Top Global University Project（Type B）Shibaura Institute of Technology

1. Outline

【 Name of project 】

Design and Implementation of a Human Resource Development Model for Engineering and Sciences Focusing on Value Co-Creative Education - Contribution to Global Sustainability

【 Future vision of the university planned in TGU project 】

With the goal of “fostering global engineers and scientists who can learn from the world and contribute to global sustainability”, we promote improvements in education, research activities and creation of innovation in parallel. We build a model for private science and technology oriented university, and share it with Japanese and overseas universities.

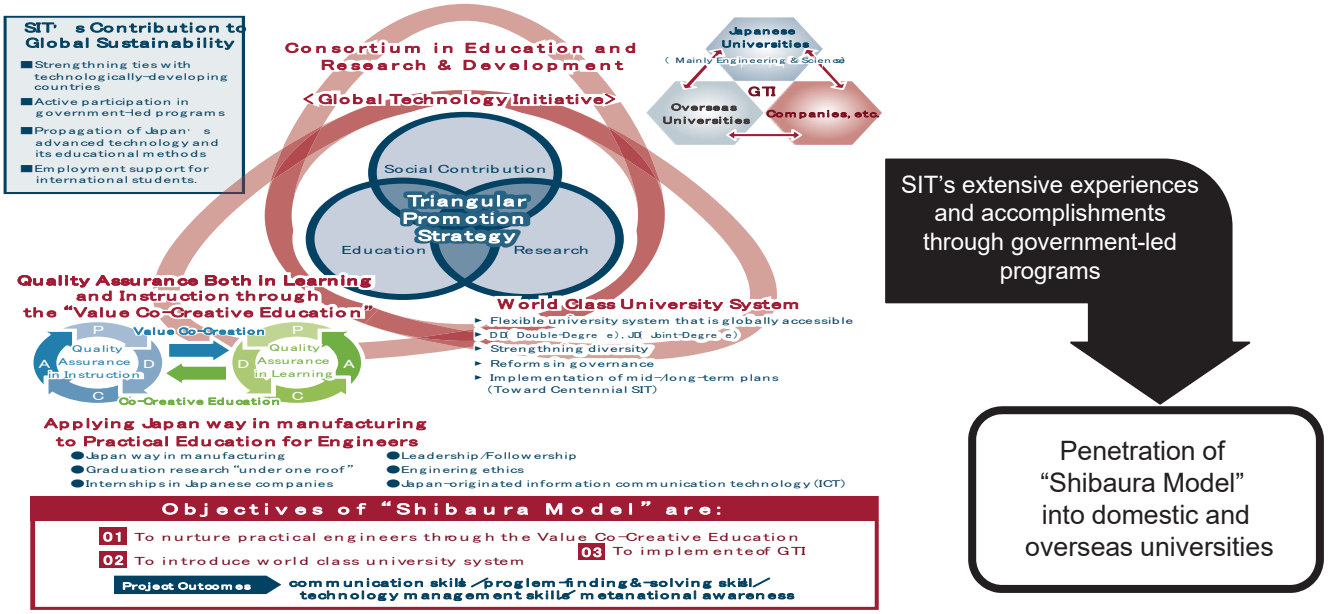
【 Summary of Project 】

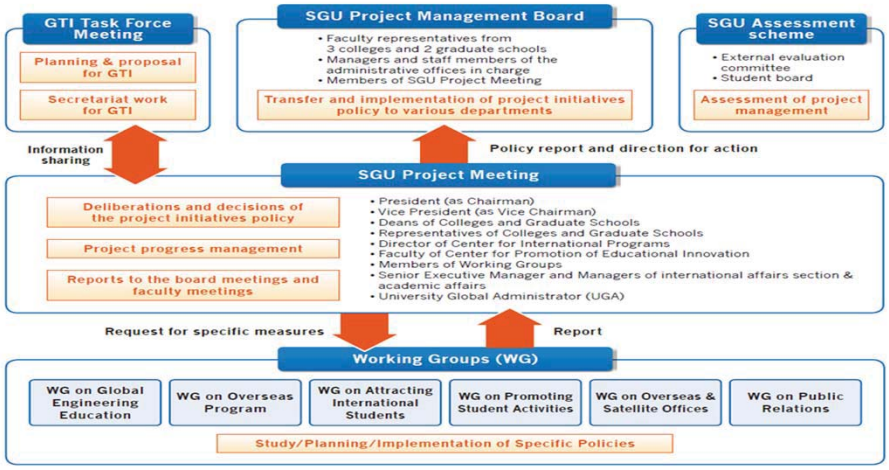
We promote this project with three pillars of “Quality Assurance Both in Learning and Teaching through Value Co-Creative Education”, “Establishment of World Class University System” and “Organizing and Steering Global Technology Initiative (GTI) Consortium”.

For “Quality Assurance both in Learning and teaching through Value Co-Creative Education”, we build the scheme that faculty and students enhance the value of education each other by running PDCA cycle.

For “Establishment of World Class University System”, we plan to be in top 10 ranking among Asian technical universities with an international students ratio by 30%, sending all the Japanese students to overseas, offering 600 lessons in English and setting out some degree courses in English language only.

For “Organizing and Steering Global Technology Initiative (GTI) Consortium”, we actively promote cooperation in human resource development and research activities in the academic-industrial alliance by forming a consortium among universities and industries both in Japan and overseas.





【Summary of the 10-year plan】

1. Establishment of Value Co-Creative Education

We establish a model for “Value Co-Creative Education” by practicing the PDCA cycle with faculty and students, and share it with science and technology oriented universities in Japan and overseas.

2. Introduction of World Class University System

We promote the globalization of the university and implement measures to be in top 10 ranking among Asian technical universities as the entire university under the solid leadership and swift decisions by the President.

3. Organizing and steering International Academic-Industrial Consortium

Focusing on South East Asia, we organize and steer an international academic-industrial alliance, Global Technology Initiative (GTI) Consortium, in which we promote human resource development and research activities, and contribute to quality assurance of higher education in science and technology as well as industrial problem solving.

4. Making all Japanese students to have overseas experience while enrolling in university

We enhance our educational and support systems for study abroad programs which enable all Japanese students at SIT (both undergraduate students and graduate students) to have overseas experience at least one time while they are enrolled in the university.

5. Promotion of diversity in university

To achieve an international faculty ratio of 60% and an international student ratio of almost 30%, we promote recruitment of international faculty and students as well as collaborations with new and existing partner universities overseas.

6. Fostering Global Human Resource in science and technology field

To contribute to global sustainability, we foster human resources with communication skills, problem finding and solving skills, meta-national awareness and technology management skills, by implementing the above plans..

【Characteristic approaches (Internationalization, University reform, Education reform)】

Private universities can be considered as the education service industry, where their management makes ends meet by receiving compensation for providing appropriate services. A private university offers higher education service and takes responsibility for building sustainable higher education and research systems with appropriate values so that such an university pushes forward globalization in the long term. The tuition from current students accounts for 70% of the whole compensation. The customer side (student) receives the contents which the provider side (faculty) provides, and education is service to convert the contents into the utility value for the student. At this chance, the experience value and utility value of the contents provided for both students and faculty increase if the students’ positive participation (customer participation) is high. This type of process is called value co-creation in the field of business management. We will take these characteristics of a private university as a positive aspect and aim for the university where both students and faculty are always conscious of value co-creative education.

We have pushed forward improvement of a quality assurance of education in conformity with Washington Accord and the educational program by the Plan-Do-Check-Act (PDCA) cycle. In parallel, we have taken in active learning such as cross-cutting system education and/or Project Based Learning (PBL), without solely depending on conventional engineering disciplines in order to offer the practical education. We will be carrying out an educational reform aiming at the establishment of the value co-creative educational model, which assures the quality of learning/education as well as the expansion of practical subject taking in value co-creative education. We also aim to spread the educational model to domestic and foreign educational institutions.

In the governance of SIT, our Board of Directors has decided to entrust education management to the President, the top of education, aiming the integral operation by both the Board of Directors (management side) and faculty. The President in this way holds authority of personnel and budget management for education. Strengthening his leadership in this way enables the President to implement quick decision making.

In addition, we as a private university have positively cooperated with various intergovernmental projects. In particular, we have pushed forward strong cooperation with science and technology oriented universities in Southeast Asia. We have been exchanging students with those universities actively as a leader university of South East Asian Technical Universities Consortium (SEATUC).

We try to develop a world-class bland as a private engineering and science university taking advantage of having those assets in Southeast Asia. The bland is realized by establishing the Value Co-creative Education, which assures the quality of learning/education, practical engineering education by utilizing the Japanese craftsmanship culture, and using the Triangular Promotional strategy of education, research and innovation. We also try to establish a world-class university system and organize/manage a consortium for international industry-academia alliances, Global Technology Initiative (GTI) Consortium.

2. FY2014 Progress

■ Common indicators and targets

Internationalization

1.The ratio of International Students

The ratio of international students have increased to 4.3% (361students) from 1.5% (123 students) in FY2013. We actively accepted students from “Science without Borders” program funded by the Brazilian government. We also participated in study abroad fairs held overseas.

2.The ratio of students with study abroad experience

We enriched the study abroad programs such as the English Language Program and Global Project Based Learning and achieved to increase ratio of students with abroad experience (with credits) to 2.5% (209 students) from 1.7% (138 students) in FY2013. Including no credit program, we sent 550 students. We do continue enhancing projects like Global Project Based Learning which take advantage of our Institution.

3. The number (ratio) of subjects offered in English

The number of subjects offered in English has increased from 4 (0.2%) in FY2013 to 30 (1.1%) in the undergraduate level and from 71 (15.8%) to 74 (16.9%) in the graduate level. The acceptance of students from “Science without Borders” program accelerated the move to increase the number of subjects offered in English.

〈 Party of International Dormitory 〉

4.Initiative to assess, manage, and improve students’ language level

We have conducted 6 free TOEIC® IP Test a year on campus, as well as the CEFR (The Common European Framework of Reference for Languages: Learning, Teaching, Assessment) to assess students’ foreign language proficiencies. In addition to the regular curriculum, we offered students with free online English lessons and special courses for TOEIC® Test.

Governance Reform

1.Swift decision-making

To integrate the management between Board of Directors and faculty, it has been decided to introduce the system in which the President is appointed by Board of Directors. It enables the President to have an authority for personnel issues and finance management.

2. Clear visions and development of mid-term plans

We set clear visions with goal and performance indicators such as Key Goal Indicator (KGI) and Key Performance Indicator (KPI), and implement PDCA cycles to achieve our goals, heading to 100th anniversary in 2027.

〈 Led by solid leadership of the President 〉

3. Initiative for advancement of clerical staff

We have been proactive in recruiting clerical staff with fluency in foreign languages and experience of working overseas. Also, we offered training to clerical staff to enhance their global awareness.

Education reform

1.Promotion of student participation in assessment of University administration

Class evaluation by students has been carried out in a high ratio of over 95%. In addition, we strove for the expansion of the Students Consulting on Teaching (SCOT), which is one of class consulting systems where students who received training beforehand participate in classes and give feedback to faculty

2.Utilization of Teaching Assistants (TAs)

We employed 566 Teaching Assistants (TAs) to provide assistance to faculty members. This in turn facilitated the growth of TAs and enriched the content of classes. Likewise, we promoted the expansion of the system of Learning Facilitators (LFs) whose additional duties include not only assisting faculty members but also supporting faculty members in educational and research activities.

3. Selection of new students by diversified entrance examination

As a result of its participation in study abroad fairs held overseas, SIT saw a substantial increase in the number of applicants through the Examination for Japanese University Admission for International Students (EJU) and the number of enrollment. Furthermore, a scheme of admission on recommendation was created for Shanghai Japanese School, for which we contributed to establish its school.

■ University's own indicators and targets

1. Number and amounts of contract research, joint research and competitive funds (National Research Projects)
Through working with industries and implementing measures for acquisition of National Research Projects, we procured JP¥487 millions for 242 contracts and projects.

2. Number of Global Project Based Learning (gPBL) program participants
About 150 students participated in 12 gPBL programs overseas and anout 50 students took part in 5 gPBL programs in Japan. In total, approximately 200 students worked on practical projects, and develop problem-solving skills and international sensibilities.

〈 gPBL with Italian students 〉

3.Number of Overseas Internship program participants & Number of partner universities with Joint-Degree (JD) and Double-Degree (DD) agreements
We sent 31 students on the Global Internship program to 23 private enterprises. Meanwhile, we have mutual Joint Degree (JD) and Double Degree (DD) agreements with 1university, and plan to sign the agreements with 5 other universities in the near future.

■ Distinguishing approach based on characteristics of university

1. Promotion of Value Co-creative Education & Practical Education for Engineers
We have proceeded with the quality assurance of education through introduction of Japan Accreditation Board for Engineering Education (JABEE) programs and improvement of educational programs by PDCA cycles. Teaching based on Passive Learning, which has conventionally been performed, is not enough to improve students' ability. Thus, we introduced Active Learning, in which student themselves participate in educational processes. In 2014, 17 gPBL were carried out with partner universities in Japan and overseas, and about 200 students participated. As for the quality assurance of education, the cycle is implemented by faculty, clerical staff and students, followed by the establishment of a system to improve education in a long-term way. In its checking process, we introduced rubrics and Progress Report On Generic (PROG) skills Test for objective assessment of students.

2. Implementation of World class university system
Some of our departments have decided to introduce a quarter system from FY 2015. Also, we launched a study committee to establish a new department for JD and DD programs. Heading to 100th anniversary in 2027, we also set KGI and KPI, in order to be ranked as one of the top 10 Asian technical universities.

〈 Organizing Committee of GTI Consortium 〉

3. Organizing and Steering GTI consortium
For organizing GTI consortium scheduled to be launched in 2015, we requested universities, industries and government agencies in Japan and overseas for cooperation. As a result, more than 20 organizations promised to offer support.

■ Other approach

1. Initiative to improve students' English ability
We have been trying to improve our students' English ability by offering regular curricular classes and extracurricular classes such as free online e-learning lessons and the Short-Term English Language Programs. We have been also increasing the numbers of major subject and liberal arts classes offered in English. In addition, we offered special extracurricular lessons focusing on TOEIC® Test in FY2014. The lessons consisted of schooling and online e-learning. The applicants for the lessons were almost three times as the class capacity. We are introducing additional special extracurricular classes focusing on TOEIC® Test in FY 2015.

2. Faculty Development program for Teaching in English
In order to increase the number of major subject and liberal arts courses offered in English, we invited a lecturer from Montclair State University and held a short-term version of their "Teaching in English" program during 22-24 Mar, 2015. We accepted the participants from other universities that are members of the TGU project to enhance the quality of the higher education in Japan. As a result, 68 people including 26 people from other universities participated the program.

〈 Faculty Development Program〉

3. FY2015 Progress

■ Common indicators and targets

Internationalization

1.The ratio of International Students

The ratio of international students have increased to 6.0% (501 students) in FY2015 from 4.3% (361students) in FY2014. We actively accepted students from “Science without Borders” program funded by the Brazilian government and also those from “the African Business Education (ABE) Initiative for Youth” by the Japanese government. We also participated in study abroad fairs held overseas.

2.The ratio of students with study abroad experience

We enriched the study abroad programs such as the English Language Program and Global Project Based Learning and achieved to increase ratio of students with abroad experience (with credits) to 4.4% (358 students) from 2.5% (209 students) in FY2014. Including no credit program, we sent 712 students. Number of Global PBL(Global Project Based Learning) has been increased from 17(FY2014) to 38(FY2015). We do continue enhancing international programs which take advantage of our Institution by utilizing GTI framework.

3. The number (ratio) of subjects offered in English

The number of subjects offered in English has increased from 30 (1.1%) in FY2014 to 45 (1.3%) in the undergraduate level and from 74 to 84 in the graduate level. The acceptance of students from “Science without Borders” program accelerated the move to increase the number of subjects offered in English.

〈 TOEIC Awarding Ceremony 〉

4.Initiative to assess, manage, and improve students’ language level

We have conducted 6 free TOEIC® IP Test a year on campus, as well as the CEFR (The Common European Framework of Reference for Languages: Learning, Teaching, Assessment) to assess students’ foreign language proficiencies. We gave feedback and evaluation of test results to faculty members monthly and encouraged the efforts by faculty and students. In addition to the regular curriculum, we have offered students free online English lessons, special courses for TOEIC® Test and intensive TOEIC courses in Hayama. Such efforts led to upgrade of students’ English proficiency.

Governance Reform

1.Swift decision-making

To integrate the management between Board of Directors and faculty, it has been decided to introduce the system in which the President is appointed by Board of Directors. It enables the President to have an authority for personnel issues and finance management.

2. Clear visions and development of mid-term plans

We set clear visions with goal and performance indicators such as Key Goal Indicator (KGI) and Key Performance Indicator (KPI), and implement PDCA cycles to achieve our goals, heading to 100th anniversary in 2027.


〈 Led by solid leadership of the President 〉

3. Initiative for advancement of administrative staff

We have been proactive in recruiting administrative staff with fluency in foreign languages and experience of working overseas. Also, we offered training to administrative staff to enhance their global awareness. In addition, we have introduced the skill up support system to improve English proficiency.

Education reform

1.Promotion of student participation in assessment of University administration

Class evaluation by students has been carried out in a high ratio of over 84.5%. In addition, we strove for the expansion of the Students Consulting on Teaching (SCOT), which is one of class consulting systems where students who received training beforehand participate in classes and give feedback to faculty

2.Utilization of Teaching Assistants (TAs)

We employed 584 Teaching Assistants (TAs) to provide assistance to faculty members. This in turn facilitated the growth of TAs and enriched the content of classes. Likewise, we promoted the expansion of the system of Learning Facilitators (LFs) whose additional duties include not only assisting faculty members but also supporting faculty members in educational and research activities.

3. Selection of new students by diversified entrance examination

As a result of its participation in study abroad fairs held overseas, SIT saw a substantial increase in the number of applicants through the Examination for Japanese University Admission for International Students (EJU) and the number of enrollment. Furthermore, a scheme of admission on recommendation was created for Shanghai Japanese School, for which we contributed to establish its school. We also continued to accept students with TOEFL score as an evidence to prove English language skill.

■ University's own indicators and targets

1. Number and amounts of contract research, joint research and competitive funds (National Research Projects)
Through working with industries and implementing measures for acquisition of National Research Projects, we procured JP¥713 millions for 297 contracts and projects in FY2015.(JP¥487 millions for 242 contracts and projects in FY2014)

2. Number of Global Project Based Learning (gPBL) program participants
288 students participated in 29 gPBL programs overseas and about 137 students took part in 9 gPBL programs in Japan. In total, 425 students worked on practical projects, and develop problem-solving skills and international sensibilities.


〈 gPBL 〉

3.Number of Overseas Internship program participants & Number of partner universities with Joint-Degree (JD) and Double-Degree (DD) agreements
We sent 35 students on the Global Internship program to 25 private enterprises. Meanwhile, we have mutual Joint Degree (JD) and Double Degree (DD) agreements with 1university, and plan to sign the agreements with 5 other universities in the near future.

■ Distinguishing approach based on characteristics of university

1. Promotion of Value Co-creative Education & Practical Education for Engineers
We have proceeded with the quality assurance of education through introduction of Japan Accreditation Board for Engineering Education (JABEE) programs and improvement of educational programs by PDCA cycles. Teaching based on Passive Learning, which has conventionally been performed, is not enough to improve students' ability. Thus, we introduced Active Learning, in which student themselves participate in educational processes. In 2015, 38 gPBL were carried out with partner universities in Japan and overseas, and 425 students participated. As for the quality assurance of education, the cycle is implemented by faculty, clerical staff and students, followed by the establishment of a system to improve education in a long-term way. In its checking process, we implemented rubrics and Progress Report On Generic (PROG) skills Test for objective assessment of students.

2. Implementation of World class university system
Some of our departments have decided to introduce a quarter system. Also, we launched a study committee to establish a new department for JD and DD programs. Heading to 100th anniversary in 2027, we also set KGI and KPI, in order to be ranked as one of the top 10 Asian technical universities.


〈 GTI Consortium Symposium〉

3. Establishment of GTI (Global Technology Initiative) consortium
GTI Consortium was launched in December 3, 2015. With Shibaura Institute of Technology (SIT) as its incorporator and Japanese and Southeast Asian universities and private companies as members, the Consortium aims to bolster cooperation among government agencies, academic and industry members, training of new engineering talents, promoting innovations and the competitiveness of the technological industries in the region. About 150 institutions has already been registered as members. (March 2016)

■ Other approach

1. Initiative to improve students' English ability
We have been trying to improve our students' English ability by offering regular curricular classes and extracurricular classes such as free online e-learning lessons and the Short-Term English Language Programs. We have been also increasing the numbers of major subject and liberal arts classes offered in English. In addition, we offered special extracurricular lessons focusing on TOEIC® Test in FY2015. The lessons consisted of schooling and online e-learning. The applicants for the lessons were almost three times as the class capacity. We are introducing additional special extracurricular classes focusing on TOEIC® Test in FY 2016.

2. Opening of GLC (Global Learning Commons)
We have decided to launch GLC, a facility for intercultural exchange and promotion of diversity, in Omiya campus. GLC has just opened in April 2016. At GLC, students are able to receive counseling for study abroad programs from the staff including student staff, interact with partner universities through a TV meeting system and etc. GLC is expected to function as the core space for 1.Diversity 2.Encouragement for participating Global activity 3.Facilitation of Cross-cultural activities 4.Generation of Peer Support (spirit of mutual aid for study) culture.


〈 Global Learning Commons〉

4. FY2016 Progress

■ Common indicators and targets

Internationalization

1.The ratio of International Students

The ratio of international students have increased to 10.0% (842students) in FY2016 from 6.0% (501students) in FY2015. We actively accepted students who participate in Japanese governmental programs like “the African Business Education Initiative for Youth”. We also joined study abroad fairs that were held overseas. We are nominated as one of the universities who would accept “Innovative Asia” Program in FY 2017.

2.The ratio of students with study abroad experience

We enriched the study abroad programs such as the English Language Program and Global Project Based Learning and achieved to increase ratio of students with abroad experience (with credits) to 10.9% (873 students) in FY2016 from 4.4% (358 students) in FY2015. Including non-credit program, we sent 975 students. Number of Global PBL(Global Project Based Learning) has been increased from 29 (FY2015) to 46 (FY2016). We do continue enhancing international programs which take advantage of our Institution by utilizing GTI framework.

3.The number (ratio) of subjects offered in English

The number of subjects offered in English has increased from 45 (1.3%) in FY2015 to 200 (5.7%) in the undergraduate level and from 84 to 150 in the graduate level.

〈 TOEIC Awarding Ceremony 〉

4.Initiative to assess, manage, and improve students’ language level

We have conducted 4 TOEIC® IP Test (incl.1 free test) a year on campus, as well as the self-assessment based on CEFR (The Common European Framework of Reference for Languages: Learning, Teaching, Assessment). We gave monthly feedback and evaluation of test results to faculty members and encouraged the efforts by faculty and students. In addition to the regular curriculum, we have offered students free online English lessons, special courses for TOEIC® Test and intensive TOEIC courses in Hayama Seminar House. Such efforts led to develop English proficiency of students.

5.Reform of university structure

We have established School of Architecture with the aim of nurturing architects who can be active in global society. Global Course of Engineering and Science in graduate school were also established with the aim of nurturing leading scientists and engineers in the globalized world. In addition, we set up International Course in College of Systems Engineering and Science with an advanced curriculum whereby students can take core subjects at overseas universities, which also aims at nurturing global human resources.

Governance Reform

1. Clear visions and development of mid-term plans

As our continuous efforts from FY2016, we set clear visions with goal and performance indicators such as Key Goal Indicator (KGI) and Key Performance Indicator (KPI), and implement PDCA cycles to achieve our goals, heading to 100th anniversary in 2027.


〈 Led by solid leadership of the President 〉

2. Initiative for advancement of administrative staff

We have been proactive in recruiting administrative staff with fluency in foreign languages and experience of working overseas. Also, we offered training to administrative staff to enhance their global awareness. In addition, we have introduced the skill up support system to improve English proficiency.

Educational reform

1.Promotion of student participation in assessment of University administration

Class evaluation by students has been carried out in a high ratio of 95.6% of all the subjects. In addition, we strove for the expansion of the Students Consulting on Teaching (SCOT), which is one of class consulting systems where students who received training beforehand participate in classes and give feedback to faculty

2.Utilization of Teaching Assistants (TAs)

We employed 574 Teaching Assistants (TAs) to provide assistance to faculty members. This in turn facilitated the growth of TAs and enriched the content of classes. Likewise, we promoted the expansion of the system of Learning Facilitators (LFs) whose additional duties include not only assisting faculty members but also supporting faculty members in educational and research activities.

3. Selection of new students by diversified entrance examination

As a result of its participation in study abroad fairs that are held overseas, SIT saw a substantial increase in the number of applicants through the Examination for Japanese University Admission for International Students (EJU) which led to the increase of the number of enrollment. Furthermore, a scheme of admission on recommendation was created for Shanghai Japanese School, for which we contributed to establish its school. We also continued to accept students with TOEFL score as an evidence to prove English language skill.

■ University's own indicators and targets

〈 gPBL 〉

1. Number and amounts of contract research, joint research and competitive funds (National Research Projects)

Through working with industries and implementing measures for acquisition of National Research Projects, we procured JP¥689 millions for 280 contracts and projects in FY2016. (JP¥713 millions for 297 contracts and projects in FY2015).

2. Number of Global Project Based Learning (gPBL) participants

497 students participated in 46 gPBL programs overseas and about 208 students took part in 15 gPBL programs in Japan. In total, 705 students worked on practical projects, and develop problem-solving skills and international sensibilities.

3.Number of Overseas Internship program participants & Number of partner universities with Joint-Degree (JD) and Double-Degree (DD) agreements

We sent 19 students on the Global Internship program to 11 private enterprises. Meanwhile, we have Double Degree (DD) agreements with 1 university, and plan to sign the agreements with 1 other university in the near future.

■ Distinguished approach based on characteristics of university

1. Promotion of Value Co-creative Education & Practical Education for Engineers

〈 GTI Consortium Symposium〉

We have proceeded with the quality assurance of education through introduction of Japan Accreditation Board for Engineering Education (JABEE) programs and improvement of educational programs by PDCA cycles. In order to complement conventional teaching method of Passive Learning, we introduced Active Learning such as PBL. In 2016, 61 Global PBL were carried out with partner universities in Japan and overseas, and 705 students participated. As for the quality assurance of education, the PDCA cycle is implemented by faculty, clerical staff and students, which enables to develop the quality of PBL continuously. In its checking process, we implemented rubrics and Progress Report On Generic (PROG) skills Test for objective assessment of students.

2. Implementation of World class university system

Some of our departments have decided to introduce a quarter system. Also, we launched a study committee to establish a new department for JD and DD programs. Heading to 100th anniversary in 2027, we also set KGI and KPI, in order to be ranked as one of the top 10 Asian technical universities.
SIT was ranked in 801+ at Times Higher Education (THE) world university ranking for the first time in 2016.

3. Activity of GTI (Global Technology Initiative) consortium

GTI consortium was launched in December 2015 has promoted activities with the cooperation of 159 institutes in Japan (company139, university 10, government administrative agency 10) and 18 overseas (company 3, university 15). In FY 2016, some of seminars, internship and gPBL set task by companies within GTI were carried out. GTI Consortium Symposium was also held last year.

■ Other approaches

1. Initiative to improve students' English ability

〈 Global Learning Commons Toyosu Campus〉

We have been trying to improve our students' English ability by offering regular curricular classes and extracurricular classes such as free online e-learning lessons and the Short-Term English Language Programs. We have been also increasing the numbers of major subject classes offered in English. In addition, we offered special extracurricular lessons focusing on TOEIC® Test and 7 days training camp for TOEIC®. We also introduced TOEIC® S&W trial test and man-to-man Callan method, which is the online course for English conversation, in FY 2016.

2. Opening of GLC (Global Learning Commons)

We launched GLC, a facility for intercultural exchange and promotion of diversity at Omiya campus in April 2016. At GLC, students are able to receive counseling for study abroad programs from the staff including student staff, interact with partner universities through a TV meeting system and etc. GLC has been used intensively as the central stage for 1.Diversity 2.Encouragement for participating Global activity 3.Facilitation of Cross-cultural activities 4.Generation of Peer Support (spirit of mutual aid for study) culture. We also opened GLC at Toyosu Campus in May 2017.

3. Global student staff

The Global Student Staff System was established with the aim of providing students the opportunity to cultivate the skills required of global human resources through engaging in various tasks to promote globalization in March 2016, We are engaged in assistance for operating GLC, international airport pick-up from international students and various events.

5. FY2017 Progress

■ Common indicators and targets

Internationalization

1.The ratio of International Students

The ratio of international students increased accepting more than 1,200 students in FY2017, the highest number in the past years. We actively accepted students who participate in Japanese governmental programs such as “the African Business Education Initiative for Youth”. We are also nominated as one of the universities who would accept “Innovative Asia” Program in FY 2017. We also actively joined study abroad fairs that were held overseas.

2.The ratio of students with study abroad experience

We enriched the study abroad programs such as the ESL Program and Global Project Based Learning(gPBL) and achieved to increase the number of students with abroad experience (with credits) from about 800 students in FY2016 to about 1,000 students in FY2017. Including non-credit program, we sent more than 1,200 students, the highest number in the past years. The Number of gPBL, especially, has been increased to 488 students(40 programs) by utilizing GTI framework.

3.The number (ratio) of subjects offered in English

While increasing the number and proportion of classes taught in foreign languages, both the undergraduate and graduate schools reduced the number of subjects and tried to realize the credit with quality assurance of education. In addition, we are actively recruiting foreign faculty members as well as activating international collaborative research in preparation of the installation of the courses that can earn degrees in English in 2020.

〈 TOEIC Awarding Ceremony 〉

4.Initiative to assess, manage, and improve students’ language level

We have conducted 4 TOEIC® IP Test (incl. 1 test with free of charge) a year as well as the self-assessment based on CEFR . We provided monthly feedback and evaluation of test results to faculty members to encourage their continuous efforts. In addition to the regular curriculum, we have offered students free online English lessons and special courses for TOEIC® Test. Such efforts led to develop English proficiency of students.

5.Reform of university structure

We have established School of Architecture with the aim of nurturing architects who can be active in global society. Global Course of Engineering and Science in graduate school were also established with the aim of nurturing leading scientists and engineers in the globalized world. In addition, we set up International Course in College of Systems Engineering and Science with an advanced curriculum whereby students can take core subjects at overseas universities, which also aims at nurturing global human resources.

Governance Reform

1. Clear visions and development of mid-term plans

As our continuous efforts from FY2017(90th anniversary), we set clear visions with goal and performance indicators such as Key Goal Indicator (KGI) and Key Performance Indicator (KPI), and implement PDCA cycles to achieve our goals, heading to 100th anniversary in 2027.

〈 Led by solid leadership of the President 〉

2. Capacity building of Non-academic staff

We have been proactive in recruiting non-academic staff with fluency in foreign languages and experience of working overseas. Also, we offered training to administrative staff to enhance their global awareness. In addition, we have introduced the various systems to improve the English proficiency. As a result, the number of staff with advanced level of foreign language skill has increased.

Educational reform

1.Promotion of student participation in assessment of University administration

Class evaluation by students has been carried out in over 90% of all the subjects. We also strove for the expansion of class consultation system, the Students Consulting on Teaching (SCOT), where students who received training beforehand participate in classes and provide feedback to teachers.

2.Utilization of Teaching Assistants (TA)

We employed 617 Teaching Assistants (TAs) to provide assistance to faculty members. This not only facilitated the growth of TAs but also enriched the content of classes. Likewise, we promoted the expansion of the system of Learning Facilitators (LFs) whose additional duties include not only assisting faculty members but also supporting faculty members in educational and research activities. In addition to TA and LF system, we have developed regulations of Students Assistant (SA).

3. Selection of new students by diversified entrance examination

As a result of visiting in Japanese-language school, SIT saw a substantial increase in the number of applicants and enrollment through the Examination for Japanese University Admission for International Students (EJU) . We also have various ways to accept students including recommendation system for the students from Shanghai Japanese School which SIT supported its foundation, transfer system for Malaysian students and more. We keep our continuous effort on accepting students from Japanese language schools and/or students with evidence of International Baccalaureate.

■ University's own indicators and targets


〈 gPBL 〉

1. Number and amounts of contract research, joint research and competitive funds (National Research Projects)

Through working with industries and implementing measures for acquisition of National Research Projects, we procured JP¥558 millions for 330 contracts and projects in FY2017. (JP¥689 millions for 280 contracts and projects in FY2016).

2. Number of Global Project Based Learning (gPBL) participants and Overseas Internship program participants

488 students participated in 40 gPBL programs held in overseas and 342 students took part in 27 gPBL programs in Japan. In total, 830 students worked on practical projects interactively, and developed problem-solving skills and international sensibilities. We sent 18 students on the Global Internship program to 6 countries.

3. Number of partner universities with Joint-Degree (JD) and Double-Degree (DD) agreements

We have Double Degree (DD) agreements with 2 universities and plan to conclude the agreements with more universities in the future.

■ Distinguished approach based on characteristics of university

1. Promotion of Value Co-creative Education & Practical Education for Engineers

〈 GTI Consortium Symposium 2017〉

We have focused on the quality assurance of education by the assurance program such as Japan Accreditation Board for Engineering Education (JABEE) programs and adopting PDCA cycles. In order to complement conventional teaching method of Passive Learning, we introduced Active Learning such as PBL. In 2017, 67 gPBL were held with partner universities in Japan and overseas with 830 participating students. As for the quality assurance of education, the PDCA cycle is implemented by faculty, clerical staff and students, which enables to improve the quality of PBL continuously. In the process of checking, rubrics and Progress Report On Generic (PROG) skills Test were introduced for objective assessment of students.

2. Implementation of World class university system

From FY2015, we introduced a quarter system in order to meet a global standard educational system of universities overseas so that it helps to facilitate the mobility of student and faculty staff. We set KGI and KPI towards the 100th anniversary in 2027, and one of the set targets is to be ranked in the top 10 of Science and Technological universities in Asia. SIT was ranked in 1001+ at Times Higher Education (THE) World University ranking in 2017 by the continuous effort to meet the target.

3. Activity of GTI (Global Technology Initiative) consortium

GTI consortium, launched in December 2015, has promoted activities with the cooperation of 197 GTI members in Japan and overseas (company 157, university 31, government administrative agency 9) . In FY 2017, many internships and gPBL with the task set by GTI member organizations were carried out and a GTI Consortium Symposium was also held. In addition, we cooperated with member universities of Science end Technological University Summit to foster human resource in Science and Technology.

■ Other approaches

1. Support to improve students' English ability


〈 Global Learning Commons Toyosu Campus〉

We have been trying to improve our students' English ability by offering regular curricular classes and extracurricular classes such as free online e-learning lessons and the Short-Term English Language Programs. We have been also increasing the numbers of major subject classes offered in English. In addition, we offered special extracurricular lessons focusing on TOEIC® Test and laboratory English conversation. We also introduced TOEIC® S&W trial test and man-to-man Callan method, which is the online course for English conversation from FY 2016.

2. Enrichment of GLC (Global Learning Commons)

A facility for intercultural exchange and promotion of diversity, GLC, was firstly launched at Omiya campus in 2016. At GLC, students are able to receive counseling for study abroad programs from the staff including student staff, interact with partner universities through a TV meeting system and etc. GLC has been used actively as the hub for 1.Diversity 2.Encouragement for participating Global activities 3.Facilitation of Cross-cultural activities 4.Generation of Peer Support (spirit of mutual aid for study) culture. GLC at Toyosu Campus was also opened in 2017.

3. Global student staff(GSS)

The Global Student Staff System was established in 2016 with the aim of providing students the opportunity to cultivate the skills required of global human resources through engaging in various tasks to promote globalization. GSS engage in operation of GLC, airport pick-up of international students and various events.

6. FY2018 Progress

■ Common indicators and targets

Internationalization

1.The ratio of International Students

The ratio of international students accepted by SIT increased by about 1,500 students in FY2018, the highest number to date. This is due to the increase in both regular international students and participants in the gPBL program in Japan as well as to our increased participation in study abroad fairs that were held overseas.

2.The ratio of students with study abroad experience

By enriching the content of programs such as ESL and Global Project Based Learning (gPBL), we achieved an increase in the number of students with study abroad experience (for credits) from about 1,000 students in FY2017 to about 1,300 students in FY2018. Including non-credit programs, we sent more than 1,600 students abroad, the highest number so far. The Number of gPBL students, in particular, has been increased to 849 students (62 programs) by utilizing GTI (Global Technology Initiative Consortium) framework.

3.The number (ratio) of subjects offered in English

By increasing the number and proportion of classes taught in foreign languages and reducing the number of subjects, both the undergraduate and graduate schools has striven to ensure the educational quality of its for-credit instruction. In addition, we are actively recruiting foreign faculty members as well as initiating more international collaborative research in preparation for the commencement of the Innovative Global Program in 2020.

〈 TOEIC Awarding Ceremony 〉

4.Initiative to assess, manage, and improve student language level

We have conducted four TOEIC® IP Tests (including one test free of charge) on campus annually, as well as a self-assessment based on CEFR (Common European Framework of Reference for Languages) .
Monthly feedback and evaluation of test results was also provided to faculty members to encourage their continuing efforts. In addition to the regular curriculum, we have offered students free online English lessons and special courses to assist in preparation for TOEIC® Test. Such efforts have increased the English proficiency of students.

Governance Reform

1. Clear vision statement and development of mid-term plans

As continuation of the efforts begun in FY2017(90th anniversary), we adopted a clear visions statement with goal and performance indicators such as the Key Goal Indicator (KGI) and Key Performance Indicator (KPI), and adopted PDCA cycles methodologies to achieve these goals, while heading toward our 100th anniversary in 2027.

〈 Led by solid leadership of the President 〉

2. Capacity building of non-academic staff

We have been proactive in recruiting non-academic staff with fluency in foreign languages and experience working overseas, offering training to administrative staff to enhance their global awareness and introducing various systems to improve English proficiency.
As a result, the number of staff with an advanced level of foreign language skill has increased.

Educational reform

1.Promotion of student participation in assessment of University administration

Class evaluation by students has been carried out in over 94% of all the subjects. We also strove for the expansion of a class consultation system, Students Consulting on Teaching (SCOT), where students who are trained participate in classes and provide feedback to teachers.

2.Utilization of Teaching Assistants (TA)

We employed 632 Teaching Assistants (TAs) to provide assistance to faculty members. This not only facilitated an increase of TAs but also enriched the content of classes. Likewise, we promoted the expansion of the system of Learning Facilitators (LFs) whose additional duties include not only assisting faculty members but also supporting faculty members in educational and research activities. In addition to the TA and LF system, we have developed a set of guidelines for regulations of Students Assistants (SA).

3. Selection of new students by entrance exam diversification

As a result of visiting Japanese-language schools, SIT saw a substantial increase in the number of applicants and enrollment through the Examination for Japanese University Admission for International Students (EJU). We have also adopted other ways to accept students such as a recommendation system for the students from the Shanghai Japanese School which SIT co-founded, a transfer system for Malaysian students, and more. We have continued efforts to accept students from Japanese language schools as well as students with International Baccalaureate credentials.

■ The University's own indicators and targets

1. Number and amounts of contract research, joint research and competitive funds (National Research Projects)

Through working with industry and implementing measures for the acquisition of National Research Projects, we procured JP¥206 millions for 119 contracts and projects in FY2018.

〈 gPBL 〉

2. Number of Global Project Based Learning (gPBL) participants and Overseas Internship program participants

849 students participated in 62 gPBL programs held overseas and 538 students took part in 31 gPBL programs in Japan. In total, 830 students worked on practical projects interactively, and developed problem-solving skills and international sensibilities. We sent 22 students on the Global Internship program to 11 countries.

3. Number of partner universities with Joint-Degree (JD) and Double-Degree (DD) agreements

We have Double Degree (DD) agreements with 2 universities and plan to conclude such agreements with more universities in the future.

■ Distinguished approach based on characteristics of university

1. Promotion of Value Co-creative Education & Practical Education for Engineers

We have focused on the quality assurance of education through programs such as the Japan Accreditation Board for Engineering Education (JABEE) programs and by adopting PDCA evaluation cycles. In order to complement conventional passive learning teaching methods, we have introduced active learning modalities such as PBL. In 2018, 93 gPBLs were held with partner universities in Japan and overseas with 1,387 participating students. As for the quality assurance of education, the PDCA cycle is now being implemented by faculty, clerical staff and students, which enables us to continuously improve the quality of PBL programs. To improve the process of evaluating leaning outcomes, rubrics and the Progress Report On Generic (PROG) skills Test were introduced for a more objective assessment of students.

〈 GTI Consortium Symposium 2018〉

2. Implementation of a world class university system

In order to facilitate the mobility of student and faculty staff, the quarter system was introduced establish a common academic calendar with the educational systems of universities overseas. We have set both KGI and KPI goals for our 100th anniversary in 2027, and one of these is to be ranked among the top ten Science and Technological universities in Asia. SIT was ranked as "1001+" in the Times Higher Education (THE) World University ranking in 2018 as a result of its continuous efforts to meet this target.

3. GTI (Global Technology Initiative) consortium

The GTI consortium, launched in December 2015, has promoted activities with the cooperation of 212 GTI members in Japan and overseas (companies: 168, universities: 35, government administrative agencies: 9). In FY 2018, many internships and gPBLs GTI member organization defined goals were carried out and a GTI Consortium Symposium was also held. In addition, we cooperated with member universities of the Science end Technological University Summit to foster human resources in Science and Technology.

■ Other approaches

1. Support to improve student English ability

We have been trying to improve our students' English ability by supporting both regular academic and extracurricular classes with free online e-learning lessons and the short-term English language programs. We have been also increasing the numbers of major subject classes offered in English and have offered special extracurricular lessons focusing on TOEIC® Test and how to give academic presentation in English.

〈 Global Learning Commons Toyosu Campus〉

2. Enrichment of the GLC (Global Learning Commons)

A facility for intercultural exchange and promotion of diversity, GLC, was firstly launched at the Omiya campus in 2016. At GLC, students are able to receive counseling for study abroad programs from the staff including student staff, and do such thing as interact with partner universities through a TV meeting system. GLC has been used actively as the hub for 1.Diversity 2.Encouragement for participating Global activities 3.Facilitation of Cross-cultural activities, and 4.Generation of Peer Support (spirit of mutual aid for study) culture. A GLC was also opened at the Toyosu Campus in 2017.

3. Global student staff(GSS)

The Global Student Staff System was established in 2016 with the aim of providing students with the opportunity to cultivate the skills required of global human resources through engaging in various tasks to promote globalization. GSS participates in the operation of GLC, airport pick-up of international students and various events.