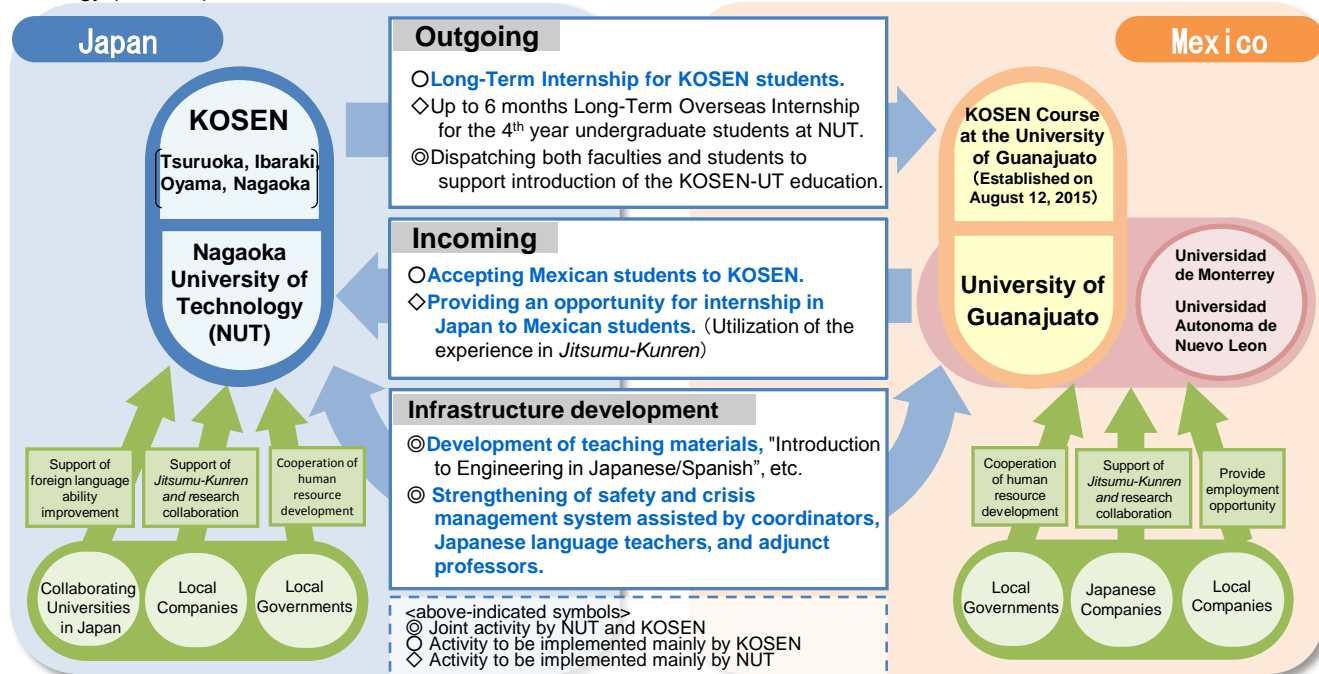


【Project Title】(Project selected for FY2015, Region: Latin America)

『Globalization of Engineering Education Model Starting from Age Fifteen: A Collaborative Program with Mexico, NAFTA Manufacturing Hub』

【Outline of the Project】

This project is aimed to establish KOSEN-University of Technology (UT) Engineering Education Model and deepen it to the bilateral exchange model in gradual and continuous exchange of both Japanese and Mexican students as global collaborative engineering education through the collaboration with Mexican universities and organizations based on Japanese College of Technology (KOSEN) model.



【Outline of Exchange Program】

- ① Japan to Mexico: Long-Term Internship for KOSEN students and *Jitsumu-Kunren* for the 4th year undergraduate students.
- ② Mexico to Japan: Study Abroad and Internship from KOSEN.
- ③ Enhancing Twinning Programs and Double Degree Programs with Mexican Universities.
- ④ Development of educational method and teaching materials for the foundation of KOSEN-UT Engineer Collaborative Education Model.

(Note)
Jitsumu-Kunren is the long-term internship system (approx. 6 months) based on the Practical Engineer Development Program, developed by the collaboration between NUT and accepting organizations.

【Type of Human Resource Trained by the Project】

In this Project, KOSEN and NUT will nurture leading and practical engineers capable of research development for resolution of the issues through the opportunities and experiences in study abroad and interaction between Japanese and Mexican students in the same generation, as well as gaining the firsthand knowledge, understanding of diverse values and recognition of the importance to resolve the issues on a global scale.

【Characteristic of the Project】

This project will enable to expand KOSEN-UT Engineering Education Model to become a transferable engineering education model with characteristics of educational methodology and supporting education tools (such as technical materials, Japanese learning materials, dealing with multilingual environment).

【Number of Prospective Exchange Students】

| | FY2015 | | | | | | | | FY2016 | | | | | | | | FY2017 | | | | | | | | |
|-------------------|--------|----|----|----|----|----|----|----|--------|----|----|----|----|---|----|----|--------|----|----|----|----|---|----|----|--|
| | A | Bo | Br | Ch | Co | M | Pa | Pe | A | Bo | Br | Ch | Co | M | Pa | Pe | A | Bo | Br | Ch | Co | M | Pa | Pe | |
| Outgoing Students | | | | | | 17 | | | | | | | | | 24 | | | | | | | | | 25 | |
| Incoming Students | | | | | | 0 | | | | | | | | | 20 | | | | | | | | | 25 | |
| | FY2018 | | | | | | | | FY2019 | | | | | | | | | | | | | | | | |
| | A | Bo | Br | Ch | Co | M | Pa | Pe | A | Bo | Br | Ch | Co | M | Pa | Pe | | | | | | | | | |
| Outgoing Students | | | | | | 24 | | | | | | | | | 25 | | | | | | | | | | |
| Incoming Student | | | | | | 26 | | | | | | | | | 25 | | | | | | | | | | |

A: Argentina Bo: Bolivia Br: Brazil Ch: Chile Co: Columbia M: Mexico Pa: Panama Pe: Peru

1. FY 2015 Progress

【Name of Project】(Project selected for FY2015, Region: Latin America)

「Globalization of Engineering Education Model Starting from Age Fifteen: A Collaborative Program with Mexico, NAFTA Manufacturing Hub」

■ Exchange Programs



〈TA by Japanese students in Mexico〉

In FY 2015, we dispatched Japanese students including KOSEN students to Mexico and discussed and collected information to enhance Twinning Program and Double Degree Program. Also, we developed multilingual teaching materials for the foundation of KOSEN-UT Engineer Collaborative Education Model, and established safety and crisis management system.

Through these efforts, we established the foundation to promote this project.

Student-Mobility

○ Outgoing

In FY 2015, as *Jitsumu-Kunren*, we dispatched 4 students for 6 months to universities and local companies in Mexico. For the support of KOSEN Course at the University of Guanajuato, 16 KOSEN students were dispatched to involve in cross-cultural exchange.

Also, for interaction with Twinning Program students at Universidad Autonoma de Nuevo Leon, 8 NUT and KOSEN Students were dispatched and practiced as TA.

○ Incoming

There were some incoming exchange in FY 2015. We will put more effort into the incoming program from next year.

| | FY2015 | | | | | | | | | | | | | | | |
|-------------------|--------|----|----|----|----|----|----|----|--------|----|----|----|----|----|----|----|
| | Plan | | | | | | | | Result | | | | | | | |
| | A | Bo | Br | Ch | Co | M | Pa | Pe | A | Bo | Br | Ch | Co | M | Pa | Pe |
| Outgoing Students | | | | | | 17 | | | | | | | | 28 | | |
| Incoming Students | | | | | | 0 | | | | | | | | 7 | | |

A:Argentina Bo:Bolivia Br:Brazil Ch:Chile Co:Columbia M:Mexico Pa:Panama Pe:Peru

■ Forming the University Network with Quality Assurance

We involved in interactive faculty exchange among University of Guanajuato, Universidad de Monterrey, and Universidad Autonoma de Nuevo Leon. We also discussed to enhance credit transfer system, Twinning Program and Double Degree Program.



〈Interaction with KOSEN students and students in Mexico〉

■ Promotion of Student-Mobility Environment

We held a project steering committee and shared the information of safety and crisis management system. We gave the students pre-departure guidance to shared information about the local circumstance in order to reduce the risks during the stay.

In addition, for using Japanese engineering textbooks as supplementary materials for students in Mexico, we translated the textbooks into Spanish, and started Japanese-English-Spanish trilingual support.

■ Internationalization of the university

Information disclosure and Publication of outcome

Started creating website and brusquer that dealing with Japanese, English, and Spanish

■ Notices

For KOSEN students, this dispatch to Mexico was first time going abroad for many of them, and they could improve their global communication skills and motivation to study abroad in the future by the cross-cultural experience. For the students in Mexico, they came into contact with part of Japanese education system through communication with KOSEN students and improved the motivation to study in Japan.

NUT students visited companies in Mexico and inquired the difference from Japanese companies and manufacturing.

2. FY 2016 Progress

【Name of Project】(Adopted year:FY2015, Region: Latin America)

「Globalization of Engineering Education Model Starting from Age Fifteen: A Collaborative Program with Mexico, NAFTA Manufacturing Hub」

■ Exchange Programs



〈TA by Japanese students in Mexico 〉

In FY 2016, we dispatched Japanese students including KOSEN students to Mexico and discussed and collected information to enhance Twinning Program and Double Degree Program. Also, we developed multilingual teaching materials for the foundation of KOSEN-UT Engineer Collaborative Education Model, and established safety and crisis management system.

Through these efforts, we established the foundation to promote this project.

Student-Mobility

○ Outgoing

In FY 2016, as *Jitsumu-Kunren*, we dispatched 4 undergraduate students to the University of Guanajuato, 1 undergraduate student to University of Monterrey for 6 months. Also, we assisted in intensive courses and took a part in cross-cultural understanding and exchange as Short-Term Program, we dispatched 4 postgraduate students and 9 undergraduate students to Universidad Autonoma de Nuevo Leon and University of Monterrey.

To support KOSEN Course at the University of Guanajuato, 13 KOSEN students from Japan were dispatched to interact with the local students as a part of cross-culture exchange. Moreover, we dispatched 4 KOSEN students from Japan to the University of Guanajuato where they engaged in their research projects at local institutes and the University and assisted as a TA.

○ Incoming

| | FY2016 | | | | | | | | | | | | | | | |
|-------------------|--------|----|----|----|----|----|----|----|--------|----|----|----|----|----|----|----|
| | Plan | | | | | | | | Result | | | | | | | |
| | A | Bo | Br | Ch | Co | M | Pa | Pe | A | Bo | Br | Ch | Co | M | Pa | Pe |
| Outgoing Students | | | | | | 24 | | | | | | | | 35 | | |
| Incoming Students | | | | | | 20 | | | | | | | | 27 | | |

A: Argentina Bo: Bolivia Br: Brazil Ch: Chile Co: Columbia M: Mexico Pa: Panama Pe: Peru

■ Forming the University Network with Quality Assurance

We involved in interactive faculty exchange among University of Guanajuato, Universidad de Monterrey, and Universidad Autonoma de Nuevo Leon. We also discussed to enhance credit transfer system, Twinning Program and Double Degree Program.



〈Interaction with KOSEN students and students in Mexico〉

■ Promotion of Student-Mobility Environment

We held a project steering committee and shared the information of safety and crisis management system. We gave the students pre-departure guidance to shared information about the local circumstance in order to reduce the risks during the stay.

In addition, to use Japanese engineering textbooks as supplementary materials for students in Mexico, we translated the textbooks into Spanish, and continued Japanese-English-Spanish trilingual support.

■ Internationalization of the university

Information disclosure and Publication of outcome

Continued to create website and brochures which introduces this project in Japanese, English, and Spanish.

■ Notices

- For many of the KOSEN students, this dispatch to Mexico was their first time going abroad. They were able to improve their global communication skills and increase motivation to study abroad in the future through the cross-cultural experience.
- We dispatched 5 undergraduate students to Mexico for 6 months as overseas *Jitsumu-Kunren* (Long-term internship).