

1. Outline

【Name of Project】

OPEN-TECH INNOVATION: An Initiative for Global, Social and Regional Collaboration

【Future vision of the university planned in TGU project】

We aim to become a core engineering school where the leading researchers, business workers and engineers engaging in the engineering research, industry and education in Japan and abroad gather in pursuit of OPEN RESOURCE (intellectual, human and physical resources) stored in our university, develop an innovation and form an ASIAN HUB of the global network, and also where international sophisticated engineers (TECH LEADER) who can demonstrate leadership to contribute to the globalization of the industrial infrastructure in all countries and regional communities are trained.

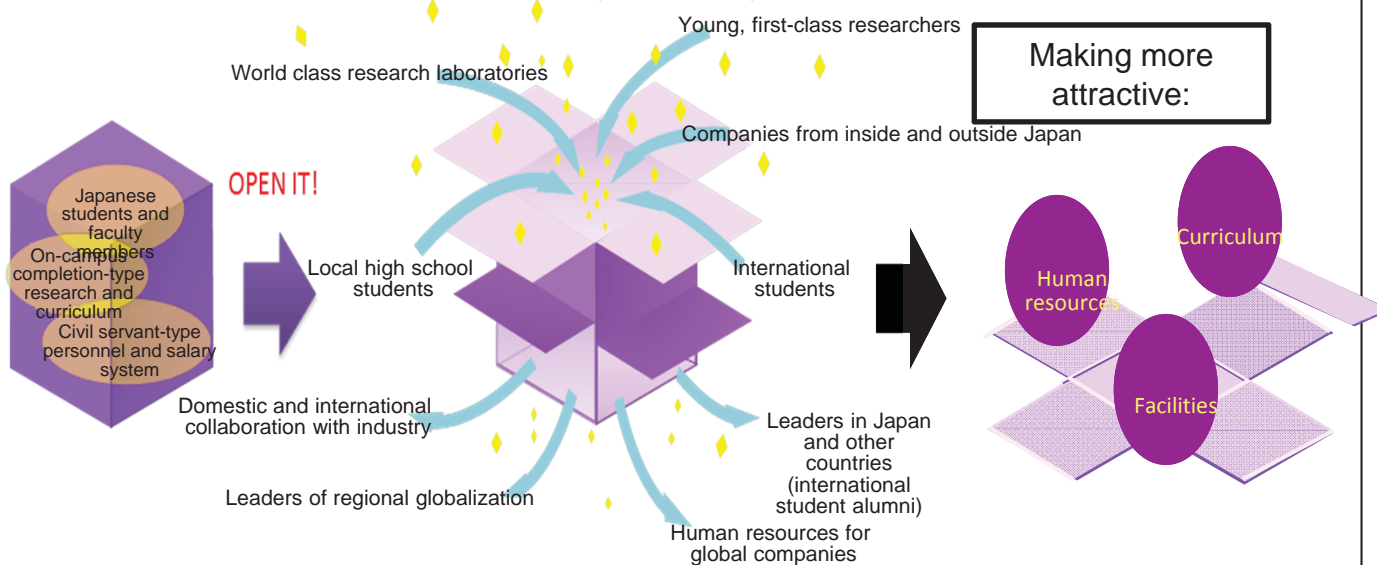
【Summary of Project】

Keys of our project are making resources more attractive in the points of curriculum, human resources, and places.

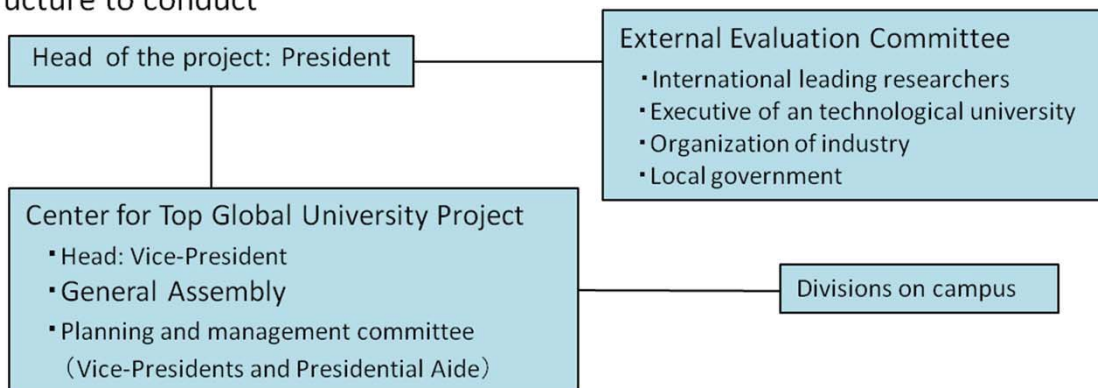
For making the curriculum more attractive, with the aim to train sophisticated specialized personnel, “TECH LEADER”, we will carry out a school-wide curriculum reform. We will foster a rich humanity by constructing an education system oriented to the international society as well as by offering learning opportunities by making a use of the cultural resources in Kyoto.

For producing more attractive human resources, we aim to shift the faculty and staff body to become an international group. We will ensure to globalize the university as a whole and promote the establishment of the global inter-university network by sending the faculty and staff members to overseas and also accepting the faculty and staff members from overseas.

For making places more attractive, we will build and improve a faculty and hub where the world’s leading researchers and our teaching staff as well as the regional companies interact, in addition to the Japanese students and students from overseas. We will create an opportunity to meet people with diverse views and background and contribute to the creation of new values and ideas.



Structure to conduct



【Summary of the 10-year plan】

○ Increasing the number of international students

We will increase the number of international students through the ways such as student exchanges, short-term programs, and giving the admission before coming to Japan. Our goal is to accept 640 international students per year no later than 2023 (16% of all students, 40% of graduate students).

○ Promoting study abroad of Japanese students

80% of Japanese students will belong to the “Global Course” in graduate school. In the “Global Course”, joining an internship program is obligated. As a result of it, study abroad of Japanese students is promoted.

○ Curriculum reform for globalization

We begin the program to enhance the English abilities and make at least half the undergraduates achieve the TOEIC score of 730 or higher. We also provide more graduate courses offered in English to make at least 80% of all courses in graduate school instructed in English no later than 2023. To enhance convenience for students to study abroad, we make our academic calendar more flexible.

○ Globalizing the faculty and staff members

We start the dispatch program of faculty and staff members. Also, staff members are obligated to take TOEIC test every year to know their English fluency and make the target of achievement by themselves.

Not only the capacity building of our staff, we invite researchers and students per laboratory from overseas leading universities.

○ Personnel systems of faculty members meeting the global standard

We establish and operate personnel systems of faculty members meeting the global standard such as annual salary scheme, tenure track, evaluation standard fitting the globalization.

○ Enhancing diversity on campus

Exchanges among international researchers/students and Japanese researchers/students on campus become common by providing dormitories where both international and Japanese students live and promoting activities of exchange.

【Featured initiatives (Internationalization, University reform, Education reform)】

○ Curriculum structure by 3×3 scheme

We change the academic year structure from the scheme of 4-year bachelor, 2-year master, and 3-year doctor to the one of 3-year bachelor, 3-year master and 3-year doctor in effect.

○ Program to enhance the English abilities: seeking the TOEIC score of 730

Students take the program of a great deal of input with high degree of demand in their freshman and sophomore years. The average TOEIC score at the time of entrance of graduate school will be raised from 616 to 730 no later than the year of 2023.

○ Step-up style of structure of Project Based Learning (PBL)

PBL style programs take important roles in our curriculum. Stepping up from On-campus group, region, to overseas, students experience PBL as team projects. Through these experiences, we foster students' leadership.



Photo: Internship program overseas

○ Dispatch program for faculties and staff

We send about 10 faculty members abroad who are expected to conduct the educational collaboration internationally for a year in maximum. We also send a staff abroad for a year in maximum. Through these activities, we promote the globalization of our campus.

○ Inviting overseas leading unit

We invite researchers and students per laboratory from overseas leading universities in the areas of design and architecture, macromolecular and fibrous materials and green innovation, all of which are the core of our plan of ASIAN HUB, in order to develop global standard educational research.

○ Activities of collaboration in TECH SALON and Global Commons

We have set up TECH SALON as the hub of collaboration among international/Japanese researchers and industries, and Global Commons as the hub of collaboration among international/Japanese students. At these facilities, we expect that seminars of advanced knowledge, collaborative researches and learning activities among multi-national members, and multi-cultural exchanges are promoted.

2. FY2014 Progress

■ Common indicators and targets

Internationalization

○ Inviting overseas leading units

We invited overseas leading units from Princeton University, Université de Paris, National University of Singapore, and so on, and held conferences and workshops.

Also we invited leading units from ETH Zurich and Royal Academy of Arts (London), and held workshops after April 2015.

○ Activities of model globalization laboratories

13 laboratories were specified as “Model Globalization Laboratories”, and developed activities such as seminars by international researchers, training for students to make presentation at international conferences, collaborative projects with students in foreign universities, and accepting international students to the laboratory. Here are some examples of outstanding outcomes:

*Japanese student completed his master thesis in English.

*An international master student who came in a short-term project felt great satisfaction with research activities in the host laboratory and decided to seek his doctoral degree in Kyoto Institute of Technology.



Collaborative activity conducted by a model globalization laboratory

○ Support for promoting global internship programs

To promote our global internship programs, we supported faculty members leading the programs with budgeting their travel cost from Top Global University Project Budget (Cost for students are supported by Japan Student Service Organization (JASSO) or our International Exchange Promotion Fund. In FY2014, 89 Japanese students joined the program and 62 of them got credits on this activities.



○ TOEIC test and trial of speaking test we originally developed

Freshmen besides ones belong to the evening program were asked to take TOEIC test and 471 of them took it.

Concerning the speaking test, we originally developed the one targeted to evaluate the skill to use English in practical situations. The trial of the test was held and 834 students took it. (Photo: Trial of speaking test)

○ Preparation for dispatch program of faculty and staff

We completed the preparation for dispatch program of faculty and staff. The program started in FY2015, where nine faculties (three of them to the UK, two to the US, other four to Canada, France, Singapore, and Thailand) and one staff (to the US) will be sent.

University reform

○ Setting up the center to promote the project

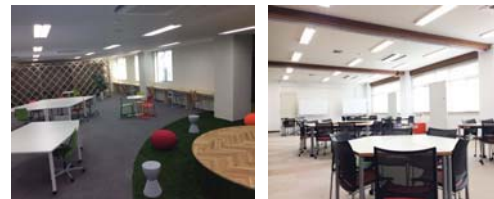
Center for Top Global University Project Office, whose head is the Vice-President for international, has been set up. Under this center, general committee and planning committee has been set up.

○ Annual salary scheme for faculties

Regulations for the scheme have been established and enacted them to eight faculties currently hired. We also hired two new faculties under this scheme.

○ Establishment of facilities for international exchange

We have established two facilities; one is “TECH SALON”, which is for global exchanges among researchers and industries, and the other is “Global Commons”, which is for exchanges among students.



Left: TECH SALON,
Right: Global Commons

Education Reform

○ Starting the curriculum of 3 × 3 structure

We enacted the 3 × 3 structure.

○ Development of the indicator for TECH LEADER

For fostering TECH LEADERS which is one of our final goals, we developed the indicator to make the goal more concrete and set the standard for measuring the achievement. The indicator has been developed by doing surveys and interviews to people in global industries, create a test based on the result of surveys and interviews, have some students take the test, and verify the result.

■ University's own indicators and targets

○ Establishment of OPEN-TECH Consortium

As a consortium of researchers and industries from foreign countries and Japan, we established "OPEN TECH Consortium" where they share the forefront knowledge in the world and do joint researches. There are 46 members (in total of organizations and personnel) as of March 2015.

○ Symposium for Japanese and international researchers and industries

As we also have been committing to "Center of Community" (COC) Project, at the kick-off of Top Global University Project, we held a joint symposium of COC and Top Global University Project. We had about 280 participants from both on and off campus.



(Photo : joint project)

■ Featured initiatives based on the characteristics of the university

○ Step by step system to foster TECH LEADERS in 6-year curriculum

Applying the 6-year curriculum for undergraduate and master based on 3 × 3 structural reform, we started the new style of education. According to this style, first half of the whole curriculum (3 years) are to consolidate the basis with the way such as the program to enhance the English abilities and the team program of Project Based Learning (PBL) on campus and regional area. On second half of the curriculum (3 years), the team program of PBL overseas is provided. Through this process, talents for a TECH LEADER is fostered.

○ Establishing the platform of exchange among researchers and industries

As a consortium of researchers and industries from foreign countries and Japan, we established "OPEN TECH Consortium". There are 46 members (in total of organizations and personnel) as of March 2015. And we opened TECH SALON as a facility for exchange.

As the kick-off of the consortium, we held a joint symposium of COC and Top Global University Project. 280 including researchers from world leading universities, and people in Japanese industries and regional communities gathered and had a time to communicate with each other.

In TECH SALON, international seminars and collaborative researches with international researchers will be held from now on.

○ Educational program suitable for "Kyoto"

Based on the strength that we are located in Kyoto, where is a traditional cluster of industry, we have provided some courses related to traditional industry and culture of Kyoto. In FY2014, we expanded the number of courses in this category (9 courses in FY2013 → 20 in FY 2014). The number of students registered these courses was dramatically expanded.

■ Free description

○ Seeking the flagship in Asia

One of our goal is to foster many TECH LEADERS, and another goal is to become "ASIAN HUB" of education and research – take the flagship in Asia.

We especially seek the flagship in the fields of design and architecture, fibrous materials and macromolecular, and green innovation. We have already invited several units from leading universities in the world. We will begin the same activities in other two fields mentioned above. Continuing these activities in 10 years effort will make us the ASIAN HUB.

○ Contribution to globalization of the region

Kyoto is a cluster of research and development-oriented enterprises, and major companies are running their business globally. On the other hand, many small companies are not ready enough for globalization.

Based on our outstanding outcomes on collaboration with the region through the COC project, we conduct the Top Global University Project to contribute to globalization of the region at the point of fostering the leaders to make the regional industry globalized and setting up the opportunities for regional industry to make communication with international researchers and industries.

3. FY2015 Progress Report

■ Common Indicators and Targets

Internationalization

○ World Leading Units Invited

We made an agreement on the Academic Unit Program with Cambridge University in England and 5 other universities, and set up an environment for inviting leading international researchers. We also gave students opportunities to develop international insights by inviting 15 research units in the fields of design and architecture, and 2 units in the fields of macromolecular and fibrous materials. In addition, we held workshops, such as a Kyoto urban renewal project, with students.

○ Model Globalization Laboratories Active

Proactively setting an example of university internationalization for other institutions, we nominated 11 of our laboratories as Model Globalization Laboratories. Each laboratory held collaborative seminars and workshops with overseas universities, advised students on the presentations they were to give at international conferences and invited researchers from overseas to lecture at KIT.

○ Global Internship Program Expanded

115 students participated in internship programs held in the United States, France, Thailand, Malaysia and other countries. We gave credit to students who fulfilled program requirements. We actively negotiated with overseas companies to expand future overseas internship lists and concluded fundamental agreements on the acceptance of our students with some companies.

○ Overseas Hubs Established

We set up our first overseas office on the campus of Rajamangala University of Technology Thanyaburi in Thailand and had a signing ceremony for a new joint degree program with Chiang Mai University to start in 2017. This means we are now ready for interchange with Thai students and people from industry and will begin educational research activities and overseas internship projects through academia-industry cooperation at ASEAN country hubs.



〈 A Workshop at Chiang Mai University 〉

University Reform

○ Instructors' Annual Salary System Revamped

We applied an annual salary system to newly hired and all other full-time instructors and streamlined the monthly salary system. In addition, by increasing instructor salary system categories, it became possible for us to employ various categories of instructors, revitalize our organization, secure superior human resources, and introduce ability- and performance-based pay.



〈 Signing Ceremony at Chiang Mai University in Thailand 〉

○ Personnel Evaluation System Revamped

To evaluate personnel more objectively and transparently, we initialized a system that makes the best use of performance data registered in the university database. We examined data retroactive to job performance evaluations from December 2015 and assigned points to each instructor according to their level of international contribution, such as sending and accepting international students, or concluding international exchange agreements. Other points we evaluated clarified whether the contributions were for work abroad or were for work in Japan (at KIT). This system enables us to credit instructors who undertake international education/research, and as it is an internationally valid evaluation system, it will be understood by new non-Japanese professors.

Education Reform

○ English Training Programs Begun

An "extensive reading program" was introduced using a specifically designed support/administration website with the aim of enabling students to acquire English skills over the TOEIC 730 score level by the completion of their undergraduate degree. English classes have a new focus on increasing freshman knowledge of English vocabulary. We established a system for comprehensively monitoring each student's assignment achievement status. Furthermore, we conducted TOEIC tests for all freshmen twice a year (April and December) and incorporated the results into student grades.



〈 Speaking Test 〉

○ Multilateral Selection of Applicants Developed

We launched an "English speaking test working group" to work toward incorporating an English speaking test in our da Vinci (AO) entrance examination. This year's second trial freshman speaking test results showed an obvious improvement in student positivity, compared with the previous testing. The trials enabled us to examine the feasibility of testing students' oral English ability as part of our entrance examination.

○ Active Learning Enabled

We have been offering a course, “producing things with industrial cooperation,” with the aim of enabling students to acquire the skills to multilaterally foresee the overall (cradle to cradle) process of producing “my product.” Filling a request from a product development company, students in this course actually design and follow products through actual manufacture. With this course, we are heightening our students’ motivation for learning.

■ KIT’s Own Indicators and Targets

○ TECH LEADERS Trained

As part of our SGU vision, we set a goal to nurture TECH LEADERS with expertise, leadership skills, a command of a foreign language and an objective cultural identity. To train such human resources, we drew up a program infrastructure in 2014 with specific TECH LEADER indicators. In 2015, we added diploma and curriculum policies for 2016. We also initiated lectures, attended by 62 students, which furthered their understanding of leadership and facilitated its actual practice. With the aim of becoming TECH LEADERS who can flourish anywhere in the world, 136 of our graduate students participated in PBL studies in 2015. Specifically, these were overseas internships and entrepreneur programs.

■ Featured Initiatives Based on KIT Strengths

~Producing More Attractive Human Resources~

○ Faculty Dispatched Overseas

To promote the internationalization of our curriculum, we set up a system for faculty dispatch in 2014. Since the start of 2015, we have dispatched 9 instructors to overseas universities: 3 of them to England, 2 to the United States, and 1 each to Canada, France, Singapore, and Thailand. They acquired more effective English lecture styles, interactively questioning and answering students and using gestures to explain lecture content. This is expected to result in more dynamic instruction and an increase in more globally aware lecture styles on campus. It also provided clues on how best to set up a suitable environment here to ease students into study overseas.

○ Staff Internationalization Reinforced

We began administrator dispatch. Our long-term dispatch was to a U.S. university. This administrator gained a broad understanding of their higher education system through practical training, resulting in great expectations of his ability to contribute to our university’s internationalization. We also sent 4 administrators to universities in Australia. They deepened their understanding of the need to promote recognition and respect for different cultures and administrative systems in Australian universities. With these training programs, we succeeded in increasing the number of administrators who have English skills over the TOEIC 730 score level and bumping up our average score.

~Making Encounter Spaces More Attractive~

○ Establishment of Facilities for Multicultural Exchange

At the “Global Commons” we established as a space for interaction among all our students, Japanese and non-Japanese alike and held special classes where they could learn other languages. We also scheduled Chinese, Korean, Vietnamese, English and Japanese speaking staff to converse with students about their countries and culture in a casual atmosphere. We worked on this continuously. These activities enabled Japanese students to learn more about foreign countries before studying abroad. Moreover, we provided reference materials on Japan for international students.



〈 Multicultural Exchange at “M café” in the Global Commons 〉

○ OPEN TECH Symposiums Held

At our TECH SALON, we held 8 OPEN TECH symposiums on the themes of innovative mindsets, developing sophisticated human resources overseas by inviting, as lecturers, researchers and parties in the industrial world at home and abroad. We had 38 participants from local companies. At lectures held by the overseas researchers we invited, students gained insights into future career paths and were inspired by discussion taking place in English.



〈 7th OPEN TECH Symposium 〉

~Making the Curriculum Structure More Flexible~

○ 6-year Consecutive Learning Program Launched (3×3 Structural Reform)

In 2014, we constructed a “3×3 (three by three)” teaching/learning system in which 4th year undergraduates were re-labeled as graduate students. In the first year of this teaching system, 2015, we conducted the first 3×3 entrance examination for master’s program students admitted in April. In 2016, successful applicants took master’s program classes and were designated “M0” students, meaning they were in the first of a three-year program. This breakthrough system enables students to study abroad more easily in the first or second year of their 3-year master’s degree.

4. FY2016 Progress

■ Common Indicators and Targets

Internationalization

○ World Leading Research Units Invited

We provided opportunities for our students and faculty to collaborate with leading international researchers invited as design and architecture, macromolecular and fibrous materials, and green innovation research reinforcement units. We expanded the potential for more such units by signing four new agreements with universities such as Singapore University of Technology and Design (SUTD).

○ Short-term Programs Expanded

【Outbound Students】

200 of our students participated in exchange programs and global internship programs and we gave credit to students who fulfilled our requirements abroad. We established two new programs: "North Carolina State University Entrepreneurship Camp, USA" and "KMUTT Summer Camp, Thailand."

【Inbound Students】

214 international students studied at our university in exchange programs and global internship programs. We also held a "KIT Electronics Summer School" in which students collaborated on electronic circuits and programming with Université d'Orléans students.

○ Overseas Hubs Established

We set up an overseas office at Chiang Mai University and were granted space on the campus of King Mongkut's University of Technology Thonburi. These hubs will host collaborative projects, overseas internship projects with academia-industry cooperation and a joint degree program with Chiang Mai University.

○ Pre-enrollment Scholarship Notification Implementation

We notified prospective FY2016 Special Admissions for Privately-financed International Graduate Students of tuition exemption, and informed nine program applicants of their results before the completion of their enrollment procedures.

○ Course Numbering System Implemented

In April, we distributed a table with courses numerically coded by academic year, major, academic field, discipline, subclass and language.

○ Course List and Syllabi Available in English

As of FY2016, we made our course list and syllabi available in Japanese and, as a global language, English, in order that this information could be accessible to all students.

○ English Training Programs Implemented

Requiring students to make use of Academic Express 2 (an e-learning system) and M-Reader (an extensive reading program) strengthened students' English language foundation. Students were also assigned a large number of tasks over summer and winter breaks to further their English abilities. As a result, the number of students with TOEIC scores of 600 or more at their enrollment in April 2015 increased from 83 (13.6%) to 175 (28.9%) in 2 years.



〈 Electronics Summer School 〉



〈 Kyoto Institute of Technology
Chiang Mai University Office 〉

University Reform

○ Instructors' Annual Salary System Implemented

Three faculty switched from a monthly to an annual salary and 11 new full-time faculty hires began to take advantage of the annual salary system. The introduction of the annual salary system and the increase in faculty salary system options make it possible to implement more diverse faculty recruitment, revitalize our organization, secure talented people, and introduce competence and performance-based wages.

Education Reform

○ Diversification of Entrance Exams

The Da Vinci (AO) entrance examination capacity for our Regional Revitalization Tech Program (RRTP) was expanded. We allowed 10 more students to enroll than in the previous academic year, for a total of 70 places on AO exams (General Program + RRTP). We had 5.3 times more applicants than places as there were 369 applicants for FY2017.

○ Academic Paths Made More Flexible and Versatile (Continuing Education Program)

In an effort to respond to the needs of adult learners seeking to update their skills or embark on new career paths, we implemented the Elementary Machine-Learning Skill Acquisition Program, a certification program to train engineers in design, implementation and evaluation of products and services requiring machine learning. Four persons completed the program and were awarded certification.

■ Kyoto Institute of Technology's Own Indicators and Targets

○ Tech Leaders Trained and Evaluated

We independently developed questions to measure the effectiveness of our 'Tech Leader' training and polled 2nd year master's degree students on each item of the Tech Leader index. The Tech Leader Indicator Questionnaire asks students 26 questions related to "Global Skills & Knowledge, Global Practice Power, Leadership, Global Adaptability" and has them rate each by indicating one of 9 levels. Compiled results revealed the proportion of students with a confident leader orientation to be 44.4%.

We also asked "Would you like to work overseas in the future?" to survey the university's unique performance indicator, "proportion of students with a global orientation." The proportion of students who answered "Yes" to this was 41.7% in the FY2013 survey, and was seen to rise to 68.2% in FY2016.

■ Featured Initiatives Based on Kyoto Institute of Technology's Strengths

~Human Resource Improvements~

○ Faculty Dispatched Overseas

To aid faculty in acquiring more effective English lecturing styles and to reinforce networks with universities and research institutions abroad, we dispatched 10 instructors to universities in Portugal, the USA and other countries. They surveyed the educational systems and curriculum of their destinations. After their return, this information assists us in our internationalization.

Remarkable outcomes after faculty return:

- New agreement with host university achieved
- Doctoral program student from host university enrolls at our university
- International student visit from host university (summer program)
- Joint research article published with the host university instructor

○ Administrative Staff Internationalized

59 staff members used our TOEIC e-learning system and 44 staff attended practical English training with native English speaker instructors with a focus on conversational English. We dispatched two administrative staff to Thailand and France for short-term overseas training, and six persons to Thailand, Vietnam and neighboring regions for international work experience. In November all administrative staff took the TOEIC exam.

TOEIC Exam Results:

- Average staff score: 512.3 (a 20.5% improvement over 2015)
- Staff with scores of 600 or more: 26.1% (a 4.5% improvement over 2015)
- Staff with scores of 730 or more: 13.7% (a 2.2% improvement over 2015)



〈 Global Commons African Fair 〉

~Facility Improvements~

○ Students Exposed to Other Languages and Multicultural Studies

M-Café was created within our Global Commons, to provide students “a place to study multiple languages and cultures firsthand with international students” (5,032 users). Events at M-Café included Mr. Arthur Binard speaking on what comprises a multi-lingual/multi-cultural globalized modern society and three fairs dedicated to informing visitors about the clothing, music and cuisine of specific countries. (696 participants).

In addition, native speakers of four languages taught “Improving Your Foreign Language Skills Sessions” about 10 (up to 15) times each (178 participants). We invited members of the community with abundant overseas work experience and conducted three “Speak With A Person Who Has Worked in an International Setting” sessions. (29 participants)

- Languages available at M-Café: Korean, Chinese, Japanese, French, Vietnamese and Thai
- Fairs: In August we held an African Fair, in October, a Vietnamese Fair and in January, an East Asian Fair.
- Improving Your Foreign Language Skill Sessions: Chinese, English, French and German (in-house and outside instructors used)



〈 15th Seminar Panel Discussion 〉

○ Community and Regional Business Globalization Begun

International seminars (18) were given by highly respected overseas faculty, providing students, local businesspeople, and Japanese and overseas researchers an opportunity to interact. At the 15th seminar, we welcomed innovation platform experts from Aalto University in Finland to lecture on “How to Educate Innovators.”

~Curriculum Enhancements~

○ Joint Degree Program Begun

The Kyoto Institute of Technology and Chiang Mai University Joint Master's Degree Program in Architecture was approved in both Japan and Thailand. Two of our students passed the entrance exam for this program. Preparations for Japan's first joint master's degree program were completed for its start in April 2017.



〈 Model Globalization Lab Collaborative Research in Bangkok 〉

○ Model Globalization Labs Actively Lead the Way

We assigned 10 of our laboratories to model globalization for the remaining labs. FY2016 saw technical guidance and a workshop by an instructor from New Zealand Massey University, a foreign language lecture by an instructor from Morocco and lectures on making presentations at international academic conferences by native English speakers.

Accomplishments to Date:

- Students won awards at international academic conferences.
- A presentation at an international conference resulted in a model-lab student securing a researcher's position at a university overseas.
- International students, motivated by their supervisor's seminar at Kyoto Institute of Technology, enrolled in our master's program.
- An international student, motivated by instruction at one of our model labs, enrolled in our doctoral program.
- A new overseas university agreed to host our students.
- Collaborative research was begun with researchers who gave international seminars at our university.

5. FY2017 Progress Report

■ Common Indicators and Targets

Internationalization

○ Overseas Hub Activation

At northern Thailand's Chiang Mai University (CMU), we held an opening ceremony for the Joint Master's Degree Program in Architecture and our Overseas Office at Chiang Mai University. This office has been key in exchanging information for activities held primarily in Thailand and Southeast Asia such as our joint degree program, architecture workshops, platform for inter-university communication and our industry-academia collaborative projects. In addition, we opened a new office at the University of Cambridge (UK) as a base for overseas expansion in Europe.



〈 Opening Ceremony for our Chiang Mai University Office 〉

○ Short-term Programs Expanded

【Outbound Students】

Of our students, 196 became exchange students or took part in global internship programs. On June 1, we concluded a 3-way agreement with Ayabe Industrial Park Promotion Center and King Mongkut's University of Technology, Thonburi (KMUTT) for a Thai-Japan internship project. This was witnessed by the mayor of Ayabe. Four of our students, joined in part by KMUTT students, visited seven Japanese companies with offices or manufacturing centers in Thailand on an Industry Visit Training Tour. We increased the locations and academic fields our students experienced in 2017. Students made robots with French students and participated in the Polytech Orleans (France) Summer Camp robot contest. Other students made videos in Kirirom University, Cambodia using a drone at the KIT x KIT Spring Camp 2018.



〈 Visiting the Nitto Seiko Co., Ltd. in Ayabe 〉

【Inbound Students】

At our university, 214 international students studied in exchange programs and global internship programs. The 3-way agreement mentioned above enabled us to hold a summer school that included a tour of the Ayabe Industrial Park attended by 15 KMUTT students. By adding students from Germany and Kazakhstan in 2017, we expanded the KIT Electronics Summer School we began when we invited Universite d'Orleans students to attend in 2016. Thirty-three students from Turkey, Egypt, Spain, Korea and other countries attended the KIT Holistic Textile Summer School 2017.

○ English Training Programs Implemented

Continued use of Academic Express 2 (an e-learning system) and M-Reader (an extensive reading program) has strengthened our students' foundation in English and resulted in undergraduate students enrolled in 2016 who acquired TOEIC scores of 730 increasing in only two years, from 18 (2.9%) in April, 2016 to 95 (15.7%) in March, 2018. In December we required all undergraduate first year students to take our independently-developed computer-based English Speaking Test.

○ PR Video Production and Distribution

Our three Asian Hubs of expertise made clear progress and we created Japanese-with-English-subtitle videos which are now widely available. In the area of Design and Architecture, Kyoto Design Lab established a platform for creation and innovation. The Green Innovation Center promoted open access to their clean room equipment to improve the university research environment. Polymer and Fiber Science labs conducted collaborative research with the University of Cambridge, Université Paris Diderot, Budapest University of Technology and Economics, and University of Manitoba.

University Reform

○ Instructors' Annual Salary System Implemented

In FY2017, seven faculty members were paid through the annual salary system (four are foreign nationals and one has experience with education and research abroad). This system enables the recruitment of a wider range of faculty, the activation of our organization, the employment of excellent talent, and the introduction of capacity-based and performance-based wages.

Education Reform

○ Academic Paths Made More Flexible and Versatile (Continuing Education Program)

To respond to the need for the continuing education of people in the workforce, we implemented the following courses: Machine-learning for Basic Skill Acquisition (15 persons certified), Traditional Industry and Culture in Kyoto (three persons certified), Machine-learning Seminar (open to the public) "Machine-learning Course - Overview" (56 attendees) and "Introduction to Machine-learning" (57 attendees).



〈 Displaying our agreement with Politecnico di Torino 〉

○ Diversification of Entrance Exams

- In the FY2018 general entrance exam for third year transfer students, 145 applicants sat for 50 available slots. The English proficiency of 133 of these candidates was evaluated from TOEIC scores rather than written English exams.
- In the 'Global' recruitment category of the Da Vinci (AO) entrance examination established in FY2017, there were 14 applicants. "English Speaking and Writing" ability was evaluated in the ten persons who advanced to the final selection.
- Beginning with the FY2018 Da Vinci (AO) entrance exam, we made it known that persons who acquire International Baccalaureate diplomas in Japan are eligible to apply. International Baccalaureate content and achievement at accredited schools will be considered in combination with exam scores in applicant selection.

■ Featured Initiatives Based on Kyoto Institute of Technology's Strengths

○ Tech Leaders Trained and Evaluated

We conducted a questionnaire to evaluate Tech Leader skills in students who were about to complete their master's degrees. Results showed 40.6% of students had developed a leader orientation. Using this independent outcome indicator to evaluate the "global orientation" of students, we found that in response to the question, "Would you like to work overseas in the future?" in FY2013, 41.7% of students responded "I would like to." In FY2016, this rose to 68.2% and in FY2017, to 70.6%.

■ Kyoto Institute of Technology's Own Indicators and Targets

~Human Resource Improvements~

○ Administrative Staff Internationalized

Of our administrative staff, 82 practiced for the TOEIC test using an e-learning program and 37 faculty and administrative staff attended training sessions which included practical English communication practice with a native speaker. We dispatched three staff to Thailand and Australia for short term overseas training. In November, we required all administrative staff to take the TOEIC exam.

○ Faculty Dispatched Overseas

To become more effective when instructing students in English and to strengthen networks with overseas educational and research institutions, nine faculty went to Switzerland, the United States, Australia, and other countries through our faculty dispatch program. They collected data on host institution curricula to use in contributing to the internationalization of our university upon their return.

Remarkable Outcomes from Returning Faculty:

- Returning faculty began teaching in English using English-language teaching materials.
- A student from a host university was accepted to our doctoral degree course.
- A short-term program "KIT Bio Tech x IT Spring School 2018" was developed and implemented.
- Faculty jointly authored international academic papers with their counterparts at host universities.

These were published.



〈KIT Bio Tech x IT Spring School 2018〉

~Facility Improvements~

○ Students Exposed to Other Languages and Multicultural Studies

Many Japanese and international students interacted at the multilingual and multicultural learning project (M café) at the Global Learning Commons we continued to implement (4,415 users annually).

We invited a gastronomist, Mr. Yoshiharu Doi, to speak on "Japanese Cuisine and Its Presentation" on July 15 for our Global Learning Commons 2nd International Seminar. He provided insights into Japanese cultural traditions and the future of Japanese cuisine. In addition, 270 participants from the university and beyond, learned about Japanese traditional culture in contrast with some of the world's other cultures.

The Global Learning Commons held an African Fair in August, a Thai Fair in October, and an Earth Fair, "Mindful Spaces," in March.



〈African Fair in August, 2017〉

○ Community and Regional Business Globalization Implemented

We held Open Tech Symposiums and other international seminars (18 in total) at our Tech Salon and other locations, with domestic and foreign researchers and persons from industry. Participants from outside the university totaled 151. We provided a space to encourage exchange among students, local business people and domestic and foreign researchers and conducted innovative student education.

~Curriculum Enhancements~

○ International Degree Programs

- Two students each from Kyoto Institute of Technology and the University of Chiang Mai enrolled in our Joint Master's Degree Program in Architecture. Our students took classes at Chiang Mai University from August of 2017 to January of 2018. CMU students have been taking classes at our university since February 2018.
- We began discussions on the final fine tuning of our Double Degree Program with Politecnico di Torino, Italy.
- We held an exam for our first group of Higher Engineering Education Development Project, Mongolia (M-JEED) Twining Program students, enrolling two students each in our Architecture and Design, and Mechanical Engineering Programs for April 2018.
- We concluded our first Agreement on International Joint Supervision of a Doctoral Thesis with Université d'Orléans, France (Cotutelle) and sent one student to their doctoral course in March.

○ Model Globalization Labs Actively Lead the Way

We designated five laboratories in our university as models of globalization. One lab accepted students from Université d'Orléans, France; Justus Liebig University Giessen, Germany; and Al-Farabi Kazakhstan National University, Kazakhstan. The second hosted a KIT Rubber Science Spring 2018 program for students from Mahidol University, King Mongkut's University of Technology, North Bangkok, Chulalongkorn University, Thailand and University Kuala Lumpur, Malaysia. The third lab welcomed and provided guidance during experimentation for students from Rajamangala University of Technology Thanyaburi, Thailand. The fourth held the Electrical Analytical Chemistry Workshop 2017 which students from Kyungpook National University, Korea attended. The fifth conducted international collaborative architecture design workshops with students from Technology Arts Sciences TH Koeln in Germany.

Accomplishments to Date:

- In FY2017, we expanded an inbound FY2016 program into an inbound/outbound program.
- We employed one of our international Ph.D. students as a Retained Assistant Professor.
- We sent one of our students to the Australian university of a guest researcher we invited to speak at one of our international seminars in 2014.
- One of our students who studied in Belgium gave a poster presentation at an international workshop.



〈KIT Rubber Science Spring School 2018〉

6. FY2018 Progress Report

■ Common Indicators and Targets

Internationalization

○ Overseas Hub Established and Activated

Upon the conclusion of the double degree program agreement between KIT and Politecnico di Torino (PoliTo), Italy, we set up an overseas office at PoliTo. This office has proven key in cooperatively organizing activities held primarily in Italy and other areas of Europe such as our double degree program, architecture workshops, platforms for inter-university communication and our industry-academia collaborative projects. In addition, our overseas office at Chiang Mai University (CMU) has continuously been key in cooperatively organizing activities in Southeast Asia such as our joint degree program, biomedical workshops, platforms for inter-university communication, and mutual university information exchange. It has also provided our students with information on careers in Thailand.



〈 Opening Ceremony for our Office at PoliTo 〉

○ Short-term Programs Expanded 【Outbound Students】

Of our undergraduate and graduate students, 219 became exchange students or took part in global internship programs. Some made robots with French students and participated in the Polytech Orleans (France) Summer Camp robot contest while others made videos at Kirirom Institute of Technology (KIT), Cambodia using a drone at the KIT x KIT Spring Camp. These and other internship programs were conducted with universities which previously hosted dispatched faculty under the Overseas Education Exchange Program for Faculty Members of KIT. In addition, we initiated a CMU Biomedical Summer Camp and an International Summer Engineering Program in Taiwan_TECH. Students received academic credit as the global internship programs are part of our regular courses. In FY 2018, we conducted a global internship tour of 11 Japanese companies with offices or manufacturing centers in Thailand. Five of our students joined King Mongkut's University of Technology Thonburi (KMUTT) students and gained first-hand impressions of corporate work abroad.

【 Inbound Students 】

International students at our university studying in our exchange and global internship programs numbered 248. First, they were attracted to our successful Second Monotsukuri Engineer Summer School which received 17 KMUTT students who benefited from a close look at Ayabe Industrial Park manufacturing sites. Second, by adding students from Thai and Chinese universities in 2018, we expanded the KIT Electronics Summer School we began when we invited Universite d'Orleans students to attend in 2016. Third, 27 students from Egypt, Spain, Singapore, and Malaysia and 5 other countries attended the KIT Fiber & Textile Summer School.



〈 Visiting the Nitto Koshin Co., Ltd. in Ayabe 〉

○ PR Videos Produced and Distributed

To recruit foreign students, acquire new internship-provider companies, and increase international academic exchange agreements with universities, we created a promotional video in Japanese with English-subtitles which is now widely available. The video features images of many of the Tech-Leader-fostering activities that took place on our campus and showed our attractive Asian Hub potential through images of science and technology research activities conducted by people from all over the world who come to our campus to study, interact and create new value.



〈 Promotional Video Images 〉

University Reform

○ Instructors' Annual Salary System Implemented

In FY2018, seven faculty members were paid through the annual salary system (of these, three are foreign nationals and two have experience with education and research abroad). This system enables the recruitment of a wider range of faculty, the employment of highly talented individuals, the international mobility of faculty, and has resulted in positive overall stimulation of our organization.

Education Reform

○ English Training Programs Implemented

Continued use of Academic Express 2 (an e-learning system) and M-Reader (an extensive reading program) has strengthened our students' foundation in English and resulted in the number of undergraduate students enrolled in 2017 who acquired TOEIC scores of 730 and higher increasing in only two years, from 60 in April, 2017 to 98 in March, 2019. In December we required all undergraduate first year students to take our independently-developed computer-based English Speaking Test.

○ Academic Paths Made More Flexible and Versatile (Continuing Education Program)

To respond to the need for workforce engagement in continuing education, we implemented the following courses: Machine-learning for Basic Skill Acquisition (10 persons certified), Traditional Industry and Culture in Kyoto (one person certified), Machine-learning Seminar (open to the public) comprising a "Machine-learning Course - Overview" (38 attendees) and an "Introduction to Machine-learning" (18 attendees).

○ Entrance Exams Diversified

• In the FY2018 general entrance exam for third year transfer students, 173 applicants sat for 50 available slots. The English proficiency of 141 of these candidates was evaluated from TOEIC scores rather than a written English exam.

• In FY2018, 24 applicants sat the 'Global Recruitment' category of the Da Vinci (AO) entrance examination (established in FY2017). English speaking and writing abilities were evaluated in the nine persons who advanced to the final cut.

■ Featured Initiatives Based on Kyoto Institute of Technology's Strengths

○ Tech Leaders Trained and Evaluated

We conducted a questionnaire to evaluate Tech Leader skills in students who were about to complete their master's degrees. Results showed 37.2% of students had developed a leadership orientation. Using this independent outcome indicator to evaluate student "global orientation," we found that in FY2018, 68.3% of students responded positively to the question, "Would you like to work overseas in the future?"

■ Kyoto Institute of Technology's Own Indicators and Targets

~Human Resource Improvements~

○ Administrative Staff Internationalized

Seventy five of our administrative staff practiced for the TOEIC test using an e-learning program, 16 administrative staff attended a seminar on TOEIC countermeasures, and 18 faculty and administrative staff attended practical English training with a native speaker. We dispatched three staff to the Philippines for short term overseas training. In November, we required all administrative staff to take the TOEIC exam.

○ Faculty Dispatched Overseas

To become more effective when instructing students in English and to strengthen networks with overseas educational and research institutions, nine faculty went to the United Kingdom, the United States, Canada, Denmark and other countries through our faculty dispatch program. They collected data on host institution curricula to use in contributing to the internationalization of our university upon their return.

Remarkable Outcomes from Returning Faculty:

- Returning faculty began teaching in English using English-language teaching materials.
- Our faculty jointly authored international academic papers with their counterparts at host universities.
- Returning faculty reported on their academic activities abroad at a faculty-development meeting.
- Students from some host universities were accepted to our courses and vice versa.
- Faculty from some host universities were invited to our university to conduct lectures.

~Facility Improvements~

○ Students Exposed to Other Languages and Multicultural Studies

We continued to implement the multilingual and multicultural learning project (M café) at our Global Learning Commons. Many Japanese and international students interacted there on a regular basis. The Commons held an African Fair in August, a European Fair in December, and an Asian Fair in January welcoming 812 attendees, in total.

○ Community and Regional Business Globalization Implemented

We held 15 Open Tech Symposiums and other international seminars at our Tech Salon and other locations, with domestic and foreign researchers, and persons from industry. Participants from outside the university totaled 294. We also provided a space encouraging communication among students, local business people and domestic and foreign researchers; and conducted innovative student education seminars.

~Curriculum Enhancements~

○ International Degree Programs Implemented

• In October, we began a first Double Degree Program for master's students. Our Department of Innovative Materials and Material's Properties Control and the corresponding departments at PoliTo agreed on the specifics. As a result, two students from PoliTo will be at our university for a year from October of 2019. Furthermore we concluded an agreement with Venice Ca' Foscari University, Italy regarding our double degree program for doctoral students prior to starting it in FY2019.

• Two students from Kyoto Institute of Technology completed their studies and graduated from the Joint Master's Degree Program in Architecture in March of 2019 and two from CMU will graduate in July of 2019. Students took classes at CMU from August of 2018 to January of 2019. CMU Joint Degree students have been taking classes at our university since February of 2019.

• We held an exam for our second group of Higher Engineering Education Development Project, Mongolia (M-JEED) Twining Program students, enrolling three students in our Architecture and Design and five in our Mechanical Engineering Programs for April of 2019.

○ Model Globalization Labs Actively Lead the Way

We designated six of our laboratories as models of globalization. Four out of six laboratories conducted summer schools and collaborative seminars, accepting students from Université d'Orléans, France; Technische Hochschule Köln, Germany; Kazakh-British Technical University, Kazakhstan; Donghua University, China; Mahasarakham University, Thailand; and Charles University, the Czech Republic. The remaining two laboratories supported master's student participation in international academic conferences held in Europe and America. Four students gave oral presentations and three gave poster presentations at conferences. Each laboratory continued to provide support through requiring presentations and discussion in English at regular research evaluation meetings involving the international students in their labs. After returning to Japan, students reported on their experiences. As a result, students' international conference application pace has increased. Graduate students with international experience are internationalizing our laboratories.

Accomplishments to Date:

- Laboratory environment internationalization inspired a research student from abroad to successfully apply to our institution.
- In FY2018, we expanded an inbound FY2016 program by accepting students from various universities.



〈Practical English Training〉



〈European Fair in December〉



〈KIT Electronics Summer School 2018〉

7. FY2019 Progress Report

■ Common Indicators and Targets

Internationalization

○ Overseas Hub Established and Activated

Our administrative staff met at Kyoto Institute of Technology (KIT) regarding a symposium on the Joint Degree Program with Chiang Mai University. We held a joint workshop, at our Chiang Mai University (CMU) overseas office, with the support of the KIT International Academic Exchange Club representative in Chiang Mai. In addition, at the KIT overseas office at King Mongkut's University of Technology Thonburi, students from our summer camp and architecture workshop gave and listened to presentations. Our overseas office at Politecnico di Torino, set up in December of 2019, has continuously been key in cooperatively organizing activities in Europe.

○ Received an Honorary Doctorate

January 27, 2020, Kyoto Institute of Technology Emeritus Professor, Project Professor of the Joint Master's Degree Program in Architecture and ex-Professor of Architecture, Dr. Hiroaki Kimura, received an honorary doctorate of Architecture from CMU at the 2019 Graduation Ceremony, attended by Princess Shilinthong, Kingdom of Thailand.



〈 Awards Ceremony at CMU 〉

○ Short-term Programs Expanded 【Outbound Students】

We conducted the Polytech Orleans (France) Summer Camp and IT-NPIC Engineering Implementation Camp (Cambodia) where students studied basic technology related to electronics, and its application and implementation. These programs were conducted with universities where our faculty were previously dispatched under the Overseas Education Exchange Program.

We established two new global internship programs: "Brescia University VISPEC Summer school, Italy;" and "Universität Regensburg German Language Summer School". Participating students received academic credit as these programs are included in our regular curriculum.

In FY 2019, as in the previous year, we conducted a corporate training tour of 12 Japanese companies with offices or manufacturing centers in Thailand and promoted a globalized career view.

【Inbound Students】

In FY2019, 238 international students studied in exchange programs and global internship programs at KIT. In our Electronics Summer School 2019, 25 students from 4 countries teamed up with KIT students. This enforced international communication. Furthermore, 28 students from 11 countries, such as Italy, Switzerland and Singapore, participated in the IT Fiber & Textile Summer School 2019. Twelve students from 5 countries participated in the KIT Raman Spectroscopy in Biomaterials and Food Summer School 2019 and 15 students from 8 universities, such as Vietnam, Myanmar, Laos, and Cambodia, participated in the KIT Bio Tech & IT Winter School 2019.



〈 KIT Electronics Summer School 2019 〉

University Reform

○ Constructing a New Annual Salary and Performance Evaluation System

In FY2019, improving the performance evaluation system, as well as ensuring impartial evaluations and transparency motivated faculty to further improve their research. In addition, performance evaluation is now adequately reflected in the newly implemented salary system. These changes have enabled the recruitment of a wider range of faculty, the employment of highly talented individuals, the international mobility of faculty, and have resulted in positive overall stimulation of our organization.

Education Reform

○ English Training Programs Implemented

Continued use of Academic Express 2 (an e-learning system) and M-Reader (an extensive reading program) has strengthened our students' foundation in English and resulted in the number of undergraduate students enrolled in 2016 who acquired TOEIC scores of 730 and higher increasing from 17 in April, 2016 to 151 in March, 2020. In December we required all undergraduate first year students to take our independently-developed computer-based English Speaking Test.



〈 English Speaking Test 〉

○ Academic Paths Made More Flexible and Versatile (Continuing Education Program)

To respond to the need for workforce engagement in continuing education, we implemented the following courses: Machine-learning for Basic Skill Acquisition (20 persons certified), Machine-learning Seminar (open to the public) comprising a "Machine-learning Course - Overview" (25 attendees) and an "Introduction to Machine-learning" (31 attendees).

○ Entrance Exams Diversified

• In the FY2019 general entrance exam for third year transfer students, 163 applicants sat for 50 available slots. The English proficiency of 137 of these candidates was evaluated from TOEIC scores rather than a written English exam.

• In FY2019, the 'Global Recruitment' category of the Da Vinci (AO) entrance examination saw 27 applicants sit for 10 available slots. We began evaluating English speaking and writing abilities evaluation at initial screening in 2018FY, rather than at the final screening. As a result, we could acquire students who excel in English.

■ Featured Initiatives Based on Kyoto Institute of Technology's Strengths

○ Tech Leaders Trained and Evaluated

We conducted a questionnaire to evaluate Tech Leader skills in students who were about to complete their master's degrees. Results showed 53.5% of students had developed a leadership orientation. Using this independent outcome indicator to evaluate student "global orientation," we found that in FY2019, 69.8% of students responded positively to the question, "Would you like to work overseas in the future?".

■ Kyoto Institute of Technology's Own Indicators and Targets

~Human Resource Improvements~

○ Administrative Staff Gain International Experience

In FY2019, 15 of our administrative staff practiced for the TOEIC test using an e-learning program and 7 administrative staff attended a seminar on TOEIC countermeasures. We dispatched 3 staff to Cebu Island, the Philippines, for short term overseas training. In November, 117 administrative staff took the TOEIC exam and 9 administrative staff attended English improvement training.



〈 English Training overseas 〉

○ Faculty Dispatched Overseas

To become more effective when instructing students in English and to strengthen networks with overseas educational and research institutions, 10 faculty went to the United Kingdom, the United States, France, Singapore and other countries through our faculty dispatch program. They collected data on host institution curricula to use in contributing to the internationalization of our university upon their return.

Remarkable Outcomes from Returning Faculty:

- Returning faculty began teaching in English using English-language teaching materials.
- Our faculty jointly authored international academic papers with their counterparts at host universities.
- Returning faculty reported on their academic activities abroad at a faculty-development meeting.
- Students from some host universities were accepted to our courses and vice versa.
- Faculty from some host universities were invited to our university to conduct lectures.



〈 Asian Fair in October 〉

~Facility Improvements~

○ Students Exposed to Other Languages and Multicultural Studies

We continued to implement the multilingual and multicultural learning project (M café) at our Global Learning Commons. Many Japanese and international students interacted there on a regular basis. The Commons held an African Fair in August, an Asian Fair in October, a European Fair in January, and in February, the first Japanese Fair. The Commons welcomed a total of 681 attendees.

○ Community and Regional Business Globalization Implemented

We held 13 Open Tech Symposiums and other international seminars at our Tech Salon and other locations, with domestic and foreign researchers, and persons from industry. Attendees included 766 persons from outside the university. We also provided a space to encourage communication among students, local business people, and domestic and foreign researchers; and conducted innovative student education seminars.

~Curriculum Enhancements~

○ International Degree Programs Implemented

• Two students from CMU, and a student from KIT, completed their studies and graduated from our Joint Master's Degree program in 2019 and 2020. Two new CMU students have been taking classes at our university since August of 2019 and a KIT student is enrolling in the Double Degree program from August of 2020.

• Two students from Politecnico di Torino, Italy enrolled in our Double Degree program in April and have been taking classes at KIT since September of 2019 and a KIT student has been taking classes at Politecnico di Torino since February of 2020.

• A student from Università Ca' Foscari Venezia, Italy enrolled in our doctoral Double Degree program and has been taking classes at our university since September of 2019. We dispatched 2 professors and 2 administrative staff to Università Ca' Foscari Venezia where they were working to conclude our Double Master's Degree program agreement and decided to conduct from April of 2020.

• We held an exam for our third group of Higher Engineering Education Development Project, Mongolia (M-JEED) Twining Program applicants, enrolling 2 students in our Architecture and Design and 2 in our Mechanical Engineering Programs for April of 2020.

○ Model Globalization Labs Actively Lead the Way

We designated 6 of our laboratories as models of globalization. Three of the 6 conducted summer schools and collaborative seminars, accepting students from Université d'Orléans, France; Technische Hochschule Köln (Germany), The Al-Farabi Kazakh National University (Kazakhstan), Donghua University (China), Chiang Mai University, King Mongkut's University of Technology Thonburi (Thailand), and National Institute of Industrial Science and Technology (Cambodia). The remaining 3 laboratories supported master's and doctoral students in participating in international academic conferences held in Europe, the United States, Canada and Thailand. Six students gave oral presentations and 5 gave poster presentations at conferences. Each laboratory continues to provide support by requiring presentations and discussion in English at regular research evaluation meetings involving the international students in their labs. After returning to Japan, students report on their experiences. This has inspired an increase in students' international conference applications. Graduate students with experience abroad are internationalizing our laboratories.



〈 KIT-NPIC Engineering Implementation Camp 2019 〉

Accomplishments to Date:

- Laboratory environment internationalization inspired a research student from abroad to successfully enroll at KIT.
- A student participated in our summer school in FY2018 enrolled in our master's International Graduate Program HDSMS course.