

## AY 2020 Project Achievement Report for ALL DOSHISHA Co-Learning Program

Project Title
Do you know the way of Doshisha international exchange in science? ~To future students of Science and Engineering~

Project Members			
Role	Name	Major	Grade
Leader	Yuma Kuroda	Electronics	B3
Sub-Leader	Miyu Teramoto	Molecular Chemistry and Biochemistry	B1
Sub-Leader	Masaki Nishida	Molecular Chemistry and Biochemistry	B1
Sub-Leader	Leona Hirai	Environmental Systems Science	B1
	Mischa Aleksej Krueger	Electrical and Electronic Engineering	M2
	Tomoki Kitagawa	Electrical Engineering	B1
	Alansari Shouq	Mechanical Engineering	M2
	Masaki Mizue	Intelligent Information	B1
	Shoji Oikawa	Mechanical and Systems Engineering	B1
	Sora Sakamoto	Mechanical and Systems Engineering	B1

Expenditure			
Expenditure Items	Unit Price	Quantity	Amount
Reward for cooperation in interviews (Study abroad, language lessons)	\2,000	5	\10,000
Gratuity for a lecturer (Prof. Romero Camille)	¥11,137	1	¥11,137
TOTAL			\21,137

### Purpose of the Project and Reasons

The purpose of this project is to convey the characteristics and appeal of international exchange in the science field to the students of Doshisha's schools (future students of science and engineering faculty). The concept of this project is "Learn science and engineering in a foreign language and in a foreign country to connect with the world - Step up to study abroad! -" The concept of the program was not just to learn a language, but to communicate to high school students that they can study science and engineering in a foreign language while in Japan, can study abroad, and will eventually be active in the world, rather than simply learning a foreign language.

By holding workshops, the number of students, who wish to enter the Faculty of Science and Engineering and participate in various programs after entering the faculty, will increase. In addition, by posting information on the website, not only the students who attended the workshops, but also other students can use the website as a source of information when they consider entering Doshisha, and current students can also use the website as a source of information when consider participating in various programs. Also, we tried to make the gathered information reusable for similar projects in the future.

### Details of Project Implementation (More than 1 page)

- Describe specifically your group project implementation in chronological order.
  - Describe the roles of your group members and what they actually did for the project.
  - Appropriately, you can attach photos by which we can see your work if you have.
- (Less than half of the format)

Due to the impact of COVID-19, we were not able to hold the workshop that we had originally planned.

Initially, we planned to hold a workshop in order to let the participants know how interesting science and engineering are, and to let them realize how interesting it is to study abroad and in a different culture. The content of the workshop focused on introducing the Double Degree Program (DD) with the partner schools of Science and Engineering, the related programs of Language Lessons and the Co-Learning program, as well as the regular course of Academic English for Science (AES). We dealt with a large number of topics in the project, so we decided to create different groups for AES and DD/Language Lesson in order to avoid miscommunication with 10 project members and the possibility of unclear responsibilities. We did not create a separate group targeting the Co-Learning program because the contents could have been covered by the introduction of our project activities in the workshop. In addition, a different group was created to be in charge of negotiations with the high schools where the workshop would be held. The following is a description of each group's preparations for the workshop.

[Negotiation group] (Leader: Leona Hirai, Alansari Shouq, and Yuma Kuroda)

Of the four high schools in the Doshisha group (Doshisha Junior and Senior High School, Doshisha Kori Junior · Senior High School, Doshisha Girls' Junior and Senior High school, Doshisha International Junior / Senior High School), some of the project members were from Doshisha International Junior / Senior High School. Therefore, we decided to hold the first workshop for the Doshisha International Junior / Senior High School. On October 23, we visited and had a meeting at the high school after summarizing our purposes, contents, and introduction of previous years' Co-Learning programs. Initially, we had planned to conduct the workshop in 2020, but due to the schedule of exams and long vacations at the high school, we adjusted the schedule from late January 2021 to early February 2021. At that time, we received a request to hold the workshop on Saturday afternoon considering the number of students who would probably attend the workshop. It focuses on the narrow topics about study-abroad-related programs of Science and Engineering. In addition, since there was no tour of the facilities of each faculty in AY2020 due to COVID-19, it was requested to create another opportunity to feel the atmosphere of the university and the faculties. Especially, the first and second year students are not likely to understand the technical basics of the Faculty of Science and Engineering and the differences between the various departments, so it was necessary to start with a basic explanation of the faculty. On December 4, we visited the Doshisha International Junior / Senior High School again, and adjusted the schedule to hold a workshop at Kyotanabe Campus on Saturday, February 20, from 1:00pm to 4:00pm. We also discussed that if the COVID-19 situation worsened, we would conduct the session online during their spring vacation (after March 13). Then the Faculty of Science and Engineering sent a request letter to the Doshisha International Junior / Senior High School. While we had been preparing a poster and consulting with teachers in the high school about how to hold the event since January, the situation with COVID-19 worsened. After consulting with the high school around the end of January, we gave up on holding the event this year.

Through Professor Matsukawa of the Faculty of Science and Engineering, we contacted Doshisha Junior and Senior High School, Doshisha Kori Junior · Senior High School, and Doshisha Girls' Junior and Senior High school by e-mail to ask if they would grant an opportunity for a workshop. However, the three schools replied that it would be difficult to hold the workshop within AY2020, due to the fact that the request was made at a time when the situation of COVID-19 was worsening.

Despite our efforts to hold a briefing session, we have decided against holding it

within AY2020 due to the reasons stated above.

[AES Group] (Leader: Masaki Nishida, Tomoki Kitagawa, Shoji Oikawa, Leona Hirai, Mischa Aleksej Krueger)

At the workshop, we decided to offer experiences by demonstrating small experiments and make quizzes on scientific English used in the Academic English for Science (AES) class, a regular course of the Faculty of Science and Engineering. By doing so, we aimed to create a program that emphasizes interactivity, where high school students can move their hands and use all their other senses. For the quiz on scientific English, Professor Matsukawa introduced us to the Girls Science Program, which offers contents teaching junior and senior high school students scientific English as well, and we referred to its past results and kept in mind the level of difficulty by choosing questions from the experimental procedures and using a multiple-choice format.

From November, we started referring to the lecture materials of AES to understand how the classes are conducted. Then, Professor Romero Camille, Masaki Nishida, and Leona Hirai held a "Study Session on AES Experiments" accompanied by our advisor, Professor Yamane on Thursday, January 14, from class 4 to 5 at the lounge on the second floor of the Rikagaku-kan building. Two specific experiments were conducted: a comparison of the erasing performance of several erasers and a strength test of spaghetti. We reconfirmed the difficulty of explaining the experimental procedures and evaluation of the results in English, even though we were only using everyday things like erasers or spaghetti. We were confident that this would be a good way to convey the importance of scientific English to high school students. We also felt the need to think about the amount of experiments and the extent to which we should explain peripheral knowledge to high school students, and to create opportunities for ourselves to be able to teach experiments to high school students. After this, the situation of COVID-19 worsened, and we decided not to hold the briefing session within the academic year, so we prepared materials for the two experiments to be distributed to the high school students at the workshop and finished our activities.

[DD/Language Lesson Group] (Leader: Miyu Teramoto, Yuma Kuroda, Masaki Mizue, Hiro Sakamoto, ALANSARI Shouq)

From December to January, we interviewed five people: three former DD students, Mr. Murao Masashi (major in Electrical and Electronic Engineering, went to EC Lille), Ms. Sujishi Mikako (major in Applied Chemistry, went to ENSCL) and Mr. Hashimoto Shunsuke (major in Electrical and Electronic Engineering, went to EC Nantes), a language lesson student (Ms. Kanenaka Akane, plans to go to ENSCL), and her tutor (Ms. Piet Maurine Solene Cecilia from ENSCL). After this, the situation of COVID-19 became worse, and we had to give up holding the workshop during the AY02020, so we transcribed all the contents and finished our activities. However, by reading the interview transcripts, one can get an idea of what it is like to study abroad in DD, including the preparation. When we conduct similar efforts to increase the number of high school students or students in science and engineering to study abroad in the next academic year, these materials can be used to reduce the amount of time required to gather information.

### Acquirement of Competences through the project (More than 1 page)

- Describe the results compared with the goals and objectives in your project proposal.
- Describe what kind of skills and abilities you improve since the project started.
  - 3 elements of global mindset (①Global vision, ②Respect for diversity, ③Intercultural understanding)
  - Fundamental competencies for working persons (3 Competencies/ 12 Competency Factors)
- ①Ability to step forward (Action) ②Ability to think through (Thinking), ③Ability to work in a team (Teamwork)
- In the case of non-achievement of the goals, please write specifically ①what you could not have done in the plan, ②the factors, ③the solutions.

We were not able to conduct the workshop and did not achieve our goal. The major reason for this was COVID-19. The situation did not improve from early fall to the beginning of the year, and both universities and high schools were in a state where it was difficult to make guarantees. In particular, at the beginning of the project, we had made plans based on the idea that the situation would be somewhat better at the beginning of the year than it was then, so we could not cope with the worsening situation. In a situation as unstable as this time, we should have at least made two plans, one for the ideal situation and one for the worst situation. If we had considered making a video as an alternative to the workshop, we might have been able to avoid the consequences of not being able to do anything like we did this time. From this reflection, although we were not able to practice, we were able to improve our ability to plan. Another factor that prevented the event from being held was the lack of awareness for online support. All the members of the project took a fully online course in the spring semester of 2020, and they thought that they could manage if it was online. However, even if the lectures were online, the high school would have to bear the burden of organizing and handling problems at the time of the workshop. We were not able to anticipate the situation of the high schools, which had to deal with various requests from the government and Kyoto Prefecture. We learned that our situation does not necessarily apply to others and that we have to take into account their circumstances.

As mentioned above, there were some mistakes in the planning phase, but we all discussed how to make it meaningful for the high school students. In particular, we planned a program that was interactive so that the high school students could not only listen to the lecture, but also participate proactively by using their hands and other senses. Specifically, we planned to have them experience small experiments with AES and conduct quizzes during the introducing interviews. Although we were not able to realize these plans, we were able to think with imagination and flexibility that was not limited to the existing framework of workshops.

After the abandonment of the workshop, it was not possible to maintain the motivation of all members. This was because there was a big difference between the vision we had initially envisioned and reality. Therefore, it was necessary to plan for the worst-case scenario. However, even after we abandoned the idea, all of us continued to do what we had decided to do, such as summarizing the research we had done up to that point and preparing materials that could have been distributed if there had been a briefing session. This led to an improvement in our ability to carry out tasks and control stress.

Due to the impact of COVID-19, many of the discussions in the project were held online. In this case, it was unclear whether the members were able to communicate sufficiently because we did not know the atmosphere of the place. In some cases, only some of the members came to the university, so there were cases where both face-to-face and online discussions were used. In this case, it was difficult for the online participants to speak up. We were keenly aware of the difficulty of communication in this way.

**Future Expected Results of Ripple Effect (Within 1 page)**

- Describe how it will be desirable that the University will use your project outcomes in the future.
- Write the approaches as many as possible for more spreading out the project outcomes.

The two deliverables of this project are the AES experiment materials and the interview transcripts. Just by reading the experimental materials, students can get an overview of the AES class, where students learn scientific English through experiments using familiar objects. It is a good way to convey that students need to learn scientific English. The interview transcripts are filled with not only with information about learning at the study abroad destination, but also the preparation and flow of the program. In particular, knowing the regrets of those who have experienced DD, such as "I should have made preparations earlier," or "I should have chosen French as second foreign language," can increase the chance of a student studying abroad. In addition, knowing what they learned and how they lived in their study abroad sites will help them consider their study abroad destinations more carefully. These activities will be beneficial to convey the appeal to high school students and to encourage students of the Faculty of Science and Engineering to study abroad.

The above results will reduce the preparation process for the workshop for high school students that could not be held this year, especially in the information gathering stage, and will be of great use when a similar project is launched for the Co-Learning program in 2021 and beyond. Even if a project targeting high school students is not launched, the information about AES and DD can be used in efforts to increase the number of study abroad programs in the Faculty of Science and Engineering. Although only the project members were able to obtain the above information in this project, the information is very useful, and we hope that it will be used in the co-curricular programs in and after 2021.