

New system of English for Engineers and Scientist -Structural reformation corresponding to globalization of the university-

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1. Abstract

English program for the engineering students has been taught at the school of engineering, the University of Tokyo for 10 years. However, the globalization at the university has changed the level of the students' English skills. Thus, we modified the teaching system of English for Engineer students. New course for undergraduate students was opened corresponding to the needs of them, and new graduate course was proposed to enhance their academic writing skills and presentation skills at the international conferences. The effect of the renewal of the program will be seen before long.

2. Introduction

As acceleration of globalization in our country cannot be ignored any longer, it is an urgent issue that supply of the global leaders serving for the society and the development of human resources is required to universities. Various attempts have been repeated for establishment of education programs for global human resource development at the universities in response to this, and fall enrollment, gap year, and the acquisition of excellent foreign students and talented foreign researchers have been attempted in the University of Tokyo. At the same time as the development of such surrounding environment for the sake of globalization, it is necessary to enhance the English language skills in Japanese students in campus. At the Bilingual campus Promotion Center, Institute for Innovation in International Engineering Education, in the School of Engineering, we have been providing a variety of programs for the purpose of international experience and strengthening English proficiency of students, but it is necessary to add the appropriate modifications depending on the circumstances of the campus and the needs of the times. Here we give a detailed description about the program of the one we have renamed and adjusted the contents for the first time in 10 years this year.

3. Systematic Method for Teaching Scientific English

3.1. Earlier "English for Engineers and Scientists"

"English for Engineers and Scientists" started with the inauguration of the Global Ware Project in 2003, which became the driving force of it although the term "English for specific purpose" was less familiar yet at that time. Engineering students are taught how to write papers for 8 weeks in lecture style in the first half of 15 week period each semester, then learn how to make a powerful presentation at international conferences divided into small groups and coached by native English instructors for 7 weeks. Those classes were still rare when we started, and many other universities in Japan recognized the necessity of this kind of lecture and followed the method to settle it at their own universities.

3.2. Original Course

The course schedule then is shown in the table 1 below.

Table 1: Schedule of the course

EES-A	
10/10	Course Guidance
10/17	Writing Academic Paper in English
10/24	Writing Academic Paper in English
10/31	Writing Academic Paper in English
11/07	Proficiency Test
11/14	Writing Academic Paper in English
11/21	General Presentation in English
EES-B	
11/28	Presentation in English (lecture)
12/05	Presentation Practice (group) 1
12/12	Presentation Practice (group) 2
12/19	Presentation Practice (group) 3
1/09	Presentation Practice (group) 4
1/16	Presentation Practice (group) 5
1/23	Presentation Practice (group) 6

The course was performed following this syllabus for 7 years from 2003 through 2009 and many graduate school students learned how to write papers and how to present at the international conferences.

In the School of Engineering, we have been providing a variety of programs in addition to this in order to improve the communication skills of domestic students. These programs are shown in the graphical figure 1 below.

However as the globalization proceeded, we had to rethink of the syllabus that fits the students' new level and needs.

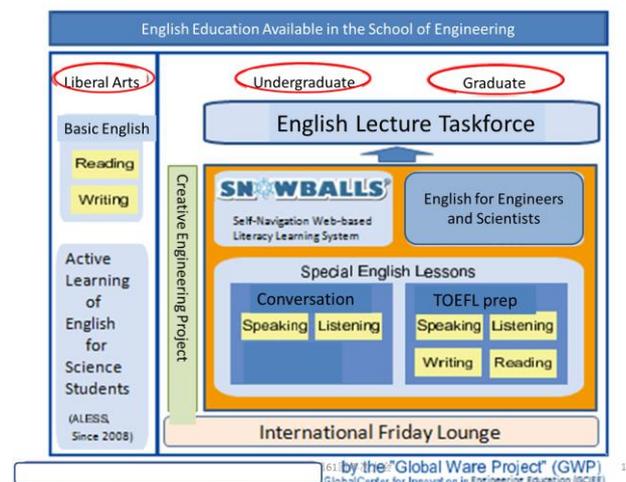


Figure1: English education available at the School of Engineering

3.3. Establishment of new course

Under the mission of English Task Force to increase the class number of specialized courses taught in English for undergraduate students which started in each department in 2011, students began to learn the basis of presentation earlier. As the effect of these educations, students who wish to take "English for Engineers and Scientists" have increased in number among the undergraduate students, so we opened its door to them from the winter semester two years ago.

Also, it is the last couple of years, the graduate students who attended the class for the first time already knew how to write a paper or how the presentation should go on. Furthermore, undergraduate students and international students take this course together in the winter semester, student-level ranged wide and the problem emerged. It was hard to focus the target audience. Thus, it became urgent to set a new system of "English for Engineers and Scientists" by integrating and dividing all over again. We divided the course, and provide the basic course for the undergraduate students and taught common background knowledge underlying in majors and departments reasonably and gradually in the summer semester and open a new advanced course for graduate and international students in winter.

4. Content of the New Course

4.1. Academic Writing for Undergraduate students

Academic Writing in summer semester is general and main subject of the lecture is the undergraduate student. It covers the basic writing of journal paper, email writing, cover letter, or summary. Difference of general writing and academic writing is also taught including fact vs. opinion, intellectual property right, ethics, and plagiarism. Writing targeting the different layers of readers-general citizen, scientists, and laboratory members- is taught. For those who go job-hunting in Japan or go internship abroad, motivation letter writing and resume writing are also taught.

4.2. Advanced Academic Writing for Graduate students

On the other hand, the Advanced Academic Writing is for the graduate school students and focus on English journal writing or thesis dissertation. It's opened in winter semester for Master, Doctoral and international students. Use of style template of various journals is taught. For the specific vocabulary, students read the prize winning paper, analyze it, compare them and build. Rethink the process of paper submission, peer review, contact with editors, and even co-authors.

5. Conclusion

The above mentioned new courses were opened last summer and many graduate students even took the course even though it was for the undergraduate students because they have not learned how to write general writing in the undergraduate school. The new advanced academic writing course is being taught now in winter semester. Effect of modification will be soon recognized.

Acknowledgements

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References

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