Virtual and Real Exchange with Overseas Universities to Enhance Language and Learning

J. O. Entzinger[1], K. Morimura[2], and S. Suzuki[3]

Institute for Innovation in International Engineering Education (IIIEE),
School of Engineering, The University of Tokyo
1. j-entzinger@t-adm.t.u-tokyo.ac.jp
2. morimura@t-adm.t.u-tokyo.ac.jp
3. tshinji@mail.ecc.u-tokyo.ac.jp

Abstract

The Institute for Innovation in International Engineering Education (IIIEE) at the University of Tokyo (UT/Todai) offers various courses and programs that provide Japanese students with opportunities to internationalize. In this year's paper, we focus on the "M/K-Skype" course and the related visits to MIT in Boston, USA, and KTH in Stockholm, Sweden. In the course, students do a small project for which they have to communicate with students from overseas universities through Skype. After the course, selected students get the opportunity to join us on a visit to the partner university and get to meet their Skype partners in person, while we have also received groups of MIT and KTH students who participated in the Skype classes at our campus in Tokyo. Students don't only improve their language skills and self-confidence, but also learn to collaborate internationally and get to talk about different education approaches and what life is like at universities abroad.

Keywords: Language Exchange, Internationalization, Skype, English, Education

1. Introduction

It is often said that Japanese have only few opportunities to practice English or work on their global competencies because Japan is an island nation with relatively few immigrants. Whether this is the true reason or not, there clearly is a great demand from Japanese students for entry-level international experiences. Many students need to build confidence both in their English skills and in being able to live in a different environment, before they even start thinking of committing oneself to study abroad for several months. Offering programs that provide such a first step for gaining confidence and sparking interest is essential to get more students to consider more intensive international exchange programs.

In several of the first-step internationalization programs we offer, we bring together the Japanese and international students studying at our university. Examples are the SNOWBALLS course where students from various backgrounds learn international team working skills while creating bilingual educational materials [1], and the International Friday Lounge where Japanese students can have a chat with international students from various countries while having lunch. The M/K-Skype program, in contrast, connects Japanese students at the UT directly with American students at the Massachusetts Institute of Technology (MIT) or Swedish students at the Swedish Royal Institute of Technology (KTH).

Since last year, several initiatives have been undertaken to give students the opportunity to visit one of our partner universities for about one week using support from the Japanese government funded "Re-inventing Japan Project" (大学の世界展開力). Within this framework, we visited MIT and KTH with students picked up from the M/K-Skype courses. We observed and participated in various classes and workshops, next to having meetings with staff, teachers, and of course students. Since our center has 2 main missions —internationalization and educational innovation— we asked the participating students to look from both perspectives, and share their experiences upon return.

2. Collaboration scheme

We started the M/K-Skype program in the winter semester of 2011 as a language exchange program in collaboration with the Japanese Language Classes of MIT (M-Skype). The basic premise is that our students are interested in improving their English, while the MIT students want to improve their Japanese. Students speak 30 minutes in English, 30 minutes in Japanese, and finally 30 minutes in either they prefer (but not mixing languages). This creates a more-or-less level playing field where nobody has to be afraid of making mistakes or bothering the other too much with poor conversation, because everyone knows his turn will come. The following semester we collaborated with the Japanese Language Classes of KTH (K-Skype) in the same way.

As the semesters of the UT and the other two universities are shifted with respect to each other, the overseas students volunteer to be a "Skype partner" during our semester, whereas our participants are asked to volunteer for participation when the courses abroad start. This provides students the opportunity to maintain or expand their international contact even after the UT course finished and to further improve their language skills.

Mutual visits of groups of students are also connected to the M/K-Skype program. The "Very Fast Track (VFT)"

intensive language course of MIT finishes with a 2 week immersive program in Japan, with language classes in the morning, and lab-tours and other events in the afternoons. This is hosted by the UT and Japanese students who participated in the M-Skype class the previous semester are taking care of various tasks, such as guiding the visitors around. We also visited MIT and KTH with a group of our students to take part in meetings, lectures, and workshops, while being shown around the campus and city by local students. Such visits give the students the unique opportunity to meet their Skype-partner in person, and connect even more.

3. M-Skype and K-Skype classes

As briefly mentioned in the previous section, the M/K-Skype course is a language exchange program with MIT in the fall/winter semester (M-Skype) and with KTH in the spring/summer semester (K-Skype). Although this is a credited course for the UT students, their Skype partners at MIT/KTH are volunteering during these sessions. To limit the burden on the volunteers, the number of mandatory individual Skype sessions is limited to 3x90 minutes. Of course, students are encouraged to have more frequent Skype sessions if both partners' schedules permit. Some pairs had even more than 10 sessions within the semester.

After the first semester, we noticed it would be better to provide the students with a bit of structure for their conversations. Although some pairs had no trouble at all establishing a good discussion, for others it proved to be difficult to change the topic and to move on to higher levels than self-introduction and hobbies. We therefore ask our students now to define a small investigative or collaborative project, and to make a planning so that they can present their results by the end of the semester. Although the first Skype session is still (and should be, according to us) mainly self-introductions, getting to know each other, and establishing a mutual understanding of the program and project objectives, the following 2 (or more) sessions focus much more on the content of the chosen project.

An example of the course schedule is given in Table 1. After a general introduction, the Japanese students form groups and define a project to work out in collaboration with students abroad by communication through Skype. We match students on our side with volunteer partners from MIT/KTH, and ask our Japanese students to take the initial contact, introduce themselves briefly, and suggest or request an appointment for a Skype session. Here, we also spend some time on e-mail writing skills, to make the students think and discuss about the appropriate content, structure, and tone of their e-mails. From this point, 3 cycles of 3 weeks start:

- **Investigation:** The students have to prepare for their Skype session. This means they have to think about the questions, requests, discussions, etc. they need to have with their overseas partners to make progress in their project.
- **One-to-one Skype session:** this 90 minute session is the equivalent of one class and should be arranged for by the students themselves anytime during the 2 week period in between the other 2 classes.
- **Recap:** students get together with their group and share the information they got or the progress they made.

The last few lectures are spent on finalizing the project in their groups and preparing a presentation. On the final day, students from the overseas university join us through Skype as an audience for the final presentations, and they ask questions, start discussions, or make some clarifying comments.

Over the semester, we teach several skills such as e-mail writing (as mentioned above), principles of effective language exchange (not mixing languages, how to correct each other's mistakes), online collaboration (such as through wiki-spaces or Google-docs), and discussion techniques such as: agreeing and disagreeing, how to change the conversation topic (in a polite way), how to keep a conversation going, how to ask for clarification or details, how to show emotions/sympathy through language.

Since the start, every semester between 10 and 20 students have been taking this course. Figure 1 shows an impression of the class.

Table 1 *Schedule of the M-Skype course in the 2012 Fall/Winter semester.*

Class	Date	Time	Content	Venue
Class 1	Oct. 12	10:30-12:10	Guidance of the class	Todai/MIT
Class 2	Oct. 19	10:30-12:10	Group discussion (decide projects)	Todai
Class 3	Oct. 26	10:30-12:10	Investigation	Todai
Class 4	Negotiate with Skype partner		One-to-one Skype session	Home
Class 5	Nov. 9	10:30-12:10	Recap the conversations	Todai
Class 6	Nov. 16	10:30-12:10	Investigation	Todai
Class 7	Negotiate with Skype partner		One-to-one Skype session	Home
Class 8	Dec. 7	10:30-12:10	Recap the conversations	Todai
Class 9	Dec. 14	10:30-12:10	Investigation	Todai
Class 10	Negotiate with Skype partner		One-to-one Skype session	Home
Class 11	Jan. 11	10:30-12:10	Preparation for presentations	Todai
Class 12	Jan. 18	10:30-12:10	Presentation practice	Todai
Class 13	Jan. 25	10:30-12:10	Final Presentations	Todai/MIT

Figure 1 *Impression of the Skype Classes. Left: One of the first classes with self-introduction through Skype. Middle: Project discussions. Right: Final presentation with MIT students listening in through Skype.*

4. Our visit to MIT

We visited MIT with 9 students, of which 6 from the M-Skype class and 4 who had participated in our SNOWBALLS class on e-learning system and content development (1 student had taken both classes). Students were selected based on a motivation letter they had to write to show why they should be chosen to join this tour and what they could do for us as a Teaching Assistant (TA) in the upcoming semester(s).

Obviously, one of the main visits at MIT were the Japanese Language Classes, and in particular the Very Fast Track (VFT) classes who had kindly collaborated in our M-Skype program the previous semester. The presence of our students provided a great opportunity for the local students to practice their Japanese skills, and they interviewed our students following a questionnaire they had prepared earlier. These were followed by lively discussions about the differences between (academic) life at both universities. We met them again for lunch and at a few other occasions such as a campus tour and an acapella performance by one of the VFT students and ex-Skype partner.

Regarding the education innovation aspect of our visit, we joined the Technology-Enhanced Active Learning (TEAL) style physics class of Prof. Peter Dourmashkin and discussed with him about the educational principles behind it. This showed our students how teaching assistants are used at MIT, and how difficult subjects can be taught more interestingly and more interactively than with the regular lecture which still prevails in Japan at least. We also met a large number of Japanese students currently enrolled at MIT and talked with them about their experiences. This gave our students lots of suggestions and increased motivation to pursue a study abroad as well.

Figure 2 gives an impression of the visit.

Figure 2 *Our students visiting the MIT campus in Boston and participating in an "interview" exercise in the "Very Fast Track" Japanese Language Classes there.*

5. MIT VFT students' visit to Tokyo

A few months later, at the end of the semester at MIT, the students from the VFT language classes came to The University of Tokyo for 2 weeks. We arranged for their stay and for a classroom, where their teacher thought the last few classes of the semester in the mornings. In the afternoons, our visitors had the opportunity to immediately practice what they learned through various events. At the same time, they got to know more about Japanese culture, (life & research at) The University of Tokyo, and of course also about the famous sightseeing spots around the city.

Our ex-M-Skype students took care of guiding the MIT students around. They picked them up from the airport and brought them to their hotel, arranged various lab tours, accompanied groups of visitors to various places around the city etcetera. Everyone also participated in the welcome lunch and a special dinner to promote the exchange between our universities. Additionally, we invited our visitors to the International Friday Lounge to give them an opportunity to speak to even more Japanese students (and vice versa).

Figure 3 gives an impression of the visit.

Figure 3 *MIT students visiting the University of Tokyo where they also experienced dressing up in yukata (and later also kimono) and various lab-tours.*

6. Our visit to KTH

Earlier this year we visited KTH in Stockholm with 4 students who took part in the K-Skype course. Before leaving Japan, we had a lunch with 3 KTH students who had been K-Skype partners and had come to Tokyo for an academic exchange program after that. In Stockholm we were received by one of the ex-K-Skype partners who had taken care of 2 of the 4 students with whom we visited. He showed us around the old town and was very helpful in arranging many other things for us. That night we had a dinner with other students from the KTH Japanese Language Classes who were interested in participating in our K-Skype program for the coming semester. Many connections were made quickly and a lot of topics were discussed around the table.

The following day we received an explanation and workshop regarding the training of teaching assistants (TAs) at KTH. Students who become a TA learn about subjects such as pedagogy, curriculum design, activating students, and conflict resolution mainly through reflecting on their own learning experiences and discussing or doing group exercises and role plays. This gave us a clear image of ineffective and effective teaching methods, and of differences between a student's point of view and a teacher's (or TA's) point of view. Such reflective and perspective-changing exercises are very insightful for students who want to become a TA, and later maybe even a teacher.

Figure 4 gives an impression of the visit.

Figure 4 *Our students visiting KTH in Stockholm.* Left & middle: *Meeting KTH students with whom they Skyped or will Skype.* Right: *taking part in a Teaching Assistant training workshop at the school of Education and Communication in Engineering Science.*

7. Student experiences

For some students participating in the visits, that was their firs experience abroad. Most others had been abroad for sightseeing, but had never seen another university from the inside. They said their participation had widened their views and increased their motivation taking part in other internationalization programs general and for studying abroad in particular. Several students who were already interested in studying abroad used the M/K-Skype program to gain confidence, enhance their skills, gather information, and make connections that helped them to make the big step of moving to study abroad for several months or even a year. This includes students from MIT and KTH, as well as UT students.

7.1. Improved international understanding and communication skills

Some students had bad experiences with being laughed at by their (Japanese or international) peers in class for their bad English. The concept of language exchange and the established framework of the course around it help such students to get a positive experience and lose their fear of international communication.

Our students learned to use the English they know to communicate, without being afraid of making mistakes. They got used to the "*international spirit*" of actively taking part in conversations, rather than waiting for others to take the initiative. They also noticed their conversation partners also made mistakes, and that Swedish people speak Swedish-English, therefore feeling more comfortable with their own Japanese-English. On top of that, they met other Japanese students who proved that it is possible to successfully studied abroad.

They learned about cultural differences by talking to students from other countries and through some of their investigative projects. "*It was very interesting to know the culture of different countries, and I got a lot of different point[s] of view.*" and "*[in Japan] we sometimes think Europe and America are the same, but actually the class*

atmosphere was very different.", said one of the participants.

With many specific questions from their Skype partners, the participants noticed a lack of background knowledge regarding their own country and culture. This actually often happens in international settings, and the awareness of what is special or valuable about your own country or culture is often difficult to know, because everything seems normal and obvious when you don't have an external reference.

They also saw differences in the way of thinking about education, job-hunting, and careers. "*They said in Sweden, it is natural that students start to work soon after graduation of high school, and enter the university having two or three years work experience. That is very unusual in Japan, but they say they can think their university lectures more practically*". Others noted that the typical American career over the years is deepening into a specific career path, whereas in large Japanese companies it is common to transfer to a different department every few years, thus applying one's skills to a variety of challenges.

7.2. About education & Teaching Assistants

During our visits, students noticed that there are many exercise classes run by TAs next to the lectures taught by the professors in the universities we visited. With the TAs generally being just a few years ahead of the students, they understand the difficulties students have and have more time to provide personal guidance. Our students felt that such practical exercise training would greatly improve their understanding of the materials. This would however require an appropriate TA training program since TAs would get considerably more responsibilities than they currently have in most cases at our university.

The class observations and workshops abroad made them look at the education they received with different eyes. With their new experiences, students are motivated to improve the current programs at the UT as a TA. One student brought up an interesting view expressed in the workshop: "*Teachers should not take attendance because if the teacher is good, students will come to the class voluntarily and if students don't come to the class, it means the teacher is bad.*" and "*Teachers also should believe students' potential [...]*" and added "*I [will] try to believe [in] students and be enthusiastic when I become a TA.*"

Those who participated in the M/K-Skype course and visited a university abroad, feel they are now an ambassador of internationalization within the UT. For example, one student wrote: "*The majority of students does not have such experience [of communicating with foreigners] and need help. I can tell what they want, what they are thinking, and what obstacles there are to using English in classes. [...] I want to be a mediator.*", while another student wrote: "*I want other students to know the importance of international exchange activities.*"

8. Conclusion

Bringing our students in contact with students abroad, and giving them the opportunity to learn from each other is the main objective of a series of programs we offer at the School of Engineering of The University of Tokyo. The basis is a course called M/K-Skype, which is a for-credit course in which students have to build a small project in collaboration with MIT students (winter semester) or KTH students (summer semester) through language exchange via Skype.

For this course we work together with the Japanese language classes at MIT and KTH, so that our students can practice their English, and their students can practice Japanese. Apart from honing their language skills, students also get to know about the difference in academic life and culture in different countries, while their self-chosen projects give them a specific target to focus their discussions.

In connection to this virtual exchange, we visited MIT and KTH with a number of students that took our course and discussed in person with students and faculty at those universities about international exchange opportunities, and experienced different approaches to teaching and learning. Additionally, a group of 7 students enrolled in the "Very Fast Track" Japanese language program of MIT visited The University of Tokyo for the last part of their course and to put their newly acquired skills to practice in discussions and lab-tours with our students.

These programs have encouraged the students to think more seriously about studying abroad, and several of them actually went to study overseas. We see this international peer-learning experience as an important part of the education of "global leaders", because it deals with cross-cultural differences, offers the students an opportunity to start building an international network, requires close collaboration, and exposes the students to different education methods, which makes them look at their own education from a metacognitive level.

References
1. Jorg O. Entzinger, Kumiko Morimura, Shinji Suzuki, "Developing e-learning for internationalization: results and prospects of a seminar style course", *2011 JSEE 59th Annual Conference and Exposition / International Session*, Hokkaido University, Sapporo, Japan, 09/09/2011. Paper #W-01, Pages 16-19.
2. Kumiko Morimura, Jorg O. Entzinger, Shinji Suzuki, "国際コミュニケーション力養成のための M-Skype (M-Skype for development of global communication skills)", *工学教育研究講演会 第 60 回年次大会 (2012 JSEE 60th Annual Conference and Exposition)*, Shibaura Institute of Technology, Tokyo, Japan, 23/08/2012. Paper #6-227 [in Japanese].

Biography

Jorg Entzinger, PhD, was born in The Netherlands, where he received his M.Sc. in Mechanical Engineering from the University of Twente. He graduated on the automatic calibration and control of an industrial robot using visual information. After that, he investigated the human decision making and control process of airline pilots in the visual approach to landing, for which Jorg received his PhD in Aeronautics and Astronautics from the University of Tokyo in 2010. He currently works for the University of Tokyo as research associate at the Institute for Innovation in International Engineering Education on various projects concerning globalization and increasing students' leadership and teamwork skills , while also continuing research in the field of aeronautics.

Kumiko Morimura, PhD, is an Associate Professor at the University of Tokyo, where she teaches technical English to undergraduate and graduate students in the School of Engineering. She studied acoustic engineering and received Ph.D. in Interdisciplinary Information Studies from the University of Tokyo. Member of Acoustic Society of Japan (ASJ), IEEE Professional Communication Society, and JSEE.

Shinji Suzuki was born in Japan and obtained his bachelor in Aeronautics & Astronautics from the University of Tokyo in 1977, and his master's degree in 1979. From 1979-1986 he worked as a researcher for the Toyota Central Research and Development Inc. on Noise & Vibration analysis. In 1986 he obtained his PhD degree from the University of Tokyo, where he then became an associate professor in Aeronautics & Astronautics, and in 1996 a full professor. His main research interests are flight safety, flight dynamics, control, optimization and Unmanned Aerial Vehicles.