく、聞いて学んだことを自分のグループワークに活かすことができる，また，他のグループの発表に聴衆として参加するという点で積極的な意味を持つものである。前期末の形成的評価でこれらの項目を選んだ学生の割合を踏まえて，後期の授業でもグループワークを引き続き行わせた。後述する自由記述のなかでも，グループワークの方が英語を読む効率があがると述べている学生がおり，グループワークの効果がより高まったことを示唆している。[16] また，「ゲームを利用して授業の内容を復習したこと」が7.0％から13.9％へ増加しているのは，2.2.4で述べたように，この活動が情意フィルターを下げて学習への動機を高めたと思われる。さらに，「自分でテキストの内容に関連した研究をすすめたこと」が4.2％から8.3％へ僅かながら増加しており，自立した学習への芽が育ちつつあることを示唆している。一方，「インターネットリソースやマルチメディアを活用した活動をしたこと」については，39.4％から19.4％へと減少している。総括的評価の数字は，インターネットを含むマルチメディアが補助教具として必ずしも十分に機能していないことをうかがわせる。ただし，音声による活動に関しては，マルチメディアを使用しないオーラル・インタラクションを加えたため（2.2.4），この数字がそのまま音声による活動が受け入れられなかったことを示すと見なすには，やや時期尚早である。これについては今後の分析を待ちたい。

次に，これから伸ばしたい英語の力を前問と同様に無制限に選ばせた。**表4**では，前期の授業に対して行った形成的評価と，後期の授業に関する総括的評価をまとめた。

「英語IB」の重要な目標のひとつは，リーディングのスキルを高めることであるが，2.2.4で言及したように，形成的評価でリスニング・スピーキングを選択した学生の割合がそれぞれ47.9％，43.7％を占めたことに鑑み，音声による活動を増やすこととした。総括的評価では，それぞれ51.4％，55.6％と，さらに割合は増えている。逆にリーディングを選んだ学生の割合は38.0％から34.7％へとわずかに減少している。また，「医学に関する内容を英語で勉強するための力」，すなわちEMPを選択した学生は約半数（49.3％）であり，総括的評価ではさらに増加している（55.6％）。自由記述の欄で医学を学ぶにあたっての心構えに変化があったことを記した学生がおり，EMPに橋渡しを行うという本授業の目標がある程度達成されたことがわかる。

さらに，本授業を受講して感じたことを5から1までのスケールで答えさせた。その際，(1)「熱心に参加した，勉強した−熱心に参加しなかった，勉強しなかった」，(2)「簡単だった−難しかった」，(3)「理解できた−理解できなかった」，(4)「英語の力が伸びた−伸びなかった」，(5)「知的好奇心が刺激された−興味がわかなかった」，(6)「知識が広がった−広がらなかった」，(7)「他の授業との関連があった−関連はなかった」の7つの観点を提示した。図2の例を参照されたい。

表3　有意義であったと感じた活動

活動のタイプ	形成的評価	総括的評価
自分でテキストの内容を勉強したこと	46.5	58.3
インターネットリソースやマルチメディアを活用した活動をしたこと	39.4	19.4
グループで研究し，発表したこと	29.6	37.5
他のグループの発表を聞いたこと	26.8	45.8
教員による教科書の内容の説明を聞いたこと	25.4	29.2
クラスメートに質問したり，議論したりしたこと	17.8	15.3
ゲームを利用して授業の内容を復習したこと	7.0	13.9
自分でテキストの内容に関連した研究をさらに進めたこと	4.2	8.3

表4　伸ばしたい英語の力

技能／能力のタイプ	形成的評価	総括的評価
医学に関する内容を英語で勉強するための力	49.3	55.6
リスニング	47.9	51.4
スピーキング	43.7	55.6
リーディング	38.0	34.7
4技能にこだわらず，コミュニケーション能力	38.0	37.5
ライティング	25.4	25.0
科学的な内容を英語で勉強するための力	22.5	25.0
文化を幅広く英語で勉強するための力	15.5	18.1

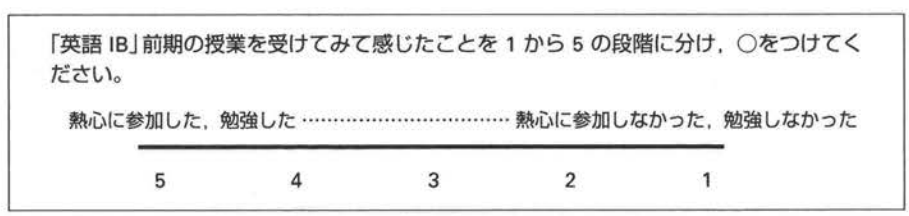


図2「英語IBを受講して感じたこと（問い）

次に，図3には前期の授業に関する形成的評価，図4には後期の授業に関する総括的評価を掲げる。

形成的評価と総括的評価との間に大きな違いはないが，「簡単だった–難しかった」の項目に関して差がみられる。形成的評価（すなわち前期の授業）において1（すなわち「（大変）難しい」）と答えた学生の割合が25.4％に上るのに対して，総括的評価（後期の授業）では8.2％である。この結果は，2.2.2で指摘したように，高等学校において「生物」を履修していない学生の割合が半数強と多いことと矛盾していない。自由記述においても，「難しかった」と述べた学生が目立つ。もしくは，高等学校で学習した英語の語彙やテキストの分量に大きな差がある，あるいは科学の専門書の読み方に慣れていないといった理由から，難しいという感想を持ったということも考えられる。現行の学習指導要領のもとで高等学校卒業までに学習する語彙数は，選択科目の「英語II」および「リーディング」を履修したとしても，中学校から通算して2,700語であり，決して十分とはいえない。[17,18] その場合，「英語IB」，「生物科学」，「物質科学」等の授業を受講して学力が向上したため，総括的評価では「難しい」と答える学生の割合も減ったとみることも可能である。一方，形成的評価，総括的評価の違いがほとんどなく，5や4を選択した学生の割合が同様に高かったのが「知識が広がった–広がらなかった」と「他の授業との関連があった–関連はなかった」であり，例えば総括的評価において，それぞれ63.4％と61.9％となっている。2.3で述べたように，平行して開講されている「生物科学」，「物質科学」などの科目との関連性を学生が認識しているためといえよう。しかしながら，「英語の力が伸びた–伸びなかった」では，いずれの評

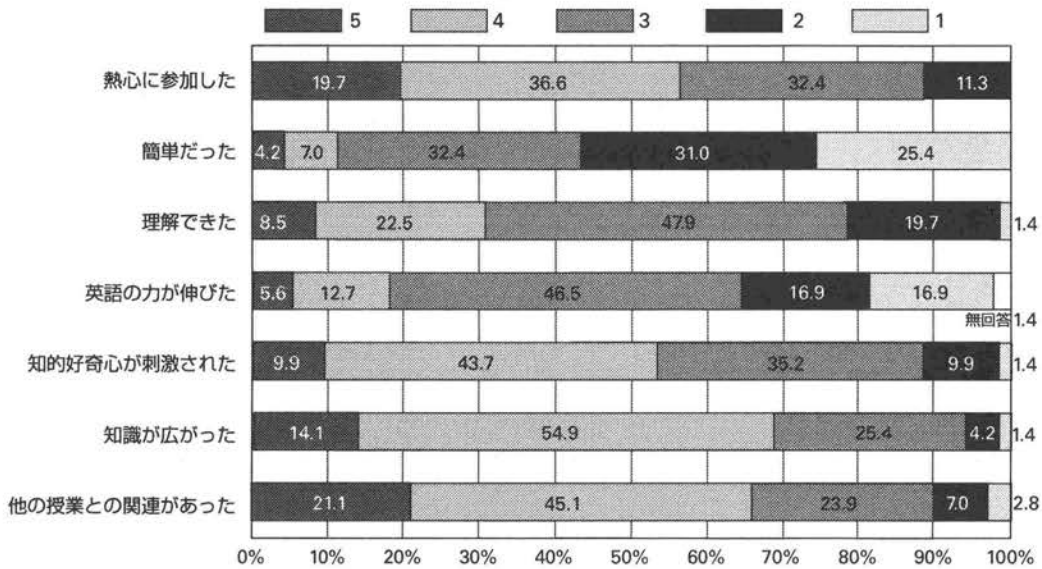


図3 「英語IB」を受講して感じたこと（形成的評価）

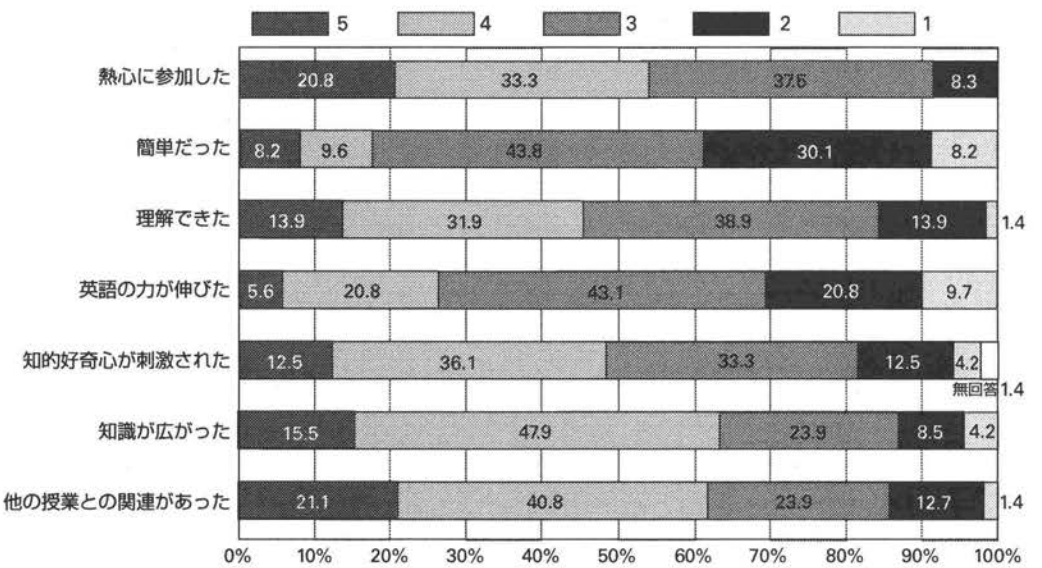


図4 「英語IB」を受講して感じたこと（総括的評価）

価においても3(すなわち「変わらない」)を選択した学生が半数弱を占めており(形成的評価では46.5％，総括的評価では43.1％)，英語の運用能力の伸びを実感できていない。今後の英語カリキュラムにおける課題といえよう。

3.2 自由記述

選択式の評価ではカバーできない点を自由に挙げさせた。その際，評価する期間を絞っての感想(前期の授業の感想，後期の授業の感想，1年を振り返っての感想)と，次の期間の授業に対する期待や決意(後期に向けての期待や決意，英語以外の科目も含めて翌年度の授業に向けての期待や決意)を書くように指示した。後者に関しては，通常の評価とは異なり，カリキュラムの連続性を認識させるという意図がある。

最初に，評価する期間を絞っての感想を分類し，どのような点に学生が着目したのかを分析してみたい。

表5では，自由記述をいくつかのタイプに分類して回答数を挙げた。それぞれをポジティブなフィードバックとネガティブなフィードバック，形成的評価と総括的評価に分類してある。(　)で示した項目は，その上の項目をさらに細かく分類したものである。

「有意義だった」という回答は，形成的評価で22，総括的評価では49あり，122.7％増加している。「意義が感じられなかった」と感じた学生の数は，これに比べて少なく，形成的評価で5，総括的評価では9である。「有意義だった」とするもののなかには，生物学，化学，医学との関連を指摘した回答が形成的評価で5，総括的評価で11あり，「英語と生物を両方勉強できる充実した授業内容だった」という意見もあった。一方，「意義が感じられなかった」という理由として，生物学や化学の知識がすでに十分あることをあげた者もいた。本セクションで後述するように，スキーマや英語の能力の違いから，学生の反応が分かれたことも考えられる。また，「科学的，医学的内容を英語で学ぼうという意図は伝わってくるが，中途半端にそういうことをするとどちらもできなくなる」というネガティブな受け止め方もあることに注目すべきである。

授業の方法に関しては，教員の授業の進め方に加えて，発表，ハンドアウト作成，ゲーム，グループワーク等の視点があげられた。「友だちのハンドアウトが大きな助けになった」，「授業を自分たちで作り上げている感じがあり，張り合いがあった」，「発表がうまい人はすごいと思った」という記述から，お互いに刺激を受けたことがうかがわれる。「協力してやれることの大切さを学んだ」，「みんな仲良く楽しい授業だった」という感想が聞かれる一方で，発表形式でなく，「全員で読み進めていく方がよいと思う」と述べた者もあった。発表やハンドアウト作成に使用する言語は，日本語でも英語でもよいことにしていたが，実際には日本語を使った学生が多い。そのため，「もっと英語を使ったほうがよい」との意見は傾聴に値する。「発表をただ聞いているだけで能動的に参加できなかった」という記述があり，発表

表5 自由記述(感想)

自由記述のタイプ(ポジティブなフィードバック)	評価 形成的	評価 総括的	自由記述のタイプ(ネガティブなフィードバック)	評価 形成的	評価 総括的
有意義だった	22	49	意義が感じられなかった	5	9
(楽しかった，ためになった)	7	15	(退屈だった，意義がなかった)	3	7
(他の科目との関連があった)	5	11			
(知識が広がった)	3	5	(新しい知識が得られなかった)	2	1
(充実した内容だった)	3	7			
(興味がわいた)	2	1			
(積極的に取り組んだ)	2	2			
(英語の力が伸びた)	0	5	(英語の力が伸びなかった)	0	1
(モチベーションが上がった)	0	3			
授業の方法がよかった	21	22	授業の方法がよくなかった	9	20
(授業の進め方がよかった)	7	8	(授業の進め方がよくなかった)	2	7
(発表がためになった)	7	1	(他の方法でもよかった)	3	6
(ハンドアウト作成が勉強になった)	4	8	(スピーキングを学習したかった)	2	2
(ゲームがよかった)	2	2	(扱えなかったページがあった)	0	3
(グループワークがよかった)	1	3	(大変だった，面倒だった)	2	2
			難しかった	18	12
教材がよかった	1	4	他の教材でもよかった	1	5

者と聴衆が協力して口頭発表の場を形成することを学ばせるには，今後の授業での工夫が必要である。なお，後期では，一部のセクションに時間をかけすぎたため，すべてのセクションをこなせなかったクラスがあり，「残念だ」という感想があった。内容はもちろん，特定のジャンルの文章構造を学ぶためには，まとまりとして学習することが重要であり，今後留意すべき点である。

「難しかった」という意見は，形成的評価の18から総括的評価における12へと33.3％減少しているが，その一方で，すでに触れたように，「有意義だった」という回答が増加している。繰り返し指摘しているように，高等学校で「生物」を履修していない学生の割合が高く，また，テキストの分量が多いため，前期の授業で苦戦している様子がわかる。後期においては，関連した知識とリーディングのスキルが向上し，スキーマを活用したリーディングに習熟してきたようだ。「英文の量が多く，良いリーディングの勉強になった」，「自分の英語力でも結構読めた」という感想がみられた。十分な知識がすでにある学生には，「良い復習になった」，「『生物科学』との関連があってよかった」という意見がある一方で，「新しい知識をつけることができなかった」，「英語の力はあまり伸びた気がしない」という不満も聞かれた。

「セル(学生はこのように呼んでいる)」を教科書として使用することに関しては，賛否両論であった。担当教員が科目の目標や意義について再検討する，そして，説明し，実行する努力がさらに必要である。

次の期間の授業に対しての期待や決意に関して，学生の自由記述に変化が表れている。形成的評価では，「がんばる」とのみ書いていた回答が20と多かったが，総括的評価では，このような記述は4に減少し，スピーキング，リーディング，医学用語，解剖学など，具体的に何を「がんばる」のかを書くようになった。「熱心に勉強すると，わからなかったものでもわかってくる。だから難しい内容のものに出会ったとしても，知的好奇心を頼りにハングリーに学問と付き合いたい」，「今後医学を学ぶ上でのモチベーションがあがった」いう意見を紹介しておきたい。なかには「期待が持てない」と述べた学生もあった。期待や決意を書かせたことで，本授業を受講した意味は何か，それが今後の学習にどのように繋がっていくのかを認識させることができたようである。

4. 結論

本稿では，平成20(2008)年度に浜松医科大学で医学科の1年次を対象に実施された *Molecular Biology of the Cell* を利用した英語教育の試みを報告した。この試みは，EGPからEMPへの橋渡しを目指し，高等学校および大学の一般教育科目で履修している科目との連携，2年次以降に履修する医学の専門教育科目との連携を図ったものである。「英語IB」の目標は，「分子細胞生物学の基礎的な事項を学習すること，英語で書かれた文献の内容を正しく読み取り，グループで発表すること」であった。自分でテキストの内容を勉強したこと，グループで研究し発表したこと，グループ発表を聞いたことが有意義だったとする学生の割合は，総括的評価でそれぞれ58.3％，37.5％，45.8％であり，この目標を達成するために努力し，お互いに刺激を受けたことがうかがえる。形成的評価と総括的評価とを比較すると，難しかったとする回答が33.3％減少する一方、有意義だったとする回答が122.7％増加している。また，他の科目との関連性を認識した学生の割合は総括的評価で61.9％であった。これらのデータから，受講した学生の多くは，スキーマの活性化，自己学習，グループワーク，発表により効率よく学習をすすめ，EMPを学ぶための基礎的な力を獲得することができたと言ってよい。一方，自由記述の評価で授業に意義を感じられなかったと答えた学生がおり，また，英語の力が変わらなかったとした学生の割合は総括的評価で43.1％にのぼった。いかなる方法で英語の運用能力をさらに高めていくのか，これから解決すべき課題である。

この取り組みを踏まえ，2年次以降には *Molecular Biology of the Cell* やその他の教材を使用した授業が専門教育科目で行われる。今回の試みに対してネガティブなフィードバックもみられたことから，今後は，大学の教育目的とそれに添ったカリキュラム，そして学生のニーズアナリシスに基づき，授業の目的や方法を設定し，学生にその意義を十分理解させることが重要である。

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文献

1. Hutchinson T and Waters A. 1987. *English for Specific Purposes: A Learning-centered Approach.* (Cambridge Language Teaching Library.) Cambridge, etc: Cambridge University Press.
2. Dudley–Evans T and St John MJ. 1998. *Developments in English for Specific Purposes: A Multi-disciplinary Approach.* (Cambridge Language Teaching Library.) Cambridge, etc: Cambridge University Press.
3. Carrell PL and Eisterhold JC: Schema theory and ESL reading pedagogy. *TESOL Quarterly* **17**(4): 553–573.
4. 文部科学省．2009．大学における教育内容等の改革状況について．<http://www.mext.go.jp/b_menu/houdou/21/03/1259150.htm> (Accessed April, 2009.)
5. Alberts B, Johnson A, Lewis J, et al. 2008. *Molecular Biology of the Cell.* 5th edition. New York and Milton Park: Garland Science.
6. Alberts B, Johnson A, Lewis, J, Raff M, Roberts K, and Walter P. 2004．細胞の分子生物学．第4版．東京：ニュートンプレス．
7. 数研出版編集部．2007．フォトサイエンス生物図録．改訂版．東京：数研出版．

8. Alberts B, Bray D, Hopkin K, et al. 2004. *Essential Cell Biology.* 2nd edition. New York and London: Garland Science. ［日本語版： Alberts B, Bray D, Hopkin K, et al. 2005. Essential 細胞生物学　原書第 2 版. 東京：南江堂.］
9. Hart H, Craine LE, and Hart DJ. 1999. *Organic Chemistry: A Short Course.* Boston: Houghton Mifflin Company. ［日本語版： Hart H, Craine LE, Hart DJ. 2002. ハート基礎有機化学. 三訂版. 東京：培風館.］
10. 田村隆明. 2007. コア講義分子生物学. 東京：裳華房.
11. 今堀和友, 山川民夫(監修). 2007. 生化学辞典. 第 4 版. 東京：東京化学同人.
12. 工藤光子, 中村桂子. 2007. 見てわかる DNA のしくみ(講談社ブルーバックス). 東京：講談社.
13. Krashen SD and Terrell TD. 1983. *The Natural Approach: Language Acquisition in the Classroom.* Oxford, etc: Pergamon Press; San Francisco: Alemany Press.
14. Kumar V, Abbas AK, Fausto N, and Aster J. 2009. *Robbins and Cotran, Pathologic Basis of Disease.* 8th edition. Philadelphia, etc.: Saunders.
15. Watson JD, Baker TA, Bell SP, et al. 2008. *Molecular Biology of the Gene.* 6th edition. Cold Spring Harbor: Cold Spring Harbor Laboratory Press.
16. Slavin RE. 1996. Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology* **21** (1): 43–69.
17. 文部科学省. 2003. 中学校学習指導要領. 一部改正版. 文部科学省.
18. 文部科学省. 2003. 高等学校学習指導要領. 一部改正版. 文部科学省.

[Original Article]

Improvement of the Quality of the Examination for Proficiency in English for Medical Purposes

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Background: The Examination of Proficiency in English for Medical Purposes (EPEMP), which certifies the ability of medical English for practical use, was started in 2008. Before the start of the official EPEMP, two pilot examinations were held in 2007.

Objective: The object of the present study was to improve the quality of the EPEMP.

Methods: The study used an iterative approach to improve the quality of EPEMP. First, the backgrounds of the examinees, total scores and their distribution were examined. For each question, difficulty index, discrimination index and unanswered ratio were calculated. After the analysis, we modified the contents of the examinations.

Results: At the second pilot examination, the same questions were used for the level 3 and 4 examinations to compare the ability of examinees. The number of problem-solving questions was also increased. The average score and discrimination index on the level 3 examination were 73.4 ± 13.8% and 0.26 ± 0.15, respectively, and those of level 4 were 64.7 ± 13.0% and 0.23 ± 0.15, respectively. At the first official examination, the number of questions was reduced from 100 to 90, and we shortened the reading passages. Finally, high discrimination indices with moderate difficulty were shown in the official examination (0.38 ± 0.14 and 75.2 ± 13.0% in level 3; 0.38 ± 0.13 and 62.9 ± 14.2% in level 4).

Conclusion: The results of the two pilot examinations contributed to the improvement of the examination quality. Continuous developmental studies are needed to maintain a good quality examination with high reliability and validity.

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Key words: medical English, achievement test, education, validation

1. Introduction

In Japan, staff in the medical environment are required to have an adequate command of medical English. However, there had been no comprehensive testing method to evaluate the English ability in medical field. To certify ability in medical English for practical use, the Examination of Proficiency in English for Medical Purposes (EPEMP) was started in 2008 by the Japan Society for Medical English Education.[1] Those who pass the level 4 competence examination are certified as having medical English ability equivalent to those who can graduate from a medical university or college in Japan. Those who can use English fluently for practical purposes in basic interactions with patients are able to pass the level 3 competence examination. Before the start of the official EPEMP, two pilot examinations were performed in 2007 to assess the quality and quantity of the examination questions. We previously reported the analyzed results of the first pilot examination (for level 3 and 4 competency) of EPEMP.[2] We encountered some problems as follows: the average scores were high, more than 80%, without a normal distribution; most of the questions (70.0% in level 3, 76.1% in level 4) were related to knowledge of vocabulary; there were no questions related to practical situations. Furthermore, because the questions were different between the first pilot examinations for level 3 and level 4, we could not obtain sufficient information about the difference in ability between the examinees of level 3

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and 4. To improve the quality of examinations and better understand the proficiency levels of the examinees, we modified the contents of the examinations. In this paper we report the process of validation for the first official EPEMP.

2. Materials and Methods

The results of the second pilot and the first official EPEMP for level 3 and 4 proficiency were used for analysis.

2.1. Contents of the examinations

All examination questions were in multiple choice format (MCQs) which had 4 options with a single correct answer. Various kinds of questions were used in the examinations. According to the classification described in a previous report, sections were divided as follows: idioms, fill-ins, medical abbreviations, synonyms, reading, written conversation, and practical items (questions related to practical situations).[2]

2.2. Background of the examinees

We examined the job or status of the examinees and classified them as follows: medical doctors, medical staff apart from medical doctors (including nurses, clinical technicians, etc.), interpreters or medical translators, medical students, and others.

2.3. Total score and difficulty index

The total score distribution was investigated for each examination. The difficulty index was calculated for each examination question. The difficulty index evaluated the examinee performance on each question and ranged from 0 (no student answered correctly) to 1.0 (all students answered correctly).[3,4]

2.4. Discrimination index

The discrimination index was measured for each question. The discrimination index measures the differences between the percentages of examinees in a designated upper and lower group who provided correct responses.[3-5] Discrimination index values range from 1.0 to −1.0. A discrimination index of 1.0 indicates that all examinees in the upper group and no examinees in the lower group answered the question correctly. A discrimination index of 0 indicates that an equal number of examinees in the upper group and lower group answered the question correctly. When calculating this index, usually the values of upper and lower quartiles of the whole sample of examinees are used.[3,4] However, in the analysis of the second pilot examination, we selected the upper and lower half for calculation owing to the relatively small sample sizes.

2.5. Unanswered ratio

The unanswered ratio was calculated for each question and indicates the prevalence of questions that were unanswered. This was calculated by the number of blank responses divided by the total number of examinees.

2.6. Statistical analysis

We used the unpaired t-test to examine differences in means between two groups. To compare the frequencies of two groups, the χ^2 test was used. If the expected values were too small (less than 5), Fisher's exact probability test was used alternatively. Calculations were performed using the statistical software package Stacel2 (OMS Publishing, Saitama, Japan). Differences with a p value less than 0.05 were considered statistically significant.

3. Results

3.1. Second pilot examination

3.1.1. Contents of the examination

Before the second pilot examination, we revised the questions. The revised points were as follows: the same questions were used for the level 3 and 4 examinations to compare the ability of the examinees; levels of the difficulty of the questions were increased; questions related to practical situations were included; the number of problem-solving questions was increased (vocabulary: 50 questions, reading and written conversations: 45 questions, practical items: 5 questions). Details of the numbers of questions in each section are shown in Table 1.

Table 1 Number of questions and average scores according to each section in the second pilot examinations.

Section	Number	Average score (%)		p value
		Level 3	Level 4	
Idioms	20	76.9 ± 23.3	69.6 ± 24.6	<0.001
Abbreviations	10	71.2 ± 14.9	59.6 ± 17.1	<0.001
Fill-ins	10	66.7 ± 22.2	50.3 ± 29.6	<0.001
Synonyms	10	80.5 ± 16.9	70.1 ± 16.3	<0.005
Reading	30	72.1 ± 19.2	63.5 ± 19.6	<0.005
Conversation	15	77.3 ± 18.7	71.0 ± 19.3	<0.05
Practical	5	62.1 ± 15.5	51.6 ± 17.3	<0.05
Total	100	73.4 ± 13.8	64.7 ± 13.0	

3.1.2. Background of the examinees

Seventy-five persons took the level 3 and 69 took the level 4 examinations. Regarding the distributions of the examinees, level 3 examinees consisted mainly of medical students (37.3%), followed by medical staff (20.0%), medical doctors (17.3%) and others (14.7%) (Table 2). In level 4, medical students made up 68.1%, followed by medical staff (18.8%), and others (10.1%) (Table 2). The proportions of medical doctors and interpreters were significantly larger and that of medical students was significantly smaller in the level 3 than in the level 4 examination. (Medical doctors, interpreters: Fisher's exact probability test, $p < 0.005$; medical students: χ^2 test, $p < 0.005$).

3.1.3. Scores

The average score on the level 3 examination was 73.4 ± 13.8% and that of level 4 was 64.7 ± 13.0% (means ± standard deviations). The curves showed normal distributions (Fig. 1). The average scores according to each section are shown in table 1. In all sections, the scores were significantly higher in level 3 than in 4, with differences of 6.3 to 16.4% (unpaired t-test, $p < 0.05$). Furthermore, the average scores according to the background of the examinees are shown in Table 2.

3.1.4. Discrimination index

Average discrimination indices of the level 3 and 4 examinations were 0.26 ± 0.15 and 0.23 ± 0.15 (mean ± standard deviation), respectively (Fig. 2).

3.1.5. Unanswered ratio

Unanswered ratios according to the question number in the level 3 and 4 examinations are shown in Figure 3. In the latter half of the examination, the unanswered ratios markedly increased. The maximum unanswered ratios in levels 3 and 4 were 9.3% and 8.7%, respectively.

The averages of unanswered ratios of all questions in the level 3 and 4 examinations were 2.7 ± 2.5% and 1.3 ± 1.9%, respectively.

3.2. First official examination (2008)

3.2.1. Contents of the examination

After the second pilot examination, we further revised the questions. Although both the average scores and difficulty indices were considered to be adequate, high unanswered ratios were shown, especially in the questions about reading (relatively long passages), written

Table 2 Background of the examinees and average scores in the second pilot examination.

Examinee Background	Level 3		Level 4	
	Number (%)	Average score (%)	Number (%)	Average score (%)
Medical doctors	13 (17.3%)	88.2 ± 8.2	2 (2.9%)	59.7 ± 15.6
Medical staff	15 (20.0%)	66.5 ± 10.9	13 (18.8%)	62.8 ± 12.8
Medical students	28 (37.3%)	72.0 ± 12.2	47 (68.1%)	67.8 ± 11.6
Interpreters	8 (10.7%)	75.3 ± 14.6	0 (0%)	—
Others	11 (14.7%)	67.7 ± 14.6	7 (10.1%)	49.3 ± 13.0
Total	75 (100%)	73.4 ± 13.8	69 (100%)	67.7 ± 13.0

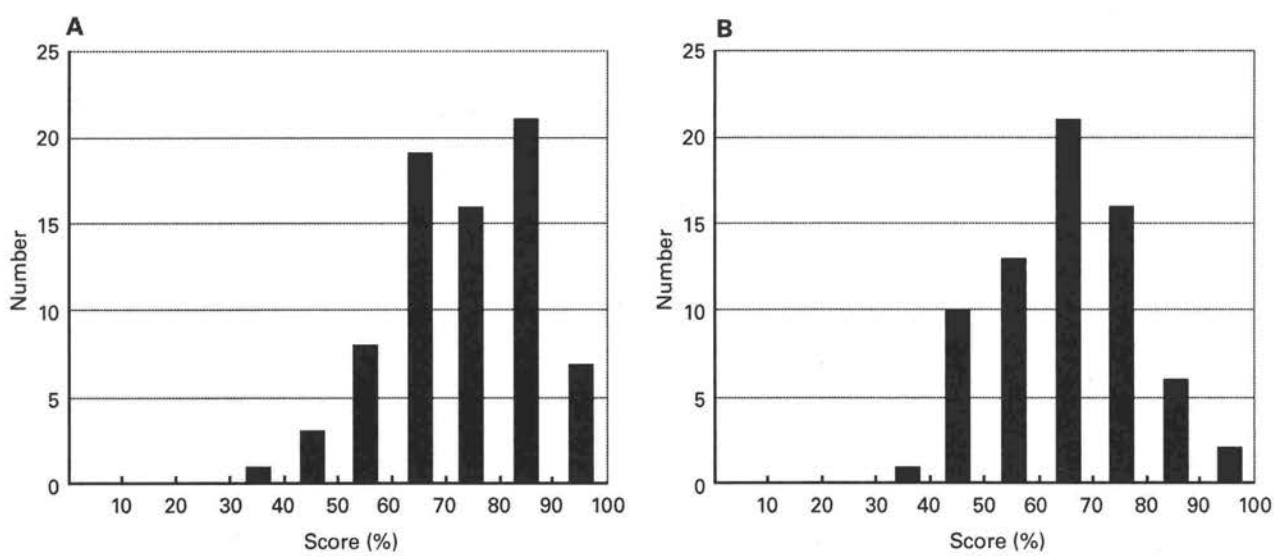

Figure 1 Distribution of the total score of the level 3 (A) and level 4 (B) in the second pilot examination.

conversation and practical items. Therefore, we reduced the number of questions from 100 to 90, (vocabulary: 40 questions, reading and conversations: 45 questions, practical items: 5 questions) and shortened the passages in the reading questions for the first official examination.

3.2.2. Background of the examinees

A total of 401 persons took the level 3 examination and 178 took the level 4 examination. Trends of the distributions of the examinees, and backgrounds in each examination were similar to those in the second pilot examination. Medical doctors were dominant among level 3 examinees (26.9%), followed by medical students (37.3%). In level 4, medical students made up 39.3%, followed by others (30.9%). The proportion of medical doctors was significantly higher and that of medical students was lower in level 3 than in level 4 (χ^2 test, $p < 0.001$).

3.2.3. Scores

The average level 3 examination score was 75.2 ± 13.0% and that of the level 4 examination was 62.9 ± 14.2% (mean ± standard deviation) both with normal distributions.

3.2.4. Discrimination index

Average discrimination indices of the level 3 and 4 examinations were 0.38 ± 0.14 and 0.38 ± 0.13 (mean ± standard deviation), respectively (Fig. 2). The values were higher than those of the first and second pilot examinations.[2]

3.2.5. Unanswered ratio

The maximum unanswered ratios in the level 3 and 4 examinations were 3.0% and 6.7%, respectively. The averages unanswered ratios for all questions in the level 3 and 4 examinations were 0.5 ± 0.7% and 1.0 ± 1.4%, respectively.

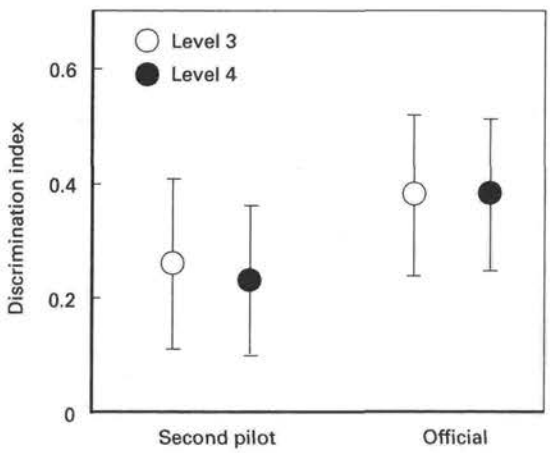

Figure 2 Average discrimination indices in the second pilot and official examinations.

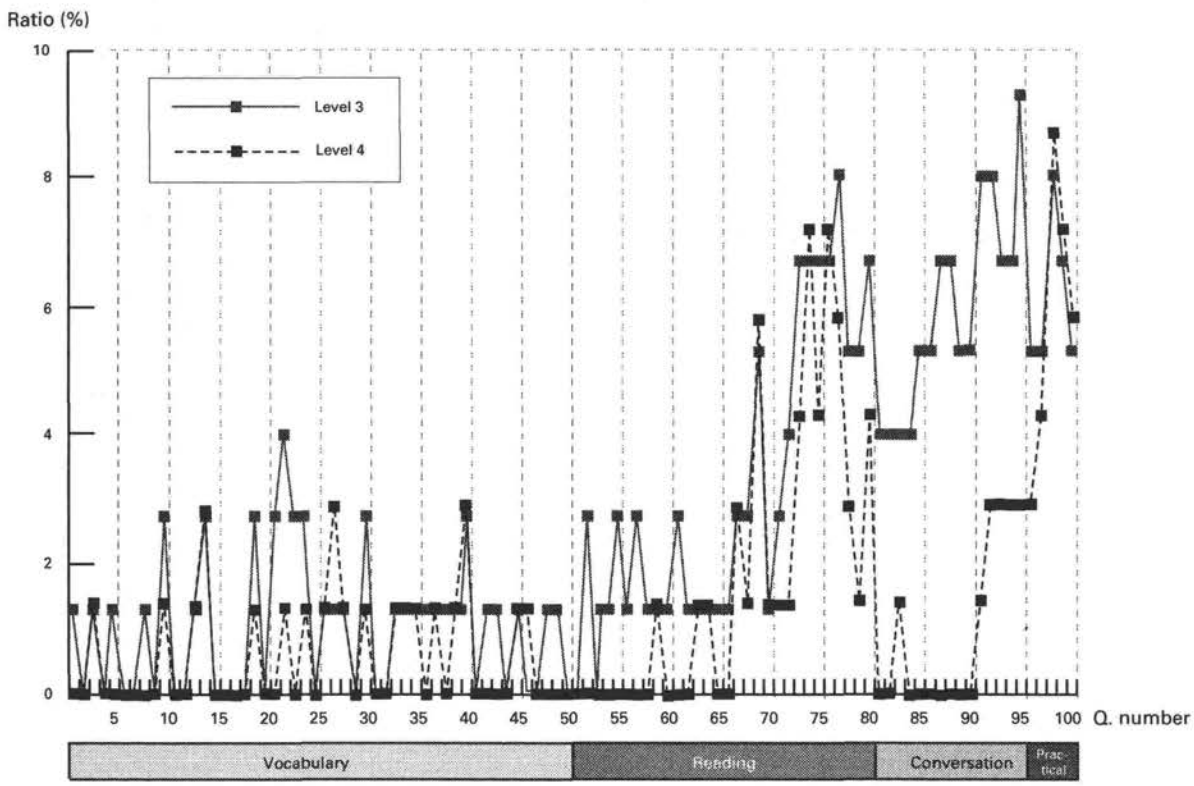

Figure 3 Unanswered ratios by question number in the second pilot examination.

4. Discussion

The EPEMP was established to standardize and evaluate English ability in the medical environment. To attain and maintain a high level of validity and reliability of the examination, we strove to develop the contents of the pilot and official examinations. Based on the initial results, first, we modified the questions and elevated the levels of difficulty of the questions. As a result, the average scores on the second pilot examination entered the ideal range (60 to 75%) with normal distributions [4-6]. Furthermore, because the same written examination was used in level 3 and 4 examinations, the difference in ability of the examinees was reflected by the difference in the average score (8.7%). The differences in average score, is due to differences in the backgrounds of the examinees: medical doctors were predominant in the level 3 examination and medical students were predominant in the level 4 examination. In the first official examination, the distributions of the backgrounds of the examinees were similar to those in the second pilot examination, and a similar difference in average score was also observed.

The major object of this study was to certify the ability of EPEMP to evaluate medical English capability for practical use. After the first pilot examination, further arrangement of problem-solving questions and questions related to practical items were emphasized. Problem-solving questions (reading, written conversation, practical items) accounted for half of all questions. In the medical environment, in addition to knowledge of medical vocabulary, it is necessary to have the ability to read quickly and understand passages, to communicate and to correspond, in any and all situations. Therefore, in further examinations, it is necessary to ensure that a variety of types of questions, including sufficient problem-solving questions, should be used.

In the second pilot and the first official examinations, discrimination indices were high. Generally, because the discrimination index is closely related to difficulty,[5,6] questions that are too difficult or too easy are not as capable of discriminating between high and low ability as questions of moderate difficulty. Ideal questions are characterized by both high discrimination and acceptable difficulty. In the second pilot and first official examinations, since their levels of difficulty were considered as moderate, they are suitable to compare and evaluate the calculated indices. Because questions with a discrimination index of more than 0.2 are considered appropriate,[3-5] the official examination, with an average discrimination index of 0.38, was considered to consist of good MCQs. Maintenance of a high discrimination index is required in further examinations.

In the second pilot examination, unanswered ratios markedly increased in the latter half of the examination. To answer the reading (especially long passages) and conversation questions within the examination period was considered to be difficult. Therefore, the number of the questions was decreased and lengths of the reading passages were shortened on the official examination. Finally, the results of unanswered ratios of the official examination indicated that most of the examinees could solve all questions within the examination period. To decide on the number of questions is also important in modifying examination contents. In addition to the unanswered ratio described in this article, analysis of subjective feedback from the examinees might be useful for further assessment.

In this paper, we describe the validation process for the first official EPEMP. The results of the two pilot examinations contributed to the improvement of the examination quality. Continuous developmental studies are needed to maintain a good quality examination with high reliability and validity.

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References

1. Japan Society for Medical English Education. 2007. *Official Guide to the Examination for Proficiency in EMP Grades 3 & 4.* Tokyo: Medical View. pp. 1–161. (in Japanese)
2. Hitosugi M, Shimizu M, Barron JP, et al. 2009. Analysis of the result of the first pilot Examinations for Profiency in English for Medical Purposes . *J Med Eng Educ* **8**(1): 17–20.
3. The Research Grou for Medical Education. 1976. *Validation and Objective Questions in Medical Eduation.* Tokyo: Shinohara Shuppan. pp. 1–451. (in Japanese)
4. Japan Society for Medical Education. 1984. *Manual for Medical Education, 4. Validation and Testing.* Tokyo: Shinohara Shuppan. pp. 1–182. (in Japanese)
5. Ebel RL, Frisbie DA. 1991. *Essentials of Educational Measurement,* 5th ed. Englewood Cliffs: Prentice Hall. pp. 1–358.
6. Sim SM, Rasiah RI. 2006. Relationship beween item difficulty and discrimination indicies in true/false-type multiple choice questions of a para-clinical multidisciplinary paper. *Ann Acad Med Shingapore* **35**: 67–71.

【Special Article】

第 11 回日本医学英語教育学会総会・特別講演

医療と通訳：コミュニケーションの視点から

演者

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本日は日本医学英語教育学会にお招きいただきまして，どうもありがとうございました。私は医学には全く素人ではありますけれども，昨日たまたま認知神経科学会が東大の本郷キャンパスで開かれて，そこで「多言語」がテーマのシンポジウムがありまして，植村先生とご一緒でした。連続して今日もお目にかかりましたけれども，何でも伺いますと，植村先生が退官なさったときにお作りになった学会だということで，大変光栄に存じます。ランチョンセミナーということで勉強という感じでもありませんので，PowerPoint はなしでひたすらお話をします。どうぞリラックスして，ゆっくりお食事を楽しまれながら聞いていただければと思います。

1. 言語コミュニケーションと医学との接点

いま私は「医学は全くの素人だ」と申し上げましたけれども，その素人の私が，最近は無縁ではいられなくなっているという気がしています。どういうことかと言うと，タイトルにも挙げました「コミュニケーション」，私の専門はコミュニケーション，とりわけ言語コミュニケーションなわけですけれども，その観点から医学との接点が生まれているのです。

例えばこの間，ある国立の施設から，病院の安全に関するアンケート調査を全国で行いたいと頼まれました。アンケートというのはなかなか大変なので，むやみに質問してもよい結果が出なかったりします。慎重に作らなければいけないのだけれど，すでにアメリカで実施されているアンケートがあるので，それを利用したいということでした。しかし，アメリカで開発されたものなので英語で書いてあって，一応は日本語に訳してあるものの，それをそのまま日本の病院関係者に配ってアンケートをしても，アメリカの病院文化あるいは状況と，日本の医療環境や病院の状況とは全く違うので，意味をなさない質問があったり，「これは何のことなのか」と理解できなかったり，勘違いして答えてしまうような，そういうアンケートになりかねない。そこをチェックしてほしい，というご依頼でした。原文の英語を読んで，そして訳された日本語を読んで，それが正しいかどうか，それを医学関係者と，コミュニケーション/言葉の専門家として私が，丸一日費やしてディスカッションしながらそのアンケートの設問を変えていくという，例えばそういうお声がかかった。

それから国立国語研究所が「病院の言葉」委員会というのを去年から作りまして，私もそのメンバーに入っています。なぜ「病院の言葉」委員会ができたかと言いますと，数年前，当時の小泉首相が「役所の文書にカタカナが多すぎる。あれでは一般の国民はわからない。だから官庁の○○白書，それから官庁が発信する文書などからカタカナ語をもう少し減らせないか」という発言をした。それが文部科学省にいき，当時の遠山敦子文部科学大臣が「何とかできないか」ということで国立国語研究所が検討することになった。そういう

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文化放送「百万人の英語」講師，国語審議会委員，観光政策審議会委員等を歴任し，現在は日本ユネスコ国内委員会委員，国立国語研究所評議員，日本通訳翻訳学会会長。日本翻訳家協会理事。日本学術会議連携委員，中央教育審議会専門委員，国際翻訳家連盟学会誌（FIT）（Babel, John Benjamins）編集委員，The Interpreter & Translator Trainer（St Jerome）編集顧問。

主な著書として，『歴史を変えた誤訳』（新潮文庫），『通訳者と戦後日米外交』（みすず書房），"Voices of the Invisible Presence"（John Benjamins Pub Co），『通訳学入門』（監訳，みすず書房），『翻訳学入門』（監訳，みすず書房）などがある。

ことで，外来語委員会というものが国立国語研究所の中にできたのが，もう数年前です。

国立国語研究所ですから日本全国の人たちを抽出して，それこそアンケート調査を大々的に行って，官庁の文書に出てくるカタカナ語の認知度を調べました。認知度が80％以上はもう定着したとしてみなして触らない。それから，すでに日本語化しているものはもちろん触りません。「コーヒー」とか，そういうものは検討対象から外します。

問題は，最近になってどんどん入ってくる，英語からきているカタカナ語をどうするかです。4人に1人しか知らない，あるいは意味がわからない，つまり4人に3人はよくわかっていないというような結果が出たカタカナ語について，言い換えの提案をしたわけです。

これは法的な拘束力はありませんから，単なる提案です。特にマスコミ，放送，新聞関係者に対して，「次のようなカタカナ語は，一般の人たちの認知度が低いので，できることなら使うときに言い換えをするか，あるいは説明を入れてほしい」という要望を出したわけです。

考えた言い換えは好評のものもあり，不評のものもあり，いろいろだったのですけれども，その中で問題が浮き出たことが1つあります。それは，カタカナ語がきわめて多い分野というのが限定されている。例えば，ファッション関連。でもファッションはよい。何となくすてきな感じがするから使いたいということだろうから，それは目くじらを立てない。

もう1つは，コンピュータ用語です。そもそもコンピュータを使えない人は，インターネットや携帯が使えないと情報格差になってしまって，受ける情報が少ないという不平等が起きるのですが，そこにカタカナ語が入るとますますわけがわからなくなる。これはdigital divideとなります。ある一定の年齢以上は特に困る人が多いのですが，これは結局，どうしようもありませんでした。

なぜなら，例えば「ユビキタス」。これはもともとはキリスト教からきた「神はどこにでもいる」という意味を込めた，「どこにでもある(ubiquitous)」という単語なので，「普遍，遍在」とか，「どこにでもいる」とか，何かそういう言い換えを考えたのですが，コンピュータ関係者から激しい反論がきました。「ユビキタスというのは，慶應SFCの○○教授が作った用語であって，いつでもどこでもコンピュータという社会を指していまや"ユビキタス社会"という専門用語になっているから触ってほしくない」という強い要望がありました。

そのほかにも「ログイン」とか「アクセス」とかいろいろあるわけですけれども，そういったものをいちいち日本語にしていたら日が暮れるということで，これも言い換えは断念しました。カタカナを使えば"ギブアップ"，諦めました。

ただし，看過できない分野として問題が出てきたのが，福祉と医療です。福祉と医療，この2つは，カタカナ語があまりに多いと困ります。サービスを受ける立場の人が，何が何だかわからないうちに話が進んでしまう。これは問題ではないかということになりました。福祉も問題だということになりましたけれども，まずは命に関わる医療ということで，「病院の言葉」委員会というものが立ち上がったのです。

2.「病院の言葉」委員会

担当者の話を聞きますと，「医療コミュニケーション」となると，あまりにも話が広がりすぎるので，単語レベルに限定することになり「病院の言葉」委員会という名称になったとのことです。

この委員会には，医療関係者，患者の会代表者，それから私のような言語コミュニケーションの専門家，放送関係者，新聞の用語委員会の人たちなどが入っています。

放送関係者としてはNHK放送研究所からメンバーが入っていますが，大事なのです。外来語委員会の時もそうでしたが，「こういう言い換えをしようか」と意見が出ると，「それはだめ。テレビで言ったときに，同音異義語を耳だけで聴いていると，どちらかわからなくなるからだめだ」というような意見が出て，「では，耳から聴いてもわかる言葉は何か」という，そういう視点からもう一度考える。これは非常に大事です。

その「病院の言葉」委員会が，データを集めながら作業しているのですけれども，やはり言葉の問題では終わらないのです。どうしてもお医者さんと患者さんのコミュニケーションの問題になってしまうので，コミュニケーションの問題を取り込みながらまとめようかという話にもなっています。

最終結果が出る前に，外来語委員会と同じようにインターネットのホームページで公表して，そして一般の方のご意見を募ります。そうすると，いろいろな方がいろいろなことをおっしゃって，期せずして日本人の言語意識であるとか，日本人の言語に対する感覚というのがよくわかります。ですから，専門家，特に医学と言葉の橋渡しの部分にいらっしゃる皆様方には，そういうものをチェックしてぜひご意見をいただきたいと思います。

3. 患者さんには伝わらない表現

例えばこういう事例が出てきました。皆さんは医学の専門家でいらっしゃいますから，「何を驚いているの」とおっしゃるかもしれませんけれども，私は素人ですからびっくりしたことがあります。

お医者さんが，「不都合が起きる可能性があります」とおっしゃることがあるそうです。私は言われたことがないのですが，これは要するに，皆さんご存じのように，医師の側から言わせると，全くリスクのない，危険のない手術であるとか，副作用がゼロという薬というのはなかなかない

もので，しかしリスクがどれくらいの度合かというのは難しいようです。例えば100人に1人とか，何万人に1人とか，確率が低い場合には，「言わなくてもよいかな」，「あまり余分な心配はさせてはいけない」などと考えるとのことです。「ええっ，もしかすると何か大変なことになるのですか。悪い結果が出るのですか。どうしよう」と，患者は非常に心配しますので，そんな余分な心配はさせたくない。しかし，「大丈夫ですよ。全く心配ありませんよ」とは言い切れない。何か起こるかもしれない。百万人に1人だと言っても，この人がその1人かもしれないわけです。ですから，何か言わざるをえないという時に，「不都合が起こらないとも限らないのですが，まあ大丈夫でしょうね」という言い方をお医者さんはする。

ところが患者側のアンケートをとってみると，その意味するところが全く伝わっていない。「何だかわからない」，「そう言えばそういうことを言われたけれども，わからない。何のことなのだろう」と。よもや何分の1かの確率で危険があるとか，副作用があるとか，そういうことには全く思いがいっていない。これをただ単語レベルでとらえるのか，コミュニケーションの問題としてとらえるのか。私はこれはコミュニケーションの問題だと考えます。

これは，インフォームド・コンセントの観点から考えるとはなはだ問題です。薬を飲んだり手術を受けるのは患者本人なわけですから，「もしかしたら，可能性は低いけれどもリスクもある」ということを覚悟しておかないといけないわけです。医師の側が思いやりで，「あまり心配させてはいけない。でも一応言っておくかな」と日本らしい気配りで「不都合がないとも限りません」という言い方をして，全く患者に通じていないとしたら，これは言わないのと同じことになるわけです。

面白いことに，10日前の群馬県の講演会でこの話をした時に，聴衆に向かって，「これを言われたことがある人」と言ったら皆さん困った顔をしていたのですが，「言われてわからなかったので，『何ですか？』と聞き返したことのある人」と聞いたら，20歳代はじめの若い人が手を挙げました。

「何のことかさっぱりわからなかったので，『それは何のことですか？』と聞いてみた」。そうしたら先生が答えてくれて，「あっ，リスクが絶対ないわけではないのだなということがわかった」と言いました。その人は大学生でした。

ということは，若い人には「不都合がある」というような日本語自体が通じない，わからない。だから「何のことだ？」と思って聞いてみるわけです。ある一定年齢以上の方は，「不都合がある」という意味が何となくわかるから，聞かないということになるのかもしれません。

というようなことで，医学におけるコミュニケーションの問題というのはかなり大きなものがある。それに気がつき始めた人たちがいるということです。

4. 多言語化する外国語での医療コミュニケーション

いまお話ししたことは，日本語の母語者同士の会話です。お医者さんも日本人で日本語を母語としていて，患者も日本人で日本語を母語としていて，それでもこんなに通じないのです。

この頃，日本語が話せない患者が非常に増えています。これは大きな問題です。ここには医療通訳に携わっていらっしゃる方が何人かお見えですけれども，その人たちが日々直面している問題というのは，要するに，医療コミュニケーションだけでも問題なのに，そこに外国語でのコミュニケーションという問題が入り込んでくるということなのです。

もちろん英語はその中で大きな言語です。しかし最近の日本は，英語だけではなく多様な言語が増えている。いつだったか朝日新聞の記者が「『グローバル化の正体』というようなことでシリーズでやっているので」ということで私のところに取材に見えて―5月末に出ているので，もしかしたらお読みになった方もいらっしゃるかもしれませんが-その時に取材に来た記者はある思い込みがあったようです。「グローバル化だから，いまのコミュニケーションというのは，パソコンの基本ソフトのようにすべてがユニバーサルに普遍化して，規格化されていくのではないですか」という質問だったので，私は「とんでもないです。グローバル化の結果として，いま日本で起こっているのは，多言語化，多文化化現象です」と申し上げました。

要するに，グローバル化で人々が自由に世界中を動き回るようになって，そしてグローバル化で日本も世界に門戸を開いているわけです。そうすると世界の各地からさまざまな人たちがやってきます。観光客ももちろん増えていますけれども，観光客は楽しく1週間くらい過ごして帰っていくわけですから，それほど日本社会にインパクトを与えません。けれども，定住する人たちも多くいます。留学生もいるし，留学生と一緒に来た家族もいるし，働きに来ている人たちもいるということで，ある自治体では，学校で30％以上が日本語を解さない子供たちが入って来ていて，そして親も日本語を解さない，この子たちを公立小学校でどうやって教育していくかということが大きな問題になっています。

言語の数でいうと，実は日本には50ヵ国語くらいあるのです。通訳者を例にとると，英語は何とか不十分ながらも行き渡っていると思いますけれども，中国語，韓国語，スペイン語，ポルトガル語などは圧倒的に足りない。アフリカから来た人は，スワヒリ語の通訳者を用意すれば間に合うかというと，とんでもない。さまざまな部族語の人がいるのです。「スワヒリ語を知りません」「英語も知りません」というような人たちが日本に定住しているわけです。生身の人間です。病気にもなります。お医者さんに行きます。でも言葉はどうするのですか，ということになります。

私も何ヵ月か前に歯医者さんに検診に行ったのですけれども，そうしたら歯の治療を受けている人がいて，どうやらアフリカのどこかの国の大使館に勤めている人のようで，大変な騒ぎでした。それこそ見ていて「英語だったらお手伝いしてあげよう」と思いましたけれども，英語ではないのです。大丈夫かなと思いながら去りましたけれども，そういうことが日本の現実にもなってきているということで，そのような言語の多様性にどう対応していくかということが問われています。

5. 医療通訳

病院でも，例えば聖路加国際病院などでは言語サービスというものを用意はしているのですけれども，そういう恵まれた病院というのはそう数多くありません。それが次の問題につながるのですけれども，病院からしてみると，「病院の経営自体が大変なのに，そんな各国語の通訳者を揃えていられるわけがないでしょう」となります。そうすると通訳者というのは，この頃ボランティア団体ができて何とかしようとしてはいますけれども，まったく数が足りない。先ほどお話しした聖路加にしても，実はボランティアばかりです。聖路加に登録している医療通訳者の人たち全員がボランティアで，交通費も出ないで，ひたすら世の為，人の為と思って，「自分の能力を生かしてお役に立てるのならば」ということでやっている。

それは美しい行為ではあるのですけれども，長期的に見たときに，これでは医療通訳者が育っていかないのです。片一方で無料でできるとなると，やはりお金を出して通訳者を依頼しようかということにならない。社会としてそのようになっていかないのです。通訳というのは専門職でありながら「無料で頼むものだ」と思われてしまうのです。

患者にしても，だれか知り合いでその言語ができる人に頼むとか，日本語ができる人を頼むとか，いよいよいなければ，何とか日常会話程度はできるようになった自分の子供を連れて行くとか。子供ですから，わけがわからなくてとんでもない通訳をやったりもする，そうするとその言語がわからないお医者さんにしても，患者(親)さんにしても「何だかよくわからない」という，危ういことになるのです。

医療というのは人の生命に関わることです。風邪をこじらせても命に関わるわけですから。ちょっとした切り傷だと思ったのが，そこから黴菌が入って大変なことになる場合もあるわけで，命がかかっている。そこに通訳者として入って行くということは，責任を考えたらとんでもなく大きな責任なわけで，やはり専門職を育てていかねばならない。

医療通訳者にどういう資質が必要かと言うと，これはこの学会の会員でもあり，日本通訳翻訳学会でコミュニティ通訳分科会の水野真木子さんが常々訴えておられることをちょっと拝借してみます。医療通訳者にまず必要なのは，医療用語についての専門知識です。中身がわからなかったら通訳はできない。ですから，専門知識が必要である。それから，通訳に関する専門知識と技術も必要です。さらには，通訳者としては異文化コミュニケーションがどういうものかという知識も必要です。加えて，医療通訳をするときには倫理というものがありますが，それを知っている必要がある。

これは研修を行ったり，訓練を行ったりして養成していかないと，長期的になかなか育っていきません。いくら頑張ってお金を出して研修を受けてもボランティアで収入を得られないとなったら，自腹を切って訓練を受けて勉強しようというモチベーションはなかなか生まれないわけです。ですからそこが悪循環に陥らないように，どこかできちんとしたいという思いがあります。

医療の専門知識あるいは医療用語の専門知識がなければ困るということは，これはもうここにいらっしゃる皆さんはよくおわかりだと思います。例えば「寛解」という難しい漢字の医療用語がありますね。「医療通訳を自分はしている」と言っている人に聞きましたら，「寛解ね，知っているわよ。治ったことでしょう」と言うのです。私は，習ったばかりでしたから，「違います。完全な治癒ではない。治ったように見えるけれども，しかし，完全に治癒したわけではない。その保証はまだちょっとというときに寛解というらしい」。だから悪くなることもあり得るという，それで「寛解」と言うのだそうで，これも「病院の言葉」委員会で問題になった用語なのです。

お医者さんは「寛解」という用語を頻繁に使うようですが，患者側にアンケートをとると，わかっていない人が多い。「何かわからないけれども，治ったようだ」というように受け取っているのです。やはり医学部で教育をするときに，専門用語はなるべく避けて患者に説明をするという，コミュニケーションの訓練をするべきである。そのときに「寛解」などという，聞いて，とても一般の人がわからないような言葉は使わないようにする。そういう話も出ました。

その時に医学の専門家から聞いたのは，「医学部を出たての若い医者は，とにかく『知っているんだぞ。専門家だぞ』ということを言いたいがために，専門用語をちりばめて患者に説明をする癖がある」ということです。「若い時はどうもそういうものだ」というのです。でも，それは患者の側からしてみると，「若いな。もしかして医学部を出たてかな。大丈夫かな」と思ってもおくびにも出しませんし，医学用語を振りまいていただかなくても，専門家だということはよくわかっていますから，やはり噛み砕いた説明をしてほしいというのが本音だろうと思います。

6. 通訳者に求められるもの

そのように医学知識，医学用語を知る必要があるというのは，ここにいらっしゃる皆さんは当然ご存じだろうと思

います。しかし，よくあるのは「通訳の倫理だとか，通訳の知識だとか，通訳の技術，これは改めて学ぶ必要があるのだろうか。医学用語を知っている○○さんだったら英語ができるし，帰国子女だし，何か頼めるんじゃないの？」という感覚です。

しかし，これは違います。通訳の素人とプロとの違いというのは，プロの通訳者は通訳をすることの怖さを知っている。むしろ，素人さんはそれを知らないからできるということがあるのですね。通訳をするということは，こんなにかけ離れた深い川に橋を架けることなのです。例えば日本語と英語と，ルビコン川とまでは言わないけれども，しかしそれをエイヤッと，本当は橋を架けられないぐらい滔々と流れている深い大きな流れに無理矢理橋を架ける。そして何とかわかってもらうという，そういう仕事をしている。毎日，綱渡りをしているようなのが通訳者です。

通訳という職業は毎日が勉強，一生が勉強で，「ああよかった，これで終わり」ということはないわけです。「今日やったあそこは，ああそうか，あのように訳してあげればもうちょっとわかったのかな」，「あそこはあのように言ってしまったけれども，ちょっと踏み込みすぎたかな」と，毎日迷って反省し，そこでめげないというのも通訳者の資質の1つでして，そこであまり深く悩みすぎると通訳ができなくなる。そこできれいさっぱり「次は頑張ろう」と，明るく次へ向かうのが通訳者なのです。

何が難しいかと言いますと，具体的に例えば，このあとの発表セッションで座長をされる押味貴之さんも医療通訳の専門家，指導者として，常々こういうことをおっしゃっています。「医療における通訳では，何も足さない，何も引かない。これが鉄則である」と。これは本当にそうなのです。

通訳をしていて，その通訳者が勝手に自分の判断で「これはこうかな」と思って足してしまったり，例えば患者が「よくわかりませんけれども，何か熱っぽいのです」と言った時に，「熱があるって言っていますけれども，たいしたことはないでしょう」というような余計なことを付け加える場合があるかもしれない。それから患者が縷々訴えている，「何か昨日から具合が悪くて，ボーっとしていて，何か頭がガンガンするし，何かちょっと気持が悪いような気もしないでもなくて，眠れなくて，いつも眠れないことが多いのですけれども……」とグチャグチャ言った時に，「こんなにグチャグチャ言っていることを，いちいち訳すこともないだろう」と"He is not feeling too well."と言って終わってしまったとする。それでよいのか。

これでまずいのは，例えばこのグダグダしゃべっていることの中から，もしかすると医師の側が心の病を見つけ出す場合があるかもしれない。診てみると，身体には特に症状がない。でも，何かしきりに訴えている。つまびらかに聞いていれば，「これは何かほかに原因がある」となるかもしれません。

例えば私の長男も，いまはもう大人になっていますが，この子が小学生4年生くらいの時に，いつも健康で元気一杯で，体格がクラス1大きい元気な子なのですけれども，下痢が止まらなくなったのですね。それで「珍しい，どうしたのだろう」と思って近くの小児科のお医者さんへ連れて行ったら，その開業医の方が診てくれて，そして息子に「ちょっとここにいなさい」と言って，「お母さん，ちょっと」と言って別室に私を連れて行って，「学校で何かありませんか。これは神経性胃炎です」と。「何か学校であるのではないか」と。それで「私が聞いても言うわけはないので，お母さんがうまく何か折を見て聞き出して，そして学校のほうでも調べてみたらどうですか」「体のほうは全然問題ありません」と言うのです。それで先生は，息子に「僕，大丈夫だよ」と言っていろいろ話をして，「このお薬を飲んだら治るからね」と言って，この薬はほとんど何も意味のない，ジュースのようなものだからと，適当に飲み薬のようなものをくださった。

息子はおしゃべりな子ではないのですが，とつとつと症状を訴えたのでしょう。お医者様は話をしながら，何か感じた。子供というのは難しいもので，「何か学校であったの？」と言っても，かくかくしかじかだとは絶対言いません。さり気なく聞いていったら，学校で先生が特定の子供を異常にターゲットにして厳しく叱ったり罰したりしていて，息子はそれが耐えられなかった。でも，自分は何ともできないので悶々として，体の調子が悪くなってしまった。親にも，「先生がそんなことしているのを言ってもいいのか」のいうようなことで悩んでいたらしいということがわかりました。問題自体が解決したら治ったのですが。

ちょっと話が長くなりましたけれども，医師が診断するということは，やはり身体を診るだけではなく，患者を人間としてトータルにみて理解をして，そしてこの病気の原因は何なのかということを探っていく。その中の大きな手掛かりは言葉なのです。患者の発する言葉です。ですから，それをどう通訳するかによって医師が患者について受ける印象が全部変わってくるはずなのです。それを考えると医師と患者のコミュニケーションは簡単ではない。

というのは，コミュニケーションというのは，言葉を右から左に，あるいは縦のものを横にするという，そういう簡単なものではない。コミュニケーションというのは，人と人とのinteraction（相互作用）なのです。例えばこういう講演の場では，私は皆さんと対話をしていると勝手に思っているのです。皆さんの反応を見ながら，横を向いてつまらなそうに欠伸とか，そうなったら「この話はウケていないのだ」と思って，ちょっと違うほうに切り替える，という風にしたいので，PowerPointなしでお話ししています。PowerPointを使ってしまうと，それに引きずられるので。やはり"対話"をしたい。

ミハイル・バフチンというロシアの思想家は，このようなモノローグであっても，「モノローグであっても基本的に

はダイアローグである」「対話をしているのだ」ということを言いました。アーヴィング・ゴッフマンという社会学者も，それからブルデューというフランスの社会学者あるいは哲学者も，「人と人との対人コミュニケーションあるいはinteractionというのは，社会的な真空状態の中で起こるわけではない」と言っています。

それぞれが，医者なら医者としての見識を備えた一個の人間，そしてその人となり，いままでの生き様，日本のどこかで生まれ育ってきた，それをすべて引きずってここにいる。そして患者もそうなのです。日本人でないのならば，どこの国かわかりませんけれども，ある国のある町で育ってきて，それなりの価値観と信条と，そしてコミュニケーション・スタイルを持ってやってきて相対している。それだけでもいろいろなことが起こるのです。

その上に，患者とお医者さん，これはものすごい権力関係なのです。お医者様はそう意識していないかもしれないけれども，患者は弱者です。弱い存在です。何もわからない。自分の体のことなのに，どうしてよいかわからない。目の前にいる，エキスパート(専門家)であってすべてを知っている神様のような存在である医師に診てもらって，そして判定してもらって，そして「こうしなさい」と言ってもらわないと体が治らない。

そういう患者にとって，「それはどういうことですか」とか，「言っている意味がわかりません」とか，「それは嫌です」とは，とても言いにくいのです。「わからないのは，医学知識のない無知な私が悪いのだ」くらいに思ってしまって，ともかくすがって「治してくれればよい」と思う。「お願いします」と。特に日本の場合には，やはりその意識が強いようです。

7. “Informed Consent”と「インフォームド・コンセント」

本当はそろそろ質疑応答に移るのですが，1つだけ申し上げておきますと，例えば，最初に申し上げた外来語委員会で問題になった言い換え語で「納得診療」というのがあります。“informed consent”の言い換えです。「インフォームド・コンセント」では，英語そのものでわからないだろうから，もっと何かよい言い換え語はないものだろうかと散々知恵を絞って「納得診療」という表現が出できたのですが，これはあまり定着していません。私は，これは出てきた中ではベストの言い換えではあるけれども，しかしすべてを言いえてはないと思っているのです。なぜならば，「インフォームド・コンセント」とカタカナで言っても，これは英語の“informed consent”とは全く違う。

“informed consent”と英語で言う時には，これは患者の権利を言っているのです。つまり，これは医学綱領のようなものに文書としてきちんと出ていて，医者は患者と綿密なコミュニケーションをとる義務があるということもきちんと言っている。そして患者にはすべてを知る権利があるということも言っていて，その上での“informed consent”なのです。

つまり，最終判断は患者である。患者自らが，主体性を持って自らの体のことを決定する権利がある。しかし，決定するに当たっては，専門家としての医師から様々な情報を得て，そして「これならばAという手術をする」，「手術はしない」，「内科的な治療でいく」という，例えばA，B，Cという選択肢があるとするならば，「Aの場合にはリスクはこうで，プラスはこう。Bの場合はプラスはこうで，マイナスはこうです。Cの場合にはこうなる」と，すべての情報を提供(inform)して，その上で患者が「では私はこれにします」と選んで同意(consent)をする。それが“informed consent”なのです。

例えばお産にしても，病院に行くと，ベルトコンベアに乗ったようにして産まれるわけなのですが，私もそうやって3人産みましたけれども，アメリカでお産をした友たちに聞きましたら，「これはレストランのメニューか？」と思うようなメニューを渡されて，「あなたはどういうお産 delivery を望むか」と聞く。無痛がよいのか。自然がよいのか。鏡を見てチェックしながらお産をするのがよいのか。夫には付き添ってほしいのか，ほしくないのか。子供はどうするのか，子供も一緒に病室に入れて一緒に産むという場合もある。いろいろある中から選んで希望する。

だから，そういう土壌のある国で生まれた"informed consent"という言葉と，これを日本語に訳して「インフォームド・コンセント」というカタカナ語にした時と，意味がやはり違うということがあります。

でも，違うと言っても，訳さないわけにはいかない。そういうときに，医療通訳者がどこまで訳の中に織り込むのか，織り込まないのか。あるいはアドバイスとして患者に言うのか，言わないのか。説明を医師に対してするのか，しないのか。

「患者は弱者であるから，医療痛訳者は advocacy として患者の権利を守る立場に立ってサービスを提供するべきであって，仲介者(intermediary)の役割を果たすべきである」ということを主張する研究者もいます。しかし，生半可に踏み込んで，先ほど申し上げたように，医師の判断を曇らせたりするということは逆効果になるので，余計なことをするのは踏み込みすぎという意見もあります。

これは決着がついているわけではなく，何年かに一度，Critical Link というコミュニティ通訳に関する大きな国際会議が開かれていて，この前はオーストラリアで開かれましたけれども，この中で医療通訳は法廷通訳と並んで非常に大きな分野になって，ここでも議論がなされ論文がたくさん出てきています。さまざまな医療の場面というのを，実際の discourse，「実際にお医者さんがこう言って，患者がこう答えて，その間に通訳者が入ってどう訳したか」というのをデータとして記録し，それを細かく分析して，実際に何が起こっているかということを見極めながら，今後どうしていったらよいのか，それを医療通訳者の研修，養成にどう役立てたらよいのかということを，議論している段階です。

ということで，少し長くなりましたけれども，コミュニケーションとしての医療通訳を考えると，これからやらねばならないこと，考えなければいけないことは非常に多いと思いますので，この学会でも，ますます研究が活発になされることをお願いしたいと思います。ありがとうございました。

(2008年7月13日，笹川記念会館にて収録)

Verbiage

Reuben M. Gerling

Recently, Oshida et al. have reported that the high uptake of FDG by tumor can serve as a risk factor for recurrence in breast cancer patients (Oshida et al. 1998). Allal et al. have also demonstrated that SUVmax can predict patient prognosis in head and neck cancer (Allal et al. 2002). (*J Cancer Res Clin Oncol* (2004) **130**: 273–278)

The passage is actually saying that two things have been demonstrated: 1. high uptake of FEG as a risk factor for breast cancer, and, 2. that SUVmax can help predict head and neck cancer.

The word 'also' in the second line is misleading since Allal et al. did not talk about breast cancer. In addition, each of the quoted authors is mentioned twice: Recently, Oshida et al.: (Oshida et al. 1998); Allal et al. have: (Allal et al. 2002). The author of this paper is repeating himself and confusing the readers. The whole thing can be rewritten as:

> Recent reports show that the high uptake of FDG by a tumor can serve as a risk factor for recurrence in breast cancer patients (Oshida et al. 1998); whereas others have demonstrated that SUVmax can predict patient prognosis in head and neck cancer (Allal et al. 2002).

Good writing is not the same as making conversation and the good writer has the advantage of being able to look at the screen edit and re-edit. Whereas trying to 'edit' your conversation will bore the listener, good editing will only enhance the work of the writer.

The cutting of verbiage may seem easy, but often escapes the writer's attention. A lot of unnecessary words creep into sentences and, since they do not relate to the body of the work, the actual contents, they escape the attentions of the writer. The results can be sloppy or, at times confusing.

Textbooks and manuals provide lists of terms that can, and should be avoided. Instead of 'Neutrophils could be observed in the place where the tissue was scarred', the authors should write: 'Neutrophils could be observed where the tissue was scarred'; and there is no need to go for the long winded 'there is the possibility', we we can simply write 'can' thus: 'under trauma, there is the possibility that the implant will become detached', can be re-written as:

'the implant can become detached under trauma'.

Other examples of long-winded terms that can be changed are: 'in all cases' instead of 'always'; 'in the event that' instead of 'if'; 'through the use of' instead of 'with'; 'the patient was ambulatory' instead of 'the patient could walk'; and, 'upper and lower extremities' instead of 'arms & legs'. And there are plenty more of the same.

It is a bit unfortunate when the writer states the obvious, or when a statement repeats information for no reason. The following passage, for example: Fifty patients with squamous cell carcinoma or carcinoma of the oral tongue and floor of mouth were selected for inclusion (*Oral Oncology* (2007) **43**, 656–661 p. 657), tells us that some of the patients had cancer of the 'oral tongue'. Does this mean they had no problems with the abdominal tongue, pedal tongue and cranial tongue? As there is only one tongue in the human body, the word 'oral' is not needed, especially as medics talk about cervical cancer that is not in the neck, without mentioning its location; and why write about 'true facts' when all facts are true; or about 'the first pioneers' when all pioneers are first?

At the end of the day publication is about catering to the reader, making the argument easy to follow and contributing something new. In medical writing the best way to do this is by using the shortest and clearest language.

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

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