

Team teaching a medical and dental English program

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Abstract

This paper describes the development of a reading skills program for third year dental students. Changes in the program since its inception in 2001 are described and examples of the curriculum and teaching materials are given. Coordination of the program, as well as teacher training, is considered. Feedback from a questionnaire for teachers reveals interesting insights concerning how a medical and dental English program is perceived by Japanese dentists involved in teaching the program.

Key words : case studies, English for specific purposes, medical and dental English, reading skills, team teaching

Background

Changes in English language teaching at all levels of education in Japan are taking place rapidly. The Ministry of Education, Culture, Sports, Science and Technology unveiled a program called *Good Practice* (MEXT, 2004) designed to institute reform at university level by rewarding forward-thinking English language programs that attempt to link classroom learning and what happens in the real world. Moves away from general English courses to ones that focus on specific language skills designed to meet students' needs are becoming more commonplace. We find, for example, an explanation of the case for English for Specific Purposes (ESP) in Japan being put forward by Orr (1998) who states that,

“Anyone current on the latest trends in Japanese higher education knows that university administrators and faculty in Japan are very interested in English for Specific Purposes (ESP). Motivated by new policies and priorities at national and local levels, Japanese universities are now in the midst of rethinking their English language curriculums and searching for better options. ESP is growing in popularity and university educators in Japan are expressing great interest in this new phenomenon since it holds promise for more effective and genuinely useful English language instruction for Japanese students who increasingly need English for specific purposes in academic, vocational, or professional contexts.”

More recently, the same sentiments have been echoed by Okamoto, Kamimura, Noguchi, & Miyama, (2006). Additionally, the case for ESP in Japanese universities has been put forward strongly by Evans, & Squires (2006), who state that,

“We foresee that English for Specific Purposes (ESP) will become the norm not the exception in Japanese universities, replacing general English curricula.”

All of the above suggest that as the need for ESP is increasingly realized, such programs will become more prevalent at Japanese universities and colleges.

What is ESP?

For the most part, ESP indicates a kind of instructional focus that is designed to prepare students or adults in the workplace for the English they will encounter in specific disciplines, vocations or professions. ESP is to be contrasted with English for General Purposes (EGP) which largely characterizes what takes place in high schools and a lot of universities here in Japan, not to mention EFL/ESL classrooms all over the world. The nature of ESP is defined by Dudley-Evans (1988) as having ‘absolute characteristics’ and ‘variable characteristics’ as follows.

Absolute characteristics of ESP

1. It meets the specific needs of the learners.
2. It employs the underlying methodology and activities of the discipline/field it serves.
3. It focuses on grammar, lexis, register, discourse and genre of the above.

Variable characteristics of ESP

1. It can be related to or designed for specific disciplines.
2. It employs a methodology different from EGP.
3. It is generally used with adult learners in higher education or the workplace.
4. It is taught at a level of intermediate or above.
5. It assumes a solid understanding of basic general English.

For teachers of ESP relevance is the key, as is giving students opportunities to fully engage in activities related to their own goals and needs. As Hutchinson et. al. (1987) point out,

“ESP is an approach to language teaching in which all decisions as to content and method are based on the learners’ reason for learning.”

ESP programs at Japanese universities

Responding to MEXT’s attempts to improve English language teaching at the level of higher education, universities and colleges throughout Japan are moving in the direction of specialist programs for English. The aim being to forge a concrete link between university programs and what actually happens in the real world. The number of universities with the clear goal of producing graduates who can function in English in their chosen field continues to grow year by year. The author is aware of several ESP programs in operation at Japanese universities and the number of such programs continues to grow. At Kitasato University, an ESP program has been developed around adapted real-life video and audio tape interactions between patients and healthcare workers for use with medical, nursing and pharmacy students. For more details see Dias (1999). At Nagaoka University a program focusing on reading skills for engineering students has been developed. The program teaches reading skills by analyzing abstracts written

in English taken from specialized journals in engineering fields. For more information see Nagano (1998). At Tokyo Medical University an English for Medical Purposes Program (EMP) is in existence that uses complete articles from the *New England Journal of Medicine*. Each unit of the program consists of an article reproduced from the above journal along with a list of key words. Students read the article and answer comprehension questions. This is followed by a medical interview which is on tape. The program is taught by native speakers. A Japanese doctor is on hand to answer any technical questions by video link that may arise. Additionally, there are other ESP programs currently in operation in Japan, particularly in the fields of information technology, economics, business, medicine and dentistry. The above are just a few examples of ESP programs in Japan.

The Medical and Dental English Program at Nihon University School of Dentistry

The Medical and Dental English program (MDE) at Nihon University School of Dentistry (NUSD) is another example of an ESP program. The program first made an appearance on the curriculum in 2001. It is interesting to note that the need for such a program was first realized by the members of the educational affairs committee and was not instituted at the request of the English department. Indeed, in the original conception of the program, the English department was not consulted about content, methodology or teaching staff. As new people joined the university and others retired, the program was put on the curriculum, suggesting some opposition to an ESP type program of this type. The aims of the program, as first envisaged, were to have students read papers from journals in the fields of medicine and dentistry and more specifically to improve students' reading ability and range of specialized vocabulary. Another goal was to give students an idea of how technical words are pronounced.

In this way, a course entitled Medical and Dental English was introduced for all third year students. The course involves two fifty-minute classes a week over one semester, one taught by a native speaker of English entirely in English and the other in Japanese by specialists in the field of dentistry. For the first three years of the program, classes focused on the abstracts of academic papers in fields related to dentistry. These papers were chosen by the Japanese teachers involved in the program and were mainly in the field of basic research. The thinking behind the decision to adopt abstracts, in preference to full scientific papers, was that students would not be able to read full papers and that abstracts would be more accessible. This choice, however, created problems for the English department as it was difficult to create meaningful teaching materials and tests from what were mostly ten or so lines of very densely packed information containing difficult vocabulary and concepts. It seems not uncommon for ESP reading programs to focus on abstracts. Indeed, among many Japanese teachers of science and technical subjects, the case for studying abstracts, as opposed to full papers, in the English language classroom is frequently made. In other words, it is a commonly held belief among Japanese scientists that abstracts from scientific articles are a good source of accessible

reading materials for students. The feeling of this author is that this approach is less than satisfactory, as the level of difficulty means that students become stuck on understanding meaning at word and single sentence level, and consequently never build up any reading speed or fluency. This, in turn, prevents them from improving their reading skills. Discussions with J Patrick Barron at Tokyo Medical University have resulted in the same conclusion. For the above and other reasons, using abstracts alone is not a suitable way of developing students' reading skills in an ESP reading program. As a way out of this problem, in the first three years of the program, abstracts were supplemented with general texts in the field of dentistry with speed reading and vocabulary exercises. The texts, selected by the English department, were mostly derived from Internet sources, and were at an intermediate level. A representative example is attached as Appendix 1. In terms of level, as we have seen from the list of characteristics of ESP by Dudley-Evans (1998), ESP courses are generally taught at the level of intermediate or above. This presupposes that students have been through adequate general English courses. We know that students without a basic grounding in English will find ESP programs very demanding. As Evans & Squires (2006) rightly point out,

“English programs should begin with some review and practice of previously learned English skills to build confidence and better prepare learners for ESP content.”

For educators developing ESP programs at universities in Japan, this is of crucial importance. If some of the students are at a level below intermediate, the benefits of the program are severely restricted and accordingly remedial steps need to be taken.

The Move to Case Studies

As mentioned above, the English teachers considered that focus on abstracts was counter-productive in helping students to comprehend scientific papers, as it was a barrier to developing reading fluency and gave no opportunity to focus on necessary reading skills such as skimming and scanning and so on. It also made creation of classroom materials and tests very difficult and meant that students did not get any of the satisfaction that could have been derived from reading a paper in its entirety. Also, the fact that the subject matter was basic research rather than subjects directly relevant to people who would soon become dentists was a problem. The English teachers felt that using case studies as the basis for the program offered several advantages in comparison with abstracts from scientific papers on basic research. Case studies are generally more accessible since they deal with a story having human interest with a beginning, middle and an end. Additionally, the subjects covered were more likely to be of direct relevance to students in their dental work after graduation. It is interesting to note that in the past couple of years, the number of English language teaching texts in medical, dental and nursing fields involving the use of case studies has increased, suggesting that the potential of such an approach has been recognized. The following topics were studied in the fourteen week program: restorative dentistry, orthodontics, prosthodontics, endodontics, periodontics and

oral and maxillofacial surgery. Please see Appendix 2 for a list of the case studies used.

Team Teaching and Teacher Training

One of the unique points of the MDE program at NUSD is that it is based on team teaching involving Japanese members of staff from the dental hospital who are specialists in a particular area of dentistry, as well as native-speakers from the English department. People current with the English language teaching scene in Japan will know that team teaching has been used in high schools for a number of years with varying degrees of success. On the Assistant English Teacher program in high schools across Japan, it has provoked serious debate, including a lot of criticism, over its effectiveness and even validity. The program at NUSD adopted team teaching in order to involve members of different departments and establish a joint enterprise in which the teaching of Medical and Dental English was the goal. We felt that it was extremely important for students to see Japanese members of staff as role models using English actively in their professional capacity as specialists in dentistry. It was also considered important for the various departments to come together in MDE lectures and to try to establish a method of producing students with the English skills they will need in their future careers. This was particularly important considering that under normal circumstances communication between clinical departments and the English department was almost non-existent.

It needs to be pointed out that in the three years in which abstracts derived from papers in the field of basic research were the main focus of study, there was little if any coordination between teachers and few meetings to exchange ideas or establish policy. Decisions were made by the person in charge of the program and implemented without recourse to the opinions of others. This was due to the extremely busy schedules of the teachers involved and the fact that seven different departments were involved. The English department considered this to be a problem and asked the group leader to arrange a meeting so that planning could take place. Eventually, in the months before the start of the new semester a meeting was called. All of the dentists involved in teaching attended the meeting which was chaired by the English department. At the meeting, a representative of the English department asked the other Japanese teachers to do the following in their lectures :

1. At the start of the lecture, to provide a 5 minute talk with slides based on their experience overseas, to explain how they use English in their jobs and how they learned or are learning English. It should be pointed out that all Japanese teachers had spent at last two years or more at universities overseas in a research capacity. The aim was to motivate students by showing them the teachers'overseas experience, the need for English and also ways of approaching it.
2. The teachers were asked to select a case study in their field that was straight-forward and relatively short. They were specifically asked not to use translation from English into Japanese as a way of teaching or testing students.

3. Teachers were asked to create classroom activities that involved the use of skimming and scanning using the case studies. Also, the need for summarizing, reporting back and group work was stressed.
4. Teachers were asked to create lists of key words based on the vocabulary items in the case studies for each class and to explain these words giving their Japanese equivalent.
5. Teachers were asked to give an easy overview of their field and introduce the clinical concepts in the case report. This was done in Japanese in the first of their two lectures.
6. Teachers were asked to give students time and space to read the case studies, to discuss questions with other students and also to ask questions. In other words, teachers were cautioned against producing an overly teacher-centered approach.

The English department felt that the results of the team teaching orientation had been very worthwhile and that teachers had generally had a positive attitude to the program. There was, however, a feeling that with more time more could have been achieved. As mentioned above, time was very limited particularly for dentists who were involved in the daily treatment of patients.

The Classes

MDE classes run each year from April to July with 14 classes given by Japanese faculty and 28 given by the English department. The English department gives the same lecture twice to two groups of about 60 students in a large auditorium. The same two groups meet for the lecture given by the Japanese specialists, forming a single group of approximately 120 students. Lectures are 50 minutes each and run back to back. A member of the English department observed all of the lectures given in Japanese by Japanese members of staff, and attempted to encourage coordination between staff members during the program. It soon became clear that several of the Japanese teachers fell back on grammar translation as a method of teaching during their lectures despite having been asked not to do this in the team teaching orientation. It is worth noting that according to Kitao et al. (1985), the grammar translation method is still widely used in English language classes at universities in Japan with classes involving students translating sentences from an English language textbook into Japanese. The grammar-translation method has been widely criticized in the past, but in the context of Japan, where classes can be very large, it should be remembered that it is a method that can be easily applied and also one which fits in well with students' previous learning experience. As the author observed the lectures given by Japanese faculty members, it became clear that several teachers resorted to translation as a teaching technique particularly in the second of their two lectures. Generally, the first lecture was taken up with their experience of living overseas, the need for English and a general overview of the field and introduction of key words, and as such there was no need to require students to translate. At the end of the first lecture, it was not uncommon for teachers to divide up the case study line by line and assign each section to groups of four or five

students who worked on the assigned sections as homework. In the following lecture, students were called upon to deliver translations into Japanese of the particular sections. Some students coped well and had clearly put a lot of time and effort into the translation. In some cases, students appeared to have used automatic translation services available on the Internet, sometimes with disastrous results since much of the medical and dental vocabulary was not translated accurately. The use of translation as a teaching technique was, however, not overwhelming and several lecturers put questions on a power point presentation slide and required students to search for specific information in the text by answering the questions. Students responded well to this technique by working alone, or in pairs and groups, scanning the text for the required information. Students wrote their answers down on small slips of paper that were provided by the lecturer. Many students wrote in English, and some in Japanese. Members of the English department circulated through the lecture hall and offered help and advice in English to students during the activity. The lecturer remained at the front of the lecture hall. After about ten minutes, students came to the front of the room either one by one or in pairs and submitted their answers to the teacher who checked them and gave confirmation and advice as required. Students were then free to leave. From the viewpoint of the English teachers, this kind of approach seemed particularly promising as it was more student-centered and did not involve the use of translation. More specifically, it involved students in developing the skills that we know must be acquired to become a proficient reader.

Creation of Teaching and Testing Materials by the English Department

At the orientation meeting, teachers had been asked to select case studies in their field that were straight-forward and relatively short. This was in response to the problems created by the level of difficulty presented by the abstracts used in the first three years of the program. The selected papers varied from 4 to 8 pages. The task of creating appropriate teaching materials from authentic texts is a difficult one that requires time, experience and a willingness to access the target genre by non-specialist teachers. On the point of appropriate ESP materials for use in class, Orr (1998) points out that,

“Few materials sold in bookstores fit the specific needs identified in a needs analysis.”

Similarly, Dias (1999) points out that many commercially available texts are,

“Far removed artificial approximations of the reality they profess to capture.”

In fact, material production was probably the most challenging part of the program for members of the English Department. As you will see from the materials shown in Appendix 3, teacher-created materials focused on the introduction of vocabulary and comprehension questions based on the case study. Examinations were mostly of the same format. Evans & Squires (2006) report on the de-emphasis on vocabulary due to the fact that the ESP teacher is usually not a specialist in the field. Additionally, it is assumed that students will naturally acquire the target vocabulary in their own content courses. It is interesting to note that in the

feedback comments from Japanese faculty, concern was expressed about students' lack of knowledge of technical vocabulary in both Japanese and English. Some teachers made comments suggesting they thought students do not know enough about dentistry, indicating this was a barrier to understanding the case studies.

In order to facilitate communication between teachers, the English teachers frequently visited the Japanese teachers involved in the program and decided on which parts of the case study to focus on in upcoming lessons. This provided considerable benefits and aided communication and coordination between teachers which, in turn, increased the quality of the teaching and materials. However, due to busy schedules, this was not always possible. Often, the English department found that it was creating materials only a few days before the lesson was actually taught. The workload involved in teaching an MDE program is considerable and should not be underestimated. Since authentic texts are used, all teaching materials have to be tailor-made and, as mentioned above, there is virtually nothing commercially available that is suitable.

Examinations

For the end of semester examination, students were told to study two of the six case studies that had been covered. It was thought that requiring students to prepare all six case reports would have been too demanding. A variety of vocabulary and comprehension questions were made as a final examination. In the early years of the program, a section in Japanese had been included that tested students on scientific content. This was subsequently dropped.

The Way Forward

The first thing to be said about the MDE program at NUSD is that the team teaching aspect is fairly unique for Japan. In the case of NUSD, the link up between the English department and other departments bodes well for the future of the program. It is probable that more training, coordination and exchange of ideas will significantly improve the quality of the program. There is also perhaps a need to put all case studies into a booklet form that students can use. For this to happen, permission from the copyright holders to reproduce the papers would be necessary. Additionally, more work on vocabulary acquisition is necessary, as well as improved forms of assessment.

Teacher Feedback

Two months after the program ended, a brief questionnaire was created by the English department and given to the Japanese teachers as a way of getting feedback and also as an impetus to begin the planning process for the following years' classes. It is worth going through and analyzing some of the comments made by the teachers, as this gives insights into people's thinking on the program. I will deal with relevant answers for each of the questions. Questions are in bold, numbered from 1 to 6 followed by a selection of edited answers from the teachers.

1. What were your goals in your lectures?

- To let students know English is a powerful tool for communication
- To have students understand basic dental terms and treatment methods
- To have students think about the importance of reading scientific articles in English
- To motivate students to understand dental English

Answers to question 1 indicate that the goals of most of the teachers have a good fit with the main objective of reading scientific articles in English.

2. How did you achieve these goals?

- I introduced recent topics in endodontic treatment using newly published material
- I lectured with simple and easy English
- I used slides, scientific papers and my clinical experience to motivate students
- I showed clinical photos and provided clinical articles

Answers to question 2 again show unanimity of purpose with most teachers concentrating on the introduction of clinical concepts and practices in simple terms.

3. How was your lecture different from other lectures you usually give?

- Basically, students do not know much about endodontic treatment or basic research. Therefore, I explained about these.
- I tried to explain many kinds of keywords.
- I tried to talk to students individually

A key point here is the statement that students do not know much about the target subject, even though they are 3rd year dental students. This suggests that teachers felt students did not have enough background knowledge to tackle the case studies. This is a legitimate concern that requires discussion by the various departments involved.

4. How and why is Medical and Dental English important for students?

- To read papers, communicate with non-Japanese and get information from around the world
- To understand the present status of Dental Science from a worldwide viewpoint, dentists have to read papers in English, as well as communicate in English
- When we make a treatment plan or conduct research, we have to access papers in English

The above comments show the importance that the Japanese teachers involved in the program attach to English

5. What problems did you have?

- I don't know what students know about dentistry
- Students don't know dental terms in either English or Japanese
- This is the first time to teach 3rd grade students. I wonder if they can understand my lecture
- The most difficult part was teaching the background to oral surgery as simply as possible

Once again teachers were very conscious of students' lack of knowledge of the target subject, suggesting that from the point of view of specialists in the field, teaching an MDE program to 3rd year dental students is perhaps over-ambitious.

6. Give suggestions for improving the lectures for next year.

- I would like to choose an easier case study
- Reduce the amount of scientific papers covered
- It might be an idea to have students choose papers and have small groups discussions and presentations
- Select shorter papers

Most comments here are concerned with difficulty and this reflects the fact that teachers were very conscious of the fact they might be introducing material students could not cope with.

Conclusion

With the Ministry of Education, Culture, Science and technology promoting improved English language teaching programs and more universities and colleges adopting specialist programs, it appears there are significant changes taking place in English language teaching in Japan. Many universities are striving to introduce programs that meet the needs of students' future career goals. At NUSD, an MDE program has been in operation since 2001. The program has moved from emphasis on abstracts from papers in the field of basic research to case studies. This has been in response to perceived levels of difficulty and the need to get students to read more extensively and acquire good reading skills. Team teaching such a program has brought together teachers from a number of different departments, raising questions about how to best organize and coordinate the program. The need for leadership, planning and ongoing teacher training has become apparent. Even though progress has been made and the program has improved, a number of problems still remain. These are as follows: creation of adequate teaching materials based on the selected case studies is a big challenge for the English department, as is creation of effective test materials. Also, dealing with students who are at a pre-intermediate level is a problem that needs to be addressed. Finally, the points made in the questionnaire by the Japanese teachers need to be considered. These are: whether 3rd year students have enough background knowledge in dentistry to follow the case reports and also whether the level and amount of material is appropriate for the program.

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Appendix 1: Supplementary material used in years 1 to 3 of the program

Speed reading 1: You have ten minutes to read this passage and answer the questions below.

Cell treatment stops teeth from falling out

Researchers at Nagoya University have found a way to restore decaying bone surrounding the base of the teeth. This is a condition that causes teeth to become loose and fall out. The research group is headed by Prof. Minoru Ueda. He says bones can be restored with injections of the patient's own bone marrow and blood platelets.

The advantages of the procedure are that the patient does not need to be hospitalized and there is no risk of infection. It is thought that the treatment could be available next year at major hospitals nationwide.

It was found that after four months of treatment, teeth that were on the verge of falling out had been restored to almost full health. The patients no longer had loose teeth or suffered from toothache. Professor Ueda said that the same method could be used to knit together broken bones in elderly patients.

1. Where was the research done?
2. What is injected into the bones?
3. How many advantages of the procedure are there?
4. When will the treatment become available?
5. How long did it take for teeth to be restored to full health?

Find a word in the text that means the same as

1. repair
2. around
3. danger
4. join
5. old

Appendix 2 : List of seven case studies used, as shown in the syllabus.

1. Matis BA, Cochran MA, Wang G, Franco M, Eckert GJ, Carlotti RJ, Bryon C. A clinical Evaluation of bleaching using whitening wraps and strips. *Oper Dent* 2005 ; 30 : 588-592
2. Bolan M, Ferreira MC, Almeida ICS, Derech CD, Ribeiro CLU. Palatal expansion and the Klippel-Trenaunay-Weber syndrome, *Am J Orthod Dentofacial Orthop* 2005 ; 128 : 385-387
3. Santos A, Goumenos G, Pascual A. Management of gingival recession by the use of an acellular dermal graft material : a 12-case series. *J Periodontol* 2005 ; 76 : 1982-1990
4. Matsumura H, Atsuta M. Repair of an eight-unit fixed partial denture with a resin-bonded overcasting : A clinical report. *J Prosthet Dent* 1996 ; 75 : 594-596
5. Gozneli R, Ozkan YK, Kazazoglu E, Akakin ZF. Effects of Bartter's syndrome on dentition and dental treatment : A clinical report. *J Prosthet Dent* 2005 ; 93 : 522-525
6. Ohki H, Matsumoto M, Hasegawa M, Shimizu O, Mukae S, Amano Y, Komiyama K (2005) Unusual cyst-like lesions in the arapharyngeal space associated with recurrence of tongue carcinoma, *J Oral Sci* 2005 ; 407 : 219-222
7. Kayaoglu G, Erten H, Alacam T, Orstavik D, Short-term antibacterial activity of root canal sealers towards *Enterococcus faecalis*, *Int Endod J* 2005, 38, 483-488

Appendix 3 : Unit 14 of the MDE program (student handout)

M & D 14: Short-term antibacterial activity of root canal sealers towards *Enterococcus faecalis*

Materials and Methods : persistent endodontic infection, maintained, colonies, adhered, immersed, excess liquid, exposure

1. How many sealers were tested?
2. What was used as the test microorganism?

3. What was the bacterial growth overnight?
4. What was used to show bacterial cells?
5. Instead of a sealer, what was used as a control?
6. What was the time from sampling to incubation?
7. At what temperature and for how long were plates incubated?

Results : significantly, insertion, dramatically, impaired

1. Which sealers reduced bacterial numbers?
2. What were the results of inserting a filter membrane?

Discussion : finding, exerted strong microbial activity,

1. How many sealers had strong antimicrobial activity on *E. faecalis*?
penetration, embedded, employed, limited, barrier,
1. Why might sealer penetration decrease?
2. In this study, how was contact between sealers and bacteria limited?
3. How do the results of this study compare with previous studies?

Conclusions : effective, direct contact, restricted, ineffective, short-term experiment

1. Which sealers were effective?
2. Which sealers were ineffective?

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